**3GPP TSG-RAN WG2 Meeting #117 electronic *R2-2203666***

**Online, 21 February – 03 March, 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** | 1 | **Current version:** | **0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | On introducing height information reporting in MDT reports [LTE-Height-MDT] | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | KDDI, Ericsson, Qualcomm | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 02 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-17 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The MDT measurement reports included in NR includes the measurements related to the UE’s height information. This information is included as follows in TS 38.331.  Sensor-LocationInfo-r16 ::= SEQUENCE {  sensor-MeasurementInformation-r16 OCTET STRING OPTIONAL,  sensor-MotionInformation-r16 OCTET STRING OPTIONAL,  ...  }  ***sensor-MeasurementInformation***  This field provides barometric pressure measurements as *Sensor-MeasurementInformation* defined in TS 37.355 [49]. The first/leftmost bit of the first octet contains the most significant bit.  The UE includes the barometric pressure measurements in the logged MDT reports and immediate MDT reports based on the network configurations. In the case of immediate MDT, the UE obtains the configuration related to the inclusion of barometric pressure measurements in the *otherConfig* whereas for the logged MDT, the UE obtains the configurations related to the inclusion of baromteric pressure measurements in the *loggedMeasurementConfiguration*.  The height information so included in the MDT reports aids the operator to build a 3D coverage map of their deployment.  Such height related information is missing in the LTE MDT reports. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Uncompensated barometric pressure information reporting is introdued for logged and immediate MDT reports. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Height information reporting is not available in the MDT reports, thus leading to inability of the operator to build 3D coverage maps. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 5.3.3.2, 5.3.10.9, 5.5.5.1, 5.6.6.3, 5.6.8.2, 6.2.2, 6.3.5, 6.3.6, 7.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 36.306 CR1838  TS 37.320 CR114 | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev 0 : Introduction of height reporting in logged MDT and immediate M.  Rev 1: Changes associated to simplification of configuration of barometric sesnor measurement request. | | | | | | | | |

/\*Start of first change\*/

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] Void.

[3] 3GPP TS 36.302: "Evolved Universal Terrestrial Radio Access (E-UTRA); Services provided by the physical layer ".

[4] 3GPP TS 36.304: "Evolved Universal Terrestrial Radio Access (E-UTRA); UE Procedures in Idle Mode".

[5] 3GPP TS 36.306 "Evolved Universal Terrestrial Radio Access (E-UTRA); UE Radio Access Capabilities".

[6] 3GPP TS 36.321: "Evolved Universal Terrestrial Radio Access (E-UTRA); Medium Access Control (MAC) protocol specification".

[7] 3GPP TS 36.322:"Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Link Control (RLC) protocol specification".

[8] 3GPP TS 36.323: "Evolved Universal Terrestrial Radio Access (E-UTRA); Packet Data Convergence Protocol (PDCP) Specification".

[9] 3GPP TS 36.300: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRAN); Overall description; Stage 2".

[10] 3GPP TS 22.011: "Service accessibility".

[11] 3GPP TS 23.122: "Non-Access-Stratum (NAS) functions related to Mobile Station (MS) in idle mode".

[12] 3GPP2 C.S0002-F v1.0: "Physical Layer Standard for cdma2000 Spread Spectrum Systems".

[13] ITU-T Recommendation X.680 (07/2002) "Information Technology - Abstract Syntax Notation One (ASN.1): Specification of basic notation" (Same as the ISO/IEC International Standard 8824-1).

[14] ITU-T Recommendation X.681 (07/2002) "Information Technology - Abstract Syntax Notation One (ASN.1): Information object specification" (Same as the ISO/IEC International Standard 8824-2).

[15] ITU-T Recommendation X.691 (07/2002) "Information technology - ASN.1 encoding rules: Specification of Packed Encoding Rules (PER)" (Same as the ISO/IEC International Standard 8825-2).

[16] 3GPP TS 36.133: "Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements for support of radio resource management".

[17] 3GPP TS 25.101: "Universal Terrestrial Radio Access (UTRA); User Equipment (UE) radio transmission and reception (FDD)".

[18] 3GPP TS 25.102: "Universal Terrestrial Radio Access (UTRA); User Equipment (UE) radio transmission and reception (TDD)".

[19] 3GPP TS 25.331:"Universal Terrestrial Radio Access (UTRA); Radio Resource Control (RRC); Protocol specification".

[20] 3GPP TS 45.005: "Radio transmission and reception".

[21] 3GPP TS 36.211: "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical Channels and Modulation".

[22] 3GPP TS 36.212: "Evolved Universal Terrestrial Radio Access (E-UTRA); Multiplexing and channel coding".

[23] 3GPP TS 36.213: "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures".

[24] 3GPP2 C.S0057-E v1.0: "Band Class Specification for cdma2000 Spread Spectrum Systems".

[25] 3GPP2 C.S0005-F v1.0: "Upper Layer (Layer 3) Signaling Standard for cdma2000 Spread Spectrum Systems".

[26] 3GPP2 C.S0024-C v2.0: "cdma2000 High Rate Packet Data Air Interface Specification".

[27] 3GPP TS 23.003: "Numbering, addressing and identification".

[28] 3GPP TS 45.008: "Radio subsystem link control".

[29] 3GPP TS 25.133: "Requirements for Support of Radio Resource Management (FDD)".

[30] 3GPP TS 25.123: "Requirements for Support of Radio Resource Management (TDD)".

[31] 3GPP TS 36.401: "Evolved Universal Terrestrial Radio Access (E-UTRA); Architecture description".

[32] 3GPP TS 33.401: "3GPP System Architecture Evolution (SAE); Security architecture".

[33] 3GPP2 A.S0008-C v4.0: "Interoperability Specification (IOS) for High Rate Packet Data (HRPD) Radio Access Network Interfaces with Session Control in the Access Network"

[34] 3GPP2 C.S0004-F v1.0: "Signaling Link Access Control (LAC) Standard for cdma2000 Spread Spectrum Systems"

[35] 3GPP TS 24.301: "Non-Access-Stratum (NAS) protocol for Evolved Packet System (EPS); Stage 3".

[36] 3GPP TS 44.060: "General Packet Radio Service (GPRS); Mobile Station (MS) - Base Station System (BSS) interface; Radio Link Control/Medium Access Control (RLC/MAC) protocol".

[37] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".

[38] 3GPP TS 23.038: "Alphabets and Language".

[39] 3GPP TS 36.413: "Evolved Universal Terrestrial Radio Access (E-UTRAN); S1 Application Protocol (S1 AP)".

[40] 3GPP TS 25.304: "Universal Terrestrial Radio Access (UTRAN); User Equipment (UE) procedures in idle mode and procedures for cell reselection in connected mode".

[41] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".

[42] 3GPP TS 36.101: "Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio transmission and reception".

[43] 3GPP TS 45.005: "GSM/EDGE Radio transmission and reception".

[44] 3GPP2 C.S0087-A v2.0: "E-UTRAN - cdma2000 HRPD Connectivity and Interworking Air Interface Specification"

[45] 3GPP TS 44.018: "Mobile radio interface layer 3 specification; Radio Resource Control (RRC) protocol".

[46] 3GPP TS 25.223: "Spreading and modulation (TDD)".

[47] 3GPP TS 36.104: "Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) radio transmission and reception".

[48] 3GPP TS 36.214: "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer - Measurements".

[49] 3GPP TS 24.008: "Mobile radio interface layer 3 specification; Core network protocols; Stage 3".

[50] 3GPP TS 45.010: "Radio subsystem synchronization".

[51] 3GPP TS 23.272: "Circuit Switched Fallback in Evolved Packet System; Stage 2".

[52] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)".

[53] 3GPP2 C.S0097-0 v3.0: "E-UTRAN - cdma2000 1x Connectivity and Interworking Air Interface Specification".

[54] 3GPP TS 36.355: "LTE Positioning Protocol (LPP)".

[55] 3GPP TS 36.216: "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer for relaying operation".

[56] 3GPP TS 23.246: "Multimedia Broadcast/Multicast Service (MBMS); Architecture and functional description".

[57] 3GPP TS 26.346: "Multimedia Broadcast/Multicast Service (MBMS); Protocols and codecs".

[58] 3GPP TS 32.422: "Telecommunication management; Subsriber and equipment trace; Trace control and confiuration management".

[59] 3GPP TS 22.368: "Service Requirements for Machine Type Communications; Stage 1".

[60] 3GPP TS 37.320: "Universal Terrestrial Radio Access (UTRA) and Evolved Universal Terrestrial Radio Access (E-UTRA); Radio measurement collection for Minimization of Drive Tests (MDT); Overall description; Stage 2".

[61] 3GPP TS 23.216: "Single Radio Voice Call Continuity (SRVCC); Stage 2".

[62] 3GPP TS 22.146: "Multimedia Broadcast/Multicast Service (MBMS); Stage 1".

[63] 3GPP TR 36.816: "Evolved Universal Terrestrial Radio Access (E-UTRA); Study on signalling and procedure for interference avoidance for in-device coexistence".

[64] IS-GPS-200F: "Navstar GPS Space Segment/Navigation User Segment Interfaces".

[65] 3GPP TS 25.307: "Requirement on User Equipments (UEs) supporting a release-independent frequency band".

[66] 3GPP TS 24.312: "Access Network Discovery and Selection Function (ANDSF) Management Object (MO)".

[67] IEEE 802.11-2012, Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications, IEEE Std.

[68] 3GPP TS 23.303: "Proximity-based services (ProSe); Stage 2".

[69] 3GPP TS 24.334: "Proximity-services (ProSe) User Equipment (UE) to ProSe function protocol aspects; Stage 3".

[70] 3GPP TS 24.333: "Proximity-services (ProSe) Management Objects (MO)".

[71] 3GPP TS 36.314: "Evolved Universal Terrestrial Radio Access (E-UTRA); Layer 2- Measurements".

[72] 3GPP TS 24.105: "Application specific Congestion control for Data Communication (ACDC) Management Object (MO)".

[73] 3GPP TS 23.179: "Functional architecture and information flows to support mission critical communication services; Stage 2".

[74] 3GPP TS 24.302: "Access to the 3GPP Evolved Packet Core (EPC) via non-3GPP access networks".

[75] 3GPP TS 23.402: "Architecture enhancements for non-3GPP accesses; Stage-2".

[76] Wi-Fi Alliance® Technical Committee, Hotspot 2.0 Technical Task Group Hotspot 2.0 (Release 2) Technical Specification Version 3.11.

[77] 3GPP TS 22.101: "Service aspects; Service principles".

[78] 3GPP TS 23.285: "Technical Specification Group Services and System Aspects; Architecture enhancements for V2X services".

[79] 3GPP TS 36.307: "Evolved Universal Terrestrial Radio Access (E-UTRA); Requirements on User Equipments (UEs) supporting a release-independent frequency band".

[80] Military Standard WGS84 Metric MIL-STD-2401 (11 January 1994): "Military Standard Department of Defence World Geodetic System (WGS)".

[81] 3GPP TS 37.340: "NR; Multi-connectivity; Overall description; Stage-2".

[82] 3GPP TS 38.331: "NR; Radio Resource Control (RRC); Protocol specification".

[83] 3GPP TS 38.323: "NR; Packet Data Convergence Protocol (PDCP) Specification".

[84] 3GPP TS 38.133: "NR; Requirements for support of radio resource management".

[85] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception; Part 1: Range 1 Standalone ".

[86] 3GPP TS 33.501: "Security Architecture and Procedures for 5G System".

[87] 3GPP TS 38.306: "NR; UE Radio Access Capabilities".

[88] 3GPP TS 38.213: "NR; Physical layer procedures for control".

[89] 3GPP TS 38.215: "NR; Physical layer measurements".

[90] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS); Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

[91] 3GPP TS 38.104: "NR; Base Station (BS) radio transmission and reception".

[92] 3GPP TS 38.304: "NR; User Equipment (UE) procedures in Idle mode and RRC Inactive state".

[93] Bluetooth Special Interest Group: "Bluetooth Core Specification v5.0", December 2016.

[94] 3GPP TS 37.213: "Physical layer procedures for shared spectrum channel access".

[95] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[96] 3GPP TS 22.261: "Service requirements for the 5G System".

[97] 3GPP TS 37.324: "Service Data Adaptation Protocol (SDAP) specification".

[98] ATIS 0700041: "WEA 3.0: Device-Based Geo-Fencing".

[99] 3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia Telephony; Media handling and interaction ".

[100] 3GPP TS 38.101-2: "NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone ".

[101] 3GPP TS 38.101-3: "NR; User Equipment (UE) radio transmission and reception; Part 3: Range 1 and Range 2 Interworking operation with other radios".

[102] 3GPP TS 23.502: "Procedures for the 5G System; Stage 2".

[103] 3GPP TS 38.314: "NR; layer 2 measurements".

[104] 3GPP TS 23.287: "Architecture enhancements for 5G System (5GS) to support Vehicle-to-Everything (V2X) services ".

[105] 3GPP TS 38.472: "NG-RAN; F1 signalling transport".

[106] 3GPP TS 38.300: "NR; Overall description; Stage 2".

[107] 3GPP TS 38.174: "NR; Integrated access and backhaul radio transmission and reception".

[108] 3GPP TS 36.423: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); X2 Application Protocol (X2AP)".

[XX] 3GPP TS 37.355: "LTE Positioning Protocol (LPP)".

/\*end of first change\*/

/\*Start of second change\*/

#### 5.3.3.2 Initiation

The UE initiates the procedure when upper layers request establishment or resume of an RRC connection while the UE is in RRC\_IDLE or when upper layers request resume of an RRC connection or RRC layer requests resume of an RRC connection for, e.g. RNAU or reception of RAN paging while the UE is in RRC\_INACTIVE.

Except for NB-IoT, upon initiation of the procedure, if the UE is connected to EPC, the UE shall:

1> if *SystemInformationBlockType2* includes *ac-BarringPerPLMN-List* and the *ac-BarringPerPLMN-List* contains an *AC-BarringPerPLMN* entry with the *plmn-IdentityIndex* corresponding to the PLMN selected by upper layers (see TS 23.122 [11], TS 24.301 [35]):

2> select the *AC-BarringPerPLMN* entry with the *plmn-IdentityIndex* corresponding to the PLMN selected by upper layers;

2> in the remainder of this procedure, use the selected *AC-BarringPerPLMN* entry (i.e. presence or absence of access barring parameters in this entry) irrespective of the common access barring parameters included in *SystemInformationBlockType2;*

1> else

2> in the remainder of this procedure use the common access barring parameters (i.e. presence or absence of these parameters) included in *SystemInformationBlockType2;*

1> if *SystemInformationBlockType2* contains *acdc-BarringPerPLMN-List* and the *acdc-BarringPerPLMN-List* contains an *ACDC-BarringPerPLMN* entry with the *plmn-IdentityIndex* corresponding to the PLMN selected by upper layers (see TS 23.122 [11], TS 24.301 [35]):

2> select the *ACDC-BarringPerPLMN* entry with the *plmn-IdentityIndex* corresponding to the PLMN selected by upper layers;

2> in the remainder of this procedure, use the selected *ACDC-BarringPerPLMN* entry for ACDC barring check (i.e. presence or absence of access barring parameters in this entry) irrespective ofthe *acdc-BarringForCommon* parameters included in *SystemInformationBlockType2*;

1> else:

2> in the remainder of this procedure use the *acdc-BarringForCommon* (i.e. presence or absence of these parameters) included in *SystemInformationBlockType2* for ACDC barring check;

1> if upper layers indicate that the RRC connection is subject to EAB (see TS 24.301 [35]):

2> if the result of the EAB check, as specified in 5.3.3.12, is that access to the cell is barred:

3> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that EAB is applicable, upon which the procedure ends;

1> if upper layers indicate that the RRC connection is subject to ACDC (see TS 24.301 [35]), *SystemInformationBlockType2* contains *BarringPerACDC-CategoryList*, and *acdc-HPLMNonly* indicates that ACDC is applicable for the UE:

2> if the *BarringPerACDC-CategoryList* contains a *BarringPerACDC-Category* entry corresponding to the ACDC category selected by upper layers:

3> select the *BarringPerACDC-Category* entry corresponding to the ACDC category selected by upper layers;

2> else:

3> select the last *BarringPerACDC-Category* entry in the *BarringPerACDC-CategoryList*;

2> stop timer T308, if running;

2> perform access barring check as specified in 5.3.3.13, using T308 as "Tbarring" and *acdc-BarringConfig* in the *BarringPerACDC-Category* as "ACDC barring parameter";

2> if access to the cell is barred:

3> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring is applicable due to ACDC, upon which the procedure ends;

1> else if the UE is establishing the RRC connection for mobile terminating calls:

2> if timer T302 is running:

3> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile terminating calls is applicable, upon which the procedure ends;

1> else if the UE is establishing the RRC connection for emergency calls:

2> if *SystemInformationBlockType2* includes the *ac-BarringInfo*:

3> if the *ac-BarringForEmergency* is set to *TRUE*:

4> if the UE has one or more Access Classes, as stored on the USIM, with a value in the range 11..15, which is valid for the UE to use according to TS 22.011 [10] and TS 23.122 [11]:

NOTE 1: ACs 12, 13, 14 are only valid for use in the home country and ACs 11, 15 are only valid for use in the HPLMN/ EHPLMN.

5> if the *ac-BarringInfo* includes *ac-BarringForMO-Data*, and for all of these valid Access Classes for the UE, the corresponding bit in the *ac-BarringForSpecialAC* contained in *ac-BarringForMO-Data* is set to *one*:

6> consider access to the cell as barred;

4> else:

5> consider access to the cell as barred;

2> if access to the cell is barred:

3> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication, upon which the procedure ends;

1> else if the UE is establishing the RRC connection for mobile originating calls:

2> perform access barring check as specified in 5.3.3.11, using T303 as "Tbarring" and *ac-BarringForMO-Data* as "AC barring parameter";

2> if access to the cell is barred:

3> if *SystemInformationBlockType2* includes *ac-BarringForCSFB* or the UE does not support CS fallback:

4> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating calls is applicable, upon which the procedure ends;

3> else (*SystemInformationBlockType2* does not include *ac-BarringForCSFB* and the UE supports CS fallback):

4> if timer T306 is not running, start T306 with the timer value of T303;

4> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating calls and mobile originating CS fallback is applicable, upon which the procedure ends;

1> else if the UE is establishing the RRC connection for mobile originating signalling:

2> perform access barring check as specified in 5.3.3.11, using T305 as "Tbarring" and *ac-BarringForMO-Signalling* as "AC barring parameter";

2> if access to the cell is barred:

3> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating signalling is applicable, upon which the procedure ends;

1> else if the UE is establishing the RRC connection for mobile originating CS fallback:

2> if *SystemInformationBlockType2* includes *ac-BarringForCSFB*:

3> perform access barring check as specified in 5.3.3.11, using T306 as "Tbarring" and *ac-BarringForCSFB* as "AC barring parameter";

3> if access to the cell is barred:

4> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating CS fallback is applicable, due to *ac-BarringForCSFB*, upon which the procedure ends;

2> else:

3> perform access barring check as specified in 5.3.3.11, using T306 as "Tbarring" and *ac-BarringForMO-Data* as "AC barring parameter";

3> if access to the cell is barred:

4> if timer T303 is not running, start T303 with the timer value of T306;

4> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating CS fallback and mobile originating calls is applicable, due to *ac-BarringForMO-Data*, upon which the procedure ends;

1> else if the UE is establishing the RRC connection for mobile originating MMTEL voice, mobile originating MMTEL video, mobile originating SMSoIP or mobile originating SMS; or

1> if the UE is establishing the RRC connection after EPS fallback for IMS voice (see TS 23.502 [102]) was triggered in NR via *RRCRelease* with *voiceFallbackIndication* (see TS 38.331 [82]):

2> if the UE is establishing the RRC connection for mobile originating MMTEL voice and *SystemInformationBlockType2* includes *ac-BarringSkipForMMTELVoice*; or

2> if the UE is establishing the RRC connection for mobile originating MMTEL video and *SystemInformationBlockType2* includes *ac-BarringSkipForMMTELVideo*; or

2> if the UE is establishing the RRC connection for mobile originating SMSoIP or SMS and *SystemInformationBlockType2* includes *ac-BarringSkipForSMS*:

3> consider access to the cell as not barred;

2> else:

3> if *establishmentCause* received from higher layers is set to *mo-Signalling* (including the case that *mo-Signalling* is replaced by *highPriorityAccess* according to TS 24.301 [35] or by *mo-VoiceCall* according to the clause 5.3.3.3)*:*

4> perform access barring check as specified in 5.3.3.11, using T305 as "Tbarring" and *ac-BarringForMO-Signalling* as "AC barring parameter";

4> if access to the cell is barred:

5> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating signalling is applicable, upon which the procedure ends;

3> if *establishmentCause* received from higher layers is set to *mo-Data* (including the case that *mo-Data* is replaced by *highPriorityAccess* according to TS 24.301 [35] or by *mo-VoiceCall* according to the clause 5.3.3.3):

4> perform access barring check as specified in 5.3.3.11, using T303 as "Tbarring" and *ac-BarringForMO-Data* as "AC barring parameter";

4> if access to the cell is barred:

5> if *SystemInformationBlockType2* includes *ac-BarringForCSFB* or the UE does not support CS fallback:

6> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating calls is applicable, upon which the procedure ends;

5> else (*SystemInformationBlockType2* does not include *ac-BarringForCSFB* and the UE supports CS fallback):

6> if timer T306 is not running, start T306 with the timer value of T303;

6> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring for mobile originating calls and mobile originating CS fallback is applicable, upon which the procedure ends;

Upon initiation of the procedure, if the UE is connected to 5GC, the UE shall:

1> if the upper layers provide an Access Category and one or more Access Identities upon requesting establishment of an RRC connection:

2> perform the unified access control procedure as specified in 5.3.16 using the Access Category and Access Identities provided by upper layers;

3> if the access attempt is barred, the procedure ends;

1> if the resumption of the RRC connection is triggered by response to NG-RAN paging:

2> select '0' as the Access Category;

2> perform the unified access control procedure as specified in 5.3.16 using the selected Access Category and one or more Access Identities provided by upper layers;

3> if the access attempt is barred, the procedure ends;

1> else if the resumption of the RRC connection is triggered by upper layers:

2> if the upper layers provide an Access Category and one or more Access Identities:

3> perform the unified access control procedure as specified in 5.3.16 using the Access Category and Access Identities provided by upper layers;

4> if the access attempt is barred, the procedure ends;

2> set the *resumeCause* in accordance with the information received from upper layers;

1> else if the resumption of the RRC connection is triggered due to an RNAU:

2> if an emergency service is ongoing:

3> select '2' as the Access Category;

3> set the *resumeCause* to *emergency*;

2> else:

3> select '8' as the Access Category;

2> perform the unified access control procedure as specified in 5.3.16 using the selected Access Category and one or more Access Identities to be applied as specified in TS 24.501 [95];

3> if the access attempt is barred:

4> set the variable *pendingRnaUpdate* to 'TRUE';

4> the procedure ends;

Except for NB-IoT, upon initiating the procedure, if connected to EPC or 5GC, the UE shall:

1> if the UE is resuming an RRC connection from a suspended RRC connection or from RRC\_INACTIVE:

2> if the UE was configured with (NG)EN-DC:

3> if the UE does not support maintaining SCG configuration upon connection resumption:

4> perform MR-DC release, as specified in TS 38.331 [82], clause 5.3.5.10;

4> release *p-MaxEUTRA*, if configured;

4> release *p-MaxUE-FR1*, if configured;

4> release *tdm-PatternConfig* or *tdm-PatternConfig2*, if configured;

3> release *otherConfig* associated with the SCG, if configured;

3> stop timers T346a, T346b, T346c, T346d and T346e associated with the SCG (see TS 38.331 [82], clause 7.1.1), if running;

2> if the UE does not support maintaining the MCG SCell configurations upon connection resumption:

3> release the MCG SCell(s), if configured, in accordance with 5.3.10.3a;

2> release *powerPrefIndicationConfig*, if configured and stop timer T340, if running;

2> release *reportProximityConfig* and clear any associated proximity status reporting timer;

2> release *obtainLocationConfig*, if configured;

2> release *bt-NameListConfig*, if configured;

2> release *wlan-NameListConfig*, if configured;

2> release *measUncomBarPre*, if configured;

2> release *idc-Config*, if configured;

2> release *sps-AssistanceInfoReport*, if configured;

2> release *measSubframePatternPCell*, if configured;

2> if the UE was configured with DC:

3> release the entire SCG configuration, if configured, except for the DRB configuration (as configured by *drb-ToAddModListSCG*);

2> release *naics-Info* for the PCell, if configured;

2> release the LWA configuration, if configured, as described in 5.6.14.3;

2> release the LWIP configuration, if configured, as described in 5.6.17.3;

2> release *bw-PreferenceIndicationTimer*, if configured and stop timer T341, if running;

2> release *delayBudgetReportingConfig*, if configured and stop timer T342, if running;

2> release *ailc-BitConfig*, if configured;

2> release *uplinkDataCompression*, if configured;

2> release *overheatingAssistanceConfig* and *overheatingAssistanceConfigForSCG*, if configured and stop timer T345, if running;

NOTE 1a: The parameters and configurations are released from the UE Inactive AS context if the UE is resuming an RRC connection from RRC\_INACTIVE.

1> if the UE is establishing or resuming an RRC connection from a suspended RRC connection:

2> if the UE has a stored *pur-Config* and the cell is different from the cell where *pur-Config* was provided:

3> if *pur-TimeAlignmentTimer* is configured, indicate to lower layers that *pur-TimeAlignmentTimer* is released;

3> release *pur-Config*;

3> discard previously stored *pur-Config*;

1> apply the default physical channel configuration as specified in 9.2.4;

1> apply the default semi-persistent scheduling configuration as specified in 9.2.3;

1> apply the default MAC main configuration as specified in 9.2.2;

1> apply the CCCH configuration as specified in 9.1.1.2;

1> apply the *timeAlignmentTimerCommon* included in *SystemInformationBlockType2*;

1> start timer T300;

1> if the UE is resuming an RRC connection from a suspended RRC connection:

2> initiate transmission of the *RRCConnectionResumeRequest* message in accordance with 5.3.3.3a;

1> else if the UE is resuming an RRC connection from RRC\_INACTIVE:

2> set the variable *pendingRnaUpdate* to 'FALSE';

2> initiate transmission of the *RRCConnectionResumeRequest* message in accordance with 5.3.3.3a;

1> else:

2> if stored, discard the UE AS context, UE Inactive AS context and *resumeIdentity*;

2> release *rrc-InactiveConfig*, if configured;

2> if the UE is initiating CP-EDT in accordance with conditions in 5.3.3.1b; or

2> if the UE is initiating CP transmission using PUR in accordance with conditions in 5.3.3.1c:

3> initiate transmission of the *RRCEarlyDataRequest* message in accordance with 5.3.3.3b;

2> else:

3> initiate transmission of the *RRCConnectionRequest* message in accordance with 5.3.3.3;

1> if stored, discard *mt-EDT*;

NOTE 2: Upon initiating the connection establishment procedure, the UE is not required to ensure it maintains up to date system information applicable only for UEs in RRC\_IDLE state or UEs in RRC\_INACTIVE. However, the UE needs to perform system information acquisition upon cell re-selection.

For NB-IoT, upon initiation of the procedure, the UE shall:

1> if theUEis connected to EPC:

2> if theUEis establishing or resuming the RRC connection for mobile originating exception data;or

2> if theUEis establishing or resuming the RRC connection for mobile originating data;or

2> if theUEis establishing or resuming the RRC connection for delay tolerant access;or

2> if theUEis establishing or resuming the RRC connection for mobile originating signalling;

3> perform access barring check as specified in 5.3.3.14;

3> if access to the cell is barred:

4> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication and that access barring is applicable, upon which the procedure ends;

1> if the UE is connected to 5GC:

2> if the Access Category provided by the upper layers is different from '0':

3> perform access barring check for per-NRSRP barring as specified in 5.3.3.14;

3> if access to the cell is barred:

4> inform upper layers about the failure to establish the RRC connection or failure to resume the RRC connection with suspend indication, upon which the procedure ends;

3> else:

4> perform the unified access control procedure as specified in 5.3.16 using the Access Category and Access Identities provided by upper layers;

4> if the access attempt is barred, the procedure ends;

1> if the UE is establishing or resuming an RRC connection:

2> if the UE has a stored *pur-Config* and the cell is different from the cell where *pur-Config* was provided:

3> if *pur-TimeAlignmentTimer* is configured, indicate to lower layers that *pur-TimeAlignmentTimer* is released;

3> release *pur-Config*;

3> discard previously stored *pur-Config*;

1> apply the default physical channel configuration as specified in 9.2.4;

1> apply the default MAC main configuration as specified in 9.2.2;

1> apply the CCCH configuration as specified in 9.1.1.2;

1> start timer T300;

1> if the UE is establishing an RRC connection:

2> if stored, discard the UE AS context and *resumeIdentity*;

2> if the UE is initiating CP-EDT in accordance with conditions in 5.3.3.1b; or

2> if the UE is initiating CP transmission using PUR in accordance with conditions in 5.3.3.1c:

3> initiate transmission of the *RRCEarlyDataRequest* message in accordance with 5.3.3.3b;

2> else:

3> initiate transmission of the *RRCConnectionRequest* message in accordance with 5.3.3.3;

1> else if the UE is resuming an RRC connection:

2> release *schedulingRequestConfig*, if configured;

2> initiate transmission of the *RRCConnectionResumeRequest* message in accordance with 5.3.3.3a;

1> if stored, discard *mt-EDT*;

NOTE 3: Upon initiating the connection establishment or resumption procedure, the UE is not required to ensure it maintains up to date system information applicable only for UEs in RRC\_IDLE state. However, the UE needs to perform system information acquisition upon cell re-selection.

NOTE 4: For EDT and transmission using PUR, upon initiating the connection establishment or resumption procedure, it is up to UE implementation whether to continue cell re-selection related measurements as well as cell re-selection evaluation and, if the conditions for cell re-selection are fulfilled, whether to perform cell re-selection as specified in 5.3.3.5.

/\*end of second change\*/

/\*start of third change\*/

#### 5.3.10.9 Other configuration

The UE shall:

1> if the received *otherConfig* includes the *reportProximityConfig*:

2> if *proximityIndicationEUTRA* is set to *enabled*:

3> consider itself to be configured to provide proximity indications for E-UTRA frequencies in accordance with 5.3.14;

2> else:

3> consider itself not to be configured to provide proximity indications for E-UTRA frequencies;

2> if *proximityIndicationUTRA* is set to *enabled*:

3> consider itself to be configured to provide proximity indications for UTRA frequencies in accordance with 5.3.14;

2> else:

3> consider itself not to be configured to provide proximity indications for UTRA frequencies;

1> if the received *otherConfig* includes the *obtainLocation*:

2> attempt to have detailed location information available for any subsequent measurement report;

NOTE 1: The UE is requested to attempt to have valid detailed location information available whenever sending a measurement report for which it is configured to include available detailed location information. The UE may not succeed e.g. because the user manually disabled the GPS hardware, due to no/poor satellite coverage. Further details, e.g. regarding when to activate GNSS, are up to UE implementation.

NOTE 1a: Any subsequent measurement report includes RLF report and SCGFailureInformationNR.

1> if the received *otherConfig* includes the *bt-NameListConfig*:

2> if *bt-NameListConfig* is set to *setup*, attempt to have Bluetooth measurement results available for subsequent measurement report;

1> if the received *otherConfig* includes the *wlan-NameListConfig*:

2> if *wlan-NameListConfig* is set to *setup*, attempt to have WLAN measurement results available for subsequent measurement report;

1> if the received *otherConfig* includes the *measUncomBarPre*:

2> if *measUncomBarPre* is set to *true*, attempt to have barometer measurement results available for subsequent measurement report;

NOTE 2: The UE is requested to attempt to have valid Bluetooth measurements, WLAN measurements and Uncompensated Barometric Pressure Sensor measurements whenever sending a measurement report for which it is configured to include these measurements. The UE may not succeed e.g. because the user manually disabled the WLAN, Bluetooth or Sensor hardware. Further details, e.g. regarding when to activate WLAN, Bluetooth or Sensor, are up to UE implementation.

1> if the received *otherConfig* includes the *idc-Config*:

2> if *idc-Indication* is included (i.e. set to *setup*):

3> consider itself to be configured to provide IDC indications in accordance with 5.6.9;

3> if *idc-Indication-UL-CA* is included (i.e. set to *setup*):

4> consider itself to be configured to indicate UL CA related information in IDC indications in accordance with 5.6.9;

3> if *idc-HardwareSharingIndication* is included (i.e. set to setup):

4> consider itself to be configured to indicate IDC hardware sharing problem indications in IDC indications in accordance with 5.6.9;

3> if *idc-Indication-MRDC* is included (i.e. set to *setup*):

4> consider itself to be configured to provide IDC indications for MR-DC in accordance with 5.6.9;

2> else:

3> consider itself not to be configured to provide IDC indications;

2> if *autonomousDenialParameters* is included:

3> consider itself to be allowed to deny any transmission in a particular UL subframe if during the number of subframes indicated by *autonomousDenialValidity*, preceeding and including this particular subframe, it autonomously denied fewer UL subframes than indicated by *autonomousDenialSubframes*;

2> else:

3> consider itself not to be allowed to deny any UL transmission;

1> if the received *otherConfig* includes the *powerPrefIndicationConfig*:

2> if *powerPrefIndicationConfig* is set to *setup*:

3> consider itself to be configured to provide power preference indications in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to provide power preference indications;

1> if the received *otherConfig* includes the sps-*AssistanceInfoReport*:

2> if *sps-AssistanceInfoReport* is set to TRUE:

3> consider itself to be configured to provide SPS assistance information in accordance with 5.6.10;

2> else

3> consider itself not to be configured to provide SPS assistance information;

1> if the received *otherConfig* includes the *bw-PreferenceIndicationTimer*:

2> consider itself to be configured to provide maximum PDSCH/PUSCH bandwidth preference indication in accordance with 5.6.10;

1> else:

2> consider itself not to be configured to provide maximum PDSCH/PUSCH bandwidth indication preference;

1> if the received *otherConfig* includes the *delayBudgetReportingConfig*:

2> if *delayBudgetReportingConfig* is set to *setup*:

3> consider itself to be configured to send delay budget reports in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to send delay budget reports and stop timer T342, if running;

1> if the received *otherConfig* includes the *overheatingAssistanceConfig*:

2> if *overheatingAssistanceConfig* is set to *setup*:

3> consider itself to be configured to provide overheating assistance information in accordance with 5.6.10;

3> if *overheatingAssistanceConfigForSCG* is included:

4> if *overheatingAssistanceConfigForSCG* is set to true:

5> consider itself to be configured to provide overheating assistance information for NR SCG in accordance with 5.6.10;

4> else if *overheatingAssistanceConfigForSCG* is set to false:

5> consider itself not to be configured to provide overheating assistance information for NR SCG and stop timer T345, if running;

2> else:

3> consider itself not to be configured to provide overheating assistance information and stop timer T345, if running;

1> for BL UEs or UEs in CE, if the received *otherConfig* includes the *rlm-ReportConfig*:

2> if *rlm-ReportConfig* is set to *setup*:

3> consider itself to be configured to detect "early-out-of-sync" and "early-in-sync" RLM events as specified in 5.3.11;

3> if *rlmReportRep-MPDCCH* is set to *setup*:

4> consider itself to be configured to report *rlmReportRep-MPDCCH* in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to detect "early-out-of-sync" and "early-in-sync" RLM events and stop timer T343, timer T344, timer T314 and timer T315 if running;

1> if the received *otherConfig* includes the *measConfigAppLayer*:

2> if *measConfigAppLayer* is set to setup:

3> forward *measConfigAppLayerContainer* to upper layers considering the *serviceType*;

3> consider itself to be configured to send application layer measurement report in accordance with 5.6.19;

2> else:

3> inform upper layers to clear the stored application layer measurement configuration;

3> discard received application layer measurement report information from upper layers;

3> consider itself not to be configured to send application layer measurement report.

1> if the received *otherConfig* includes the *ailc-BitConfig*:

2> if *ailc-BitConfig* is set to TRUE:

3> consider itself to be configured to provide assistance information bit for local cache as specified in TS 36.323 [8], clause 6.2.3;

2> else:

3> consider itself not to be configured to provide assistance information bit for local cache;

/\*end of third change\*/

/\* start of fourth change \*/

#### 5.5.5.1 General



Figure 5.5.5.1-1: Measurement reporting

The purpose of this procedure is to transfer measurement results from the UE to E-UTRAN. The UE shall initiate this procedure only after successful security activation.

For the *measId* for which the measurement reporting procedure was triggered, the UE shall set the *measResults* within the *MeasurementReport* message as follows:

1> set the *measId* to the measurement identity that triggered the measurement reporting;

1> set the *measResultPCell* to include the quantities of the PCell;

1> set the *measResultServFreqList* to include for each E-UTRA SCell that is configured, if any, within *measResultSCell* the quantities of the concerned SCell, if available according to performance requirements in TS 36.133 [16], except if *purpose* for the *reportConfig* associated with the *measId* that triggered the measurement reporting is set to *reportLocation*;

1> if the *reportConfig* associated with the *measId* that triggered the measurement reporting includes *reportAddNeighMeas*:

2> for each E-UTRA serving frequency for which *measObjectId* is referencedin the *measIdList*, other than the frequency corresponding with the *measId* that triggered the measurement reporting:

3> set the *measResultServFreqList* to include within *measResultBestNeighCell* the *physCellId* and the quantities of the best non-serving cell, based on RSRP, on the concerned serving frequency;

1> if the *triggerType* is set to *event*; and if the corresponding measObject concerns NR; and if *eventId* is set to *eventB1-NR* or *eventB2-NR*; or

1> if the *triggerType* is set to *event*; and if *eventId* is set to *eventA3* or *eventA4* or *eventA5*:

2> if *purpose* for the *reportConfig* or *reportConfigInterRAT* associated with the *measId* that triggered the measurement reporting is set to a value other than *reportLocation*:

3> set the *measResultServFreqListNR* to include for each NR serving frequency that the UE is configured to measure according to TS 38.331 [82], if any, the following:

4> set *measResultSCell* to include the available results of the NR serving cell, as specified in 5.5.5.2;

4> if the *reportConfig* associated with the *measId* that triggered the measurement reporting includes *reportAddNeighMeas* and if *eventId* is set to *eventA3* or *eventA4* or *eventA5*:

5> set *measResultBestNeighCell* to include the available results, as specified in 5.5.5.2, of the non-serving cell with the highest sorting quantity determined as specified in 5.5.5.3;

3> for each (serving or neighbouring) cell for which the UE reports results according to the previous, additionally include available beam results according to the following:

4> if *maxReportRS-Index* is configured, set *measResultRS-IndexList* to include available results, as specified in 5.5.5.2, of up to *maxReportRS-Index* beams, ordered based on the quantity determined as specified in 5.5.5.3;

1> if there is at least one applicable neighbouring cell to report:

2> set the *measResultNeighCells* to include the best neighbouring cells up to *maxReportCells* in accordance with the following:

3> if the *triggerType* is set to *event*:

4> include the cells included in the *cellsTriggeredList* as defined within the *VarMeasReportList* for this *measId*;

3> else:

4> include the applicable cells for which the new measurement results became available since the last periodical reporting or since the measurement was initiated or reset;

NOTE 1: The reliability of the report (i.e. the certainty it contains the strongest cells on the concerned frequency) depends on the measurement configuration i.e. the *reportInterval*. The related performance requirements are specified in TS 36.133 [16].

3> for each cell that is included in the *measResultNeighCells*, include the *physCellId*;

3> if the *triggerType* is set to *event*; or the *purpose* is set to *reportStrongestCells* or to *reportStrongestCellsForSON*:

4> for each included cell, include the layer 3 filtered measured results in accordance with the *reportConfig* for this *measId*, ordered as follows:

5> if the *measObject* associated with this *measId* concerns E-UTRA:

6> set the *measResult* to include the quantity(ies) indicated in the *reportQuantity* within the concerned *reportConfig*;

6> sort the included cells in order of decreasing *triggerQuantity*, i.e. the best cell is included first;

5> if the *measObject* associated with this *measId* concerns NR:

6> set the *measResultCell* to include the quantity(ies) indicated in the *reportQuantityCellNR* within the concerned *reportConfig*;

6> if *maxReportRS-Index* and *reportQuantityRS-IndexNR* are configured, set *measResultRS-IndexList* to include the result of the best beam if *threshRS-Index* is included in the *VarMeasConfig* for the corresponding *measObject*, and the remaining beams whose quantity is above *threshRS-Index*, up to *maxReportRS-Index* beams in total:

7> order beams based on the sorting quantity determined as specified in 5.5.5.3;

7> for each included beam:

8> include *ssbIndex*;

8> if *reportRS-IndexResultsNR* is set to TRUE, for each quantity indicated, include the corresponding measurement result in *measResultSSB-Index* for each *ssb-Index*;

6> sort the included cells in order of decreasing sorting quantity determined as specified in 5.5.5.3;

5> if the *measObject* associated with this *measId* concerns UTRA FDD and if *ReportConfigInterRAT* includes the *reportQuantityUTRA-FDD*:

6> set the *measResult* to include the quantities indicated by the *reportQuantityUTRA-FDD* in order of decreasing *measQuantityUTRA-FDD* within the *quantityConfig*, i.e. the best cell is included first;

5> if the *measObject* associated with this *measId* concerns UTRA FDD and if *ReportConfigInterRAT* does not include the *reportQuantityUTRA-FDD*; or

5> if the *measObject* associated with this *measId* concerns UTRA TDD, GERAN or CDMA2000:

6> set the *measResult* to the quantity as configured for the concerned RAT within the *quantityConfig* in order of either decreasing quantity for UTRA and GERAN or increasing quantity for CDMA2000 *pilotStrength*, i.e. the best cell is included first;

3> else if the *purpose* is set to *reportCGI* and the corresponding *measObject* concerns a RAT other than NR:

4> if the mandatory present fields of the *cgi-Info* for the cell indicated by the *cellForWhichToReportCGI* in the associated *measObject* have been obtained:

5> if the *includeMultiBandInfo* is configured:

6> include the *freqBandIndicator*;

6> if the cell broadcasts the *multiBandInfoList*, include the *multiBandInfoList*;

6> if the cell broadcasts the *freqBandIndicatorPriority*, include the *freqBandIndicatorPriority*;

5> if the cell broadcasts a CSG identity:

6> include the *csg-Identity*;

6> include the *csg-MemberStatus* and set it to *member* if the cell is a CSG member cell;

5> if the *si-RequestForHO* is configured within the *reportConfig* associated with this *measId*:

6> include the *cgi-Info* containing all the fields other than the *plmn-IdentityList* that have been successfully acquired;

6> include, within the *cgi-Info*, the field *plmn-IdentityList* in accordance with the following:

7> if the cell is a CSG member cell, determine the subset of the PLMN identities, starting from the second entry of PLMN identities in the broadcast information, that meet the following conditions:

a) equal to the RPLMN or an EPLMN; and

b) the CSG whitelist of the UE includes an entry comprising of the concerned PLMN identity and the CSG identity broadcast by the cell;

7> if the subset of PLMN identities determined according to the previous includes at least one PLMN identity, include the *plmn-IdentityList* and set it to include this subset of the PLMN identities;

7> if the cell is a CSG member cell, include the *primaryPLMN-Suitable* if the primary PLMN meets conditions a) and b) specified above;

7> if the cell does not broadcast *csg-Identity* and the UE is capable of reporting the *plmn-IdentityList* from cells not broadcasting *csg-Identity*:

8> include in the plmn-IdentityList the list of identities starting from the second entry of PLMN identities in the broadcast information;

5> else:

6> include the *cgi-Info* containing all the fields that have been successfully acquired and in accordance with the following:

7> include in the *plmn-IdentityList* the list of identities starting from the second entry of PLMN Identities in the broadcast information;

4> if the *cellAccessRelatedInfoList-5GC* has been acquired:

5> include *cgi-Info-5GC*;

NOTE 1a: The UE may include the *cgi-Info-5GC* even when the N1 mode is disabled.

3> else if the *purpose* is set to *reportCGI* and the corresponding *measObject* concerns NR RAT:

4> if the Cell information of *cgi-Info* for the cell indicated by the *cellForWhichToReportCGI* in the associated *measObject* has been obtained:

5> include *plmn-IdentityInfoList* including *plmn-IdentityList*, *trackingAreaCode* (if available), *ran-AreaCode* (if available) and *cellIdentity* for each entry of the *plmn-IdentityInfoList*;

5> include *frequencyBandList* if broadcasted;

4> else if MIB associated with the concerned *measObject* indicates that SIB1 is not broadcast*:*

5> include the *noSIB1* field;

1> for the cells included according to the previous (i.e. covering the PCell, the SCells, the best non-serving cells on serving frequencies as well as neighbouring EUTRA cells) include results according to the extended RSRQ if corresponding results are available according to the associated performance requirements defined in TS 36.133 [16];

1> if there is at least one applicable CSI-RS resource to report:

2> set the *measResultCSI-RS-List* to include the best CSI-RS resources up to *maxReportCells* in accordance with the following:

3> if the *triggerType* is set to *event*:

4> include the CSI-RS resources included in the *csi-RS-TriggeredList* as defined within the *VarMeasReportList* for this *measId*;

3> else:

4> include the applicable CSI-RS resources for which the new measurement results became available since the last periodical reporting or since the measurement was initiated or reset;

NOTE 2: The reliability of the report (i.e. the certainty it contains the strongest CSI-RS resources on the concerned frequency) depends on the measurement configuration i.e. the *reportInterval*. The related performance requirements are specified in TS 36.133 [16].

3> for each CSI-RS resource that is included in the *measResultCSI-RS-List*:

4> include the *measCSI-RS-Id*;

4> include the layer 3 filtered measured results in accordance with the *reportConfig* for this *measId*, ordered as follow:

5> set the *csi-RSRP-Result* to include the quantity indicated in the *reportQuantity* within the concerned *reportConfig* in order of decreasing *triggerQuantityCSI-RS*, i.e. the best CSI-RS resource is included first;

4> if *reportCRS-Meas* is set to *true* within the associated *reportConfig*, and the cell indicated by *physCellId* of this CSI-RS resource is not a serving cell:

5> set the *measResultNeighCells* to include the cell indicated by *physCellId* of this CSI-RS resource, and include the *physCellId*;

5> set the *rsrpResult* to include the RSRP of the concerned cell, if available according to performance requirements in TS 36.133 [16];

5> set the *rsrqResult* to include the RSRQ of the concerned cell, if available according to performance requirements in TS 36.133 [16];

1> if the *ue-RxTxTimeDiffPeriodical* is configured within the corresponding *reportConfig* for this *measId*;

2> set the *ue-RxTxTimeDiffResult* to the measurement result provided by lower layers;

2> set the *currentSFN*;

1> if the *measRSSI-ReportConfig* is configured within the corresponding *reportConfig* for this *measId:*

2> set the *rssi-Result* to the average of sample value(s) provided by lower layers in the *reportInterval*;

2> set the *channelOccupancy* to the rounded percentage of sample values which are beyond to the *channelOccupancyThreshold* within all the sample values in the *reportInterval*;

1> if the *measRSSI-ReportConfigNR* is configured within the corresponding *reportConfigInterRAT* for this *measId:*

2> set the *rssi-ResultNR* to the average of sample value(s) provided by lower layers in the *reportInterval*;

2> set the *channelOccupancyNR* to the rounded percentage of sample values which are beyond to the *channelOccupancyThresholdNR* within all the sample values in the *reportInterval*;

1> if uplink PDCP delay results are available:

2> set the *ul-PDCP-DelayResultList* to include the uplink PDCP delay results available;

1> if uplink PDCP delay value results are available:

2> set the *ul-PDCP-DelayValueResultList* to include the corresponding average uplink PDCP delay values;

1> if the *includeLocationInfo* is configured in the corresponding *reportConfig* for this *measId* or if *purpose* for the *reportConfig* associated with the *measId* that triggered the measurement reporting is set to *reportLocation*; and detailed location information that has not been reported is available, set the content of the *locationInfo* as follows:

2> include the *locationCoordinates*;

2> if available, include the *gnss-TOD-msec*, except if *purpose* for the *reportConfig* associated with the *measId* that triggered the measurement reporting is set to *reportLocation*;

2> include the *verticalVelocityInfo*, if available;

1> if the *includeWLAN-Meas* is configured in the corresponding *reportConfig* for this *measId*, set the *measResults* as follows:

2> if available, include the *logMeasResultListWLAN*, in order of decreasing RSSI for WLAN APs;

1> if the *includeBT-Meas* is configured in the corresponding *reportConfig* for this *measId*, set the *measResults* as follows:

2> if available, include the *logMeasResultListBT*, in order of decreasing RSSI for Bluetooth beacons;

1> if the *includeUncomBarPreMeas* is configured in the corresponding *reportConfig* for this *measId*, set the *measResults* as follows:

2> if available, include the *uncomBarPreMeasResult*;

1> if the *reportSSTD-Meas* is set to *true* or *pSCell* within the corresponding *reportConfig* for this *measId*:

2> set the *measResultSSTD* to the measurement results provided by lower layers;

1> if the *reportSFTD-Meas* is set to *neighborCells* or *pSCell* within the corresponding *reportConfigInterRAT* for this *measId*, for each applicable cell for which results are available:

2> set *sfn-OffsetResult* and *frameBoundaryOffsetResult* to the measurement results provided by lower layers;

2> if the *ss-rsrp* in the *reportQuantityCellNR* is set to *TRUE* within the corresponding *reportConfigInterRAT* for this *measId*:

3> include *rsrpResult* set to the RSRP of the concerned cell;

1> if there is at least one applicable transmission resource pool to report:

2> set the *measResultListCBR* to include the CBR measurement results in accordance with the following:

3> if the *triggerType* is set to *event*:

4> include the transmission resource pools included in the *poolsTriggeredList* as defined within the *VarMeasReportList* for this *measId*;

3> else:

4> include the applicable transmission resource pools for which the new measurement results became available since the last periodical reporting or since the measurement was initiated or reset;

3> for each transmission resource pool to be reported:

4> set the *poolIdentity* to the *poolReportId* of this transmission resource pool;

4> if *adjacencyPSCCH-PSSCH* is set to *TRUE* for this transmission resource pool:

5> set the *cbr-PSSCH* to the CBR measurement result on PSSCH and PSCCH of this transmission resource pool provided by lower layers;

4> else:

5> set the *cbr-PSSCH* to the CBR measurement result on PSSCH of this transmission resource pool provided by lower layers if available;

5> set the *cbr-PSCCH* to the CBR measurement result on PSCCH of this transmission resource pool provided by lower layers if available;

2> set the *measResultSensing* to include the sensing measurement results in accordance with the following:

3> include the applicable transmission resource pools for which the new measurement results became available since the last periodical reporting or since the measurement was initiated or reset;

3> for each transmission resource pool to be reported:

4> set the *sensingResult* to the sensing measurement results provided by the lower layers;

1> if the *triggerType* is set to *event*; and if *eventId* is set to *eventH1* or *eventH2*:

2> set the *heightUE* to include the altitude of the UE;

1> increment the *numberOfReportsSent* as defined within the *VarMeasReportList* for this *measId* by 1;

1> stop the periodical reporting timer, if running;

1> if the *numberOfReportsSent* as defined within the *VarMeasReportList* for this *measId* is less than the *reportAmount* as defined within the corresponding *reportConfig* for this *measId*:

2> start the periodical reporting timer with the value of *reportInterval* as defined within the corresponding *reportConfig* for this *measId*;

1> else:

2> if the *triggerType* is set to *periodical*:

3> remove the entry within the *VarMeasReportList* for this *measId*;

3> remove this *measId* from the *measIdList* within *VarMeasConfig*;

1> if the measured results are for CDMA2000 HRPD:

2> set the *preRegistrationStatusHRPD* to the UE's CDMA2000 upper layer's HRPD *preRegistrationStatus*;

1> if the measured results are for CDMA2000 1xRTT:

2> set the preRegistrationStatusHRPD to *FALSE*;

1> if the measured results are for WLAN:

2> set the *measResultListWLAN* to include the quantities within the *quantityConfigWLAN* for up to *maxReportCells* WLAN(s), determined according to the following:

3> include WLAN the UE is connected to, if any;

3> if *reportAnyWLAN* is set to TRUE:

4> consider WLAN with any WLAN identifiers to be applicable for measurement reporting;

3> else:

4> consider only WLANs which do not match all WLAN identifiers of any entry within *wlan-MobilitySet* in *VarWLAN-MobilityConfig* to be applicable for measurement reporting;

3> include applicable WLAN in order of decreasing WLAN RSSI, i.e. the best WLAN is included first;

2> for each included WLAN:

3> set *wlan-Identifiers* to include all WLAN identifiers that can be acquired for the WLAN measured;

3> set *connectedWLAN* to *TRUE* if the UE is connected to the WLAN measured;

3> if *reportQuantityWLAN* existswithin the *ReportConfigInterRAT* within the *VarMeasConfig* for this *measId*:

4> if *bandRequestWLAN* is set to *TRUE*:

5> set *bandWLAN* to include WLAN band of the WLAN measured;

4> if *carrierInfoRequestWLAN* is set to *TRUE*:

5> set *carrierInfoWLAN* to include WLAN carrier information of the WLAN measured if it can be acquired;

4> if *availableAdmissionCapacityRequestWLAN* is set to *TRUE*:

5> set the *measResult* to include *avaiableAdmissionCapacityWLAN* if it can be acquired;

4> if *backhaulDL-BandwidthRequestWLAN* is set to *TRUE*:

5> set the *measResult* to include *backhaulDL-BandwidthWLAN* if it can be acquired;

4> if *backhaulUL-BandwidthRequestWLAN* is set to *TRUE*:

5> set the *measResult* to include *backhaulUL-BandwidthWLAN* if it can be acquired;

4> if *channelUtilizationRequestWLAN* is set to *TRUE*:

5> set the *measResult* to include *channelUtilizationWLAN* if it can be acquired;

4> if *stationCountRequestWLAN* is set to *TRUE*:

5> set the *measResult* to include *stationCountWLAN* if it can be acquired;

1> if the measurement configuration that triggered the measurement reporting procedure was configured by an *sl-ConfigDedicatedEUTRA* that was received within an NR *RRCReconfiguration* message:

2> submit the *MeasurementReport* message via SRB1 embedded in NR RRC message *ULInformationTransferIRAT* as specified in TS 38.331 [82].

1> else if the UE is configured with NE-DC:

2> submit the *MeasurementReport* message via SRB1 embedded in NR RRC message *ULInformationTransferMRDC* as specified in TS 38.331 [82].

1> else:

2> submit the *MeasurementReport* message to lower layers for transmission, upon which the procedure ends;

/\* end of fourth change \*/

/\* start of fifth change \*/

#### 5.6.6.3 Reception of the *LoggedMeasurementConfiguration* by the UE

Upon receiving the *LoggedMeasurementConfiguration* message the UE shall:

1> discard the logged measurement configuration as well as the logged measurement information as specified in 5.6.7;

1> store the received *loggingDuration*, *loggingInterval* and *areaConfiguration*, if included, in *VarLogMeasConfig*;

1> if the *LoggedMeasurementConfiguration* message includes *plmn-IdentityList*:

2> set *plmn-IdentityList* in *VarLogMeasReport* to include the RPLMN as well as the PLMNs included in *plmn-IdentityList*;

1> else:

2> set *plmn-IdentityList* in *VarLogMeasReport* to include the RPLMN;

1> store the received *absoluteTimeInfo*, *traceReference,* *traceRecordingSessionRef* and *tce-Id* in *VarLogMeasReport*;

1> store the received *targetMBSFN-AreaList*, if included, in *VarLogMeasConfig*;

1> store the received *bt-NameList*, if included, in *VarLogMeasConfig*;

1> store the received *wlan-NameList*, if included, in *VarLogMeasConfig*;

1> store the received *measUncomBarPre*, if included, in *VarLogMeasConfig*;

1> start timer T330 with the timer value set to the *loggingDuration*;

/\* end of fifth change \*/

/\* start of sixth change \*/

#### 5.6.8.2 Initiation

While T330 is running, the UE shall:

1> if measurement logging is suspended:

2> if during the last logging interval the IDC problems detected by the UE is resolved, resume measurement logging;

1> if not suspended, perform the logging in accordance with the following:

2> if *targetMBSFN-AreaList* is included in *VarLogMeasConfig*:

3> if the UE is camping normally on an E-UTRA cell or is connected to E-UTRA; and

3> if the RPLMN is included in *plmn-IdentityList* stored in *VarLogMeasReport*;and

3> if the PCell (in RRC\_CONNECTED) or cell where the UE is camping (in RRC\_IDLE) is part of the area indicated by *areaConfiguration* if configured in *VarLogMeasConfig*:

4> for MBSFN areas, indicated in *targetMBSFN-AreaList,* from which the UE is receiving MBMS service:

5> perform MBSFN measurements in accordance with the performance requirements as specified in TS 36.133 [16];

NOTE 1: When configured to perform MBSFN measurement logging by *targetMBSFN-AreaList*, the UE is not required to receive additional MBSFN subframes, i.e. logging is based on the subframes corresponding to the MBMS services the UE is receiving.

5> perform logging at regular time intervals as defined by the *loggingInterval* in *VarLogMeasConfig,* but only for those intervals for which MBSFN measurement results are available as specified in TS 36.133 [16];

2> else if:

3> if the UE is in *any cell selection* state (as specified in TS 36.304 [4]):

4> perform the logging at regular time intervals, as defined by the *loggingInterval* in *VarLogMeasConfig*;

3> else if the UE is camping normally on an E-UTRA cell and if the RPLMN is included in *plmn-IdentityList* stored in *VarLogMeasReport* and, if the cell is part of the area indicated by *areaConfiguration* if configured in *VarLogMeasConfig*:

4> perform the logging at regular time intervals, as defined by the *loggingInterval* in *VarLogMeasConfig*;

2> when adding a logged measurement entry in *VarLogMeasReport*, include the fields in accordance with the following:

3> if the UE detected IDC problems during the last logging interval:

4> if *measResultServCell* in *VarLogMeasReport* is not empty:

5> include *inDeviceCoexDetected*;

5> suspend measurement logging from the next logging interval;

4> else:

5> suspend measurement logging;

NOTE 1A: The UE may detect the start of IDC problems as early as Phase 1 as described in clause 23.4 of TS 36.300 [9].

3> set the *relativeTimeStamp* to indicate the elapsed time since the moment at which the logged measurement configuration was received;

3> if detailed location information became available during the last logging interval, set the content of the *locationInfo* as follows:

4> include the *locationCoordinates*;

3> if *wlan-NameList* is included in *VarLogMeasConfig*:

4> if detailed WLAN measurements are available:

5> include *logMeasResultListWLAN*, in order of decreasing RSSI for WLAN APs;

3> if *bt-NameList* is included in *VarLogMeasConfig*:

4> if detailed Bluetooth measurements are available:

5> include *logMeasResultListBT*, in order of decreasing RSSI for Bluetooth beacons;

3> if *measUncomBarPre* is included in *VarLogMeasConfig*:

4> if available, include the *uncomBarPreMeasResult*;

3> if *targetMBSFN-AreaList* is included in *VarLogMeasConfig*:

4> for each MBSFN area, for which the mandatory measurements result fields became available during the last logging interval:

5> set the *rsrpResultMBSFN*, *rsrqResultMBSFN* to include measurement results that became available during the last logging interval;

5> include the fields *signallingBLER-Result* or *dataBLER-MCH-ResultList* if the concerned BLER results are availble,

5> set the *mbsfn-AreaId* and *carrierFreq* to indicate the MBSFN area in which the UE is receiving MBSFN transmission;

4> if in RRC\_CONNECTED:

5> set the *servCellIdentity* to indicate global cell identity of the PCell;

5> set the *measResultServCell* to include the layer 3 filtered measured results of the PCell;

5> if available, set the *measResultNeighCells* to include the layer 3 filtered measured results of SCell(s) and neighbouring cell(s) measurements that became available during the last logging interval, in order of decreasing RSRP, for at most the following number of cells: 6 intra-frequency and 3 inter-frequency cells per frequency and according to the following:

6> for each cell included, include the optional fields that are available;

5> if available, optionally set the *measResultNeighCells* to include the layer 3 filtered measured results of neighbouring cell(s) measurements that became available during the last logging interval, in order of decreasing RSCP(UTRA)/RSSI(GERAN)/PilotStrength(cdma2000), for at most the following number of cells: 3 inter-RAT cells per frequency/set of frequencies (GERAN), and according to the following:

6> for each cell included, include the optional fields that are available;

4> if in RRC\_IDLE:

5> set the *servCellIdentity* to indicate global cell identity of the serving cell;

5> set the *measResultServCell* to include the quantities of the serving cell;

5> if available, set the *measResultNeighCells*, in order of decreasing ranking-criterion as used for cell re-selection, to include neighbouring cell measurements that became available during the last logging interval for at most the following number of neighbouring cells: 6 intra-frequency and 3 inter-frequency neighbours per frequency and according to the following:

6> for each neighbour cell included, include the optional fields that are available;

5> if available, optionally set the *measResultNeighCells,* in order of decreasing ranking-criterion as used for cell re-selection, to include neighbouring cell measurements that became available during the last logging interval, for at most the following number of cells: 3 inter-RAT cells per frequency/set of frequencies (GERAN), and according to the following:

6> for each cell included, include the optional fields that are available;

4> for the cells included according to the previous (i.e. covering previous and current serving cells as well as neighbouring EUTRA cells) include results according to the extended RSRQ if corresponding results are available according to the associated performance requirements defined in TS 36.133 [16];

4> for the cells included according to the previous (i.e. covering previous and current serving cells as well as neighbouring EUTRA cells) include RSRQ type if the result was based on measurements using a wider band or using all OFDM symbols;

NOTE 2: The UE includes the latest results in accordance with the performance requirements as specified in TS 36.133 [16]. E.g. RSRP and RSRQ results are available only if the UE has a sufficient number of results/ receives a sufficient number of subframes during the logging interval.

3> else:

4> if the UE is in *any cell selection* state (as specified in TS 36.304 [4]):

5> set *anyCellSelectionDetected* to indicate the detection of no suitable or no acceptable cell found;

5> set the *servCellIdentity* to indicate global cell identity of the last logged cell that the UE was camping on;

5> set the *measResultServCell* to include the quantities of the last logged cell the UE was camping on;

4> else:

5> set the *servCellIdentity* to indicate global cell identity of the cell the UE is camping on;

5> set the *measResultServCell* to include the quantities of the cell the UE is camping on;

4> if available, set the *measResultNeighCells*, in order of decreasing ranking-criterion as used for cell re-selection, to include neighbouring cell measurements that became available during the last logging interval for at most the following number of neighbouring cells: 6 intra-frequency and 3 inter-frequency neighbours per frequency as well as 3 inter-RAT neighbours, per frequency/ set of frequencies (GERAN) per RAT and according to the following:

5> for each neighbour cell included, include the optional fields that are available;

4> for the cells included according to the previous (i.e. covering previous and current serving cells as well as neighbouring EUTRA cells) include results according to the extended RSRQ if corresponding results are available according to the associated performance requirements defined in TS 36.133 [16];

4> for the cells included according to the previous (i.e. covering previous and current serving cells as well as neighbouring EUTRA cells) include RSRQ type if the result was based on measurements using a wider band or using all OFDM symbols;

NOTE 3: The UE includes the latest results of the available measurements as used for cell reselection evaluation in RRC\_IDLE or as used for evaluation of reporting criteria or for measurement reporting according to 5.5.3 in RRC\_CONNECTED, which are performed in accordance with the performance requirements as specified in TS 36.133 [16].

2> when the memory reserved for the logged measurement information becomes full, stop timer T330 and perform the same actions as performed upon expiry of T330, as specified in 5.6.6.4;

/\* end of sixth change \*/

/\* start of seventh change \*/

### 6.2.2 Message definitions

/\*Unaffected IEs are excluded\*/

#### – *LoggedMeasurementConfiguration*

The *LoggedMeasurementConfiguration* message is used by E-UTRAN to configure the UE to perform logging of measurement results while in RRC\_IDLE or to perform logging of measurement results for MBSFN while in both RRC\_IDLE and RRC\_CONNECTED. It is used to transfer the logged measurement configuration for network performance optimisation, see TS 37.320 [60].

Signalling radio bearer: SRB1

RLC-SAP: AM

Logical channel: DCCH

Direction: E-UTRAN to UE

*LoggedMeasurementConfiguration message*

-- ASN1START

LoggedMeasurementConfiguration-r10 ::= SEQUENCE {

criticalExtensions CHOICE {

c1 CHOICE {

loggedMeasurementConfiguration-r10 LoggedMeasurementConfiguration-r10-IEs,

spare3 NULL, spare2 NULL, spare1 NULL

},

criticalExtensionsFuture SEQUENCE {}

}

}

LoggedMeasurementConfiguration-r10-IEs ::= SEQUENCE {

traceReference-r10 TraceReference-r10,

traceRecordingSessionRef-r10 OCTET STRING (SIZE (2)),

tce-Id-r10 OCTET STRING (SIZE (1)),

absoluteTimeInfo-r10 AbsoluteTimeInfo-r10,

areaConfiguration-r10 AreaConfiguration-r10 OPTIONAL, -- Need OR

loggingDuration-r10 LoggingDuration-r10,

loggingInterval-r10 LoggingInterval-r10,

nonCriticalExtension LoggedMeasurementConfiguration-v1080-IEs OPTIONAL

}

LoggedMeasurementConfiguration-v1080-IEs ::= SEQUENCE {

lateNonCriticalExtension-r10 OCTET STRING OPTIONAL,

nonCriticalExtension LoggedMeasurementConfiguration-v1130-IEs OPTIONAL

}

LoggedMeasurementConfiguration-v1130-IEs ::= SEQUENCE {

plmn-IdentityList-r11 PLMN-IdentityList3-r11 OPTIONAL, -- Need OR

areaConfiguration-v1130 AreaConfiguration-v1130 OPTIONAL, -- Need OR

nonCriticalExtension LoggedMeasurementConfiguration-v1250-IEs OPTIONAL

}

LoggedMeasurementConfiguration-v1250-IEs ::= SEQUENCE {

targetMBSFN-AreaList-r12 TargetMBSFN-AreaList-r12 OPTIONAL, -- Need OP

nonCriticalExtension LoggedMeasurementConfiguration-v1530-IEs OPTIONAL

}

LoggedMeasurementConfiguration-v1530-IEs ::= SEQUENCE {

bt-NameList-r15 BT-NameList-r15 OPTIONAL, --Need OR

wlan-NameList-r15 WLAN-NameList-r15 OPTIONAL, --Need OR

nonCriticalExtension LoggedMeasurementConfiguration-v17xy-IEs OPTIONAL

}

LoggedMeasurementConfiguration-v17xy-IEs ::= SEQUENCE {

measUncomBarPre-r17 ENUMERATED {true} OPTIONAL, --Need OR

nonCriticalExtension SEQUENCE {} OPTIONAL

}

TargetMBSFN-AreaList-r12 ::= SEQUENCE (SIZE (0..maxMBSFN-Area)) OF TargetMBSFN-Area-r12

TargetMBSFN-Area-r12 ::= SEQUENCE {

mbsfn-AreaId-r12 MBSFN-AreaId-r12 OPTIONAL, -- Need OR

carrierFreq-r12 ARFCN-ValueEUTRA-r9,

...

}

-- ASN1STOP

| *LoggedMeasurementConfiguration* field descriptions |
| --- |
| ***absoluteTimeInfo***  Indicates the absolute time in the current cell. |
| ***areaConfiguration***  Used to restrict the area in which the UE performs measurement logging to cells broadcasting either one of the included cell identities or one of the included tracking area codes/ identities. |
| ***measUncomBarPre***  If configured, the UE attempts to perform the uncompensated Barometeric pressure measurement as defined in TS 37.355 [XX]. |
| ***plmn-IdentityList***  Indicates a set of PLMNs defining when the UE performs measurement logging as well as the associated status indication and information retrieval i.e. the UE performs these actions when the RPLMN is part of this set of PLMNs. |
| ***targetMBSFN-AreaList***  Used to indicate logging of MBSFN measurements and further restrict the area and frequencies for which the UE performs measurement logging for MBSFN. If both MBSFN area id and carrier frequency are present, a specific MBSFN area is indicated. If only carrier frequency is present, all MBSFN areas on that carrier frequency are indicated. If there is no entry in the list, any MBSFN area is indicated. |
| ***tce-Id***  Parameter Trace Collection Entity Id: See TS 32.422 [58]. |
| ***traceRecordingSessionRef***  Parameter Trace Recording Session Reference: See TS 32.422 [58] |

/\*Unaffected IEs are excluded\*/

#### – *UEInformationResponse*

The *UEInformationResponse* message is used by the UE to transfer the information requested by the E-UTRAN.

Signalling radio bearer: SRB1 or SRB2 (when logged measurement information is included)

RLC-SAP: AM

Logical channel: DCCH

Direction: UE to E-UTRAN

*UEInformationResponse message*

-- ASN1START

UEInformationResponse-r9 ::= SEQUENCE {

rrc-TransactionIdentifier RRC-TransactionIdentifier,

criticalExtensions CHOICE {

c1 CHOICE {

ueInformationResponse-r9 UEInformationResponse-r9-IEs,

spare3 NULL, spare2 NULL, spare1 NULL

},

criticalExtensionsFuture SEQUENCE {}

}

}

UEInformationResponse-r9-IEs ::= SEQUENCE {

rach-Report-r9 RACH-Report-r16 OPTIONAL,

rlf-Report-r9 RLF-Report-r9 OPTIONAL,

nonCriticalExtension UEInformationResponse-v930-IEs OPTIONAL

}

-- Late non critical extensions

UEInformationResponse-v9e0-IEs ::= SEQUENCE {

rlf-Report-v9e0 RLF-Report-v9e0 OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

-- Regular non critical extensions

UEInformationResponse-v930-IEs ::= SEQUENCE {

lateNonCriticalExtension OCTET STRING (CONTAINING UEInformationResponse-v9e0-IEs) OPTIONAL,

nonCriticalExtension UEInformationResponse-v1020-IEs OPTIONAL

}

UEInformationResponse-v1020-IEs ::= SEQUENCE {

logMeasReport-r10 LogMeasReport-r10 OPTIONAL,

nonCriticalExtension UEInformationResponse-v1130-IEs OPTIONAL

}

UEInformationResponse-v1130-IEs ::= SEQUENCE {

connEstFailReport-r11 ConnEstFailReport-r11 OPTIONAL,

nonCriticalExtension UEInformationResponse-v1250-IEs OPTIONAL

}

UEInformationResponse-v1250-IEs ::= SEQUENCE {

mobilityHistoryReport-r12 MobilityHistoryReport-r12 OPTIONAL,

nonCriticalExtension UEInformationResponse-v1530-IEs OPTIONAL

}

UEInformationResponse-v1530-IEs ::= SEQUENCE {

measResultListIdle-r15 MeasResultListIdle-r15 OPTIONAL,

flightPathInfoReport-r15 FlightPathInfoReport-r15 OPTIONAL,

nonCriticalExtension UEInformationResponse-v1610-IEs OPTIONAL

}

UEInformationResponse-v1610-IEs ::= SEQUENCE {

rach-Report-v1610 RACH-Report-v1610 OPTIONAL,

measResultListExtIdle-r16 MeasResultListExtIdle-r16 OPTIONAL,

measResultListIdleNR-r16 MeasResultListIdleNR-r16 OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

RACH-Report-r16 ::= SEQUENCE {

numberOfPreamblesSent-r16 NumberOfPreamblesSent-r11,

contentionDetected-r16 BOOLEAN

}

RACH-Report-v1610 ::= SEQUENCE {

initialCEL-r16 INTEGER (0..3),

edt-Fallback-r16 BOOLEAN

}

RLF-Report-r9 ::= SEQUENCE {

measResultLastServCell-r9 SEQUENCE {

rsrpResult-r9 RSRP-Range,

rsrqResult-r9 RSRQ-Range OPTIONAL

},

measResultNeighCells-r9 SEQUENCE {

measResultListEUTRA-r9 MeasResultList2EUTRA-r9 OPTIONAL,

measResultListUTRA-r9 MeasResultList2UTRA-r9 OPTIONAL,

measResultListGERAN-r9 MeasResultListGERAN OPTIONAL,

measResultsCDMA2000-r9 MeasResultList2CDMA2000-r9 OPTIONAL

} OPTIONAL,

...,

[[ locationInfo-r10 LocationInfo-r10 OPTIONAL,

failedPCellId-r10 CHOICE {

cellGlobalId-r10 CellGlobalIdEUTRA,

pci-arfcn-r10 SEQUENCE {

physCellId-r10 PhysCellId,

carrierFreq-r10 ARFCN-ValueEUTRA

}

} OPTIONAL,

reestablishmentCellId-r10 CellGlobalIdEUTRA OPTIONAL,

timeConnFailure-r10 INTEGER (0..1023) OPTIONAL,

connectionFailureType-r10 ENUMERATED {rlf, hof} OPTIONAL,

previousPCellId-r10 CellGlobalIdEUTRA OPTIONAL

]],

[[ failedPCellId-v1090 SEQUENCE {

carrierFreq-v1090 ARFCN-ValueEUTRA-v9e0

} OPTIONAL

]],

[[ basicFields-r11 SEQUENCE {

c-RNTI-r11 C-RNTI,

rlf-Cause-r11 ENUMERATED {

t310-Expiry, randomAccessProblem,

rlc-MaxNumRetx, t312-Expiry-r12},

timeSinceFailure-r11 TimeSinceFailure-r11

} OPTIONAL,

previousUTRA-CellId-r11 SEQUENCE {

carrierFreq-r11 ARFCN-ValueUTRA,

physCellId-r11 CHOICE {

fdd-r11 PhysCellIdUTRA-FDD,

tdd-r11 PhysCellIdUTRA-TDD

},

cellGlobalId-r11 CellGlobalIdUTRA OPTIONAL

} OPTIONAL,

selectedUTRA-CellId-r11 SEQUENCE {

carrierFreq-r11 ARFCN-ValueUTRA,

physCellId-r11 CHOICE {

fdd-r11 PhysCellIdUTRA-FDD,

tdd-r11 PhysCellIdUTRA-TDD

}

} OPTIONAL

]],

[[ failedPCellId-v1250 SEQUENCE {

tac-FailedPCell-r12 TrackingAreaCode

} OPTIONAL,

measResultLastServCell-v1250 RSRQ-Range-v1250 OPTIONAL,

lastServCellRSRQ-Type-r12 RSRQ-Type-r12 OPTIONAL,

measResultListEUTRA-v1250 MeasResultList2EUTRA-v1250 OPTIONAL

]],

[[ drb-EstablishedWithQCI-1-r13 ENUMERATED {qci1} OPTIONAL

]],

[[ measResultLastServCell-v1360 RSRP-Range-v1360 OPTIONAL

]],

[[ logMeasResultListBT-r15 LogMeasResultListBT-r15 OPTIONAL,

logMeasResultListWLAN-r15 LogMeasResultListWLAN-r15 OPTIONAL

]],

[[ measResultListNR-r16 MeasResultCellListNR-r15 OPTIONAL,

previousNR-PCellId-r16 CellGlobalIdNR-r16 OPTIONAL,

failedNR-PCellId-r16 CHOICE {

cellGlobalId-r16 CellGlobalIdNR-r16,

pci-arfcn-r16 SEQUENCE {

physCellId-r16 PhysCellIdNR-r15,

carrierFreq-r16 ARFCN-ValueNR-r15

}

} OPTIONAL,

reconnectCellId-r16 CHOICE {

nrReconnectCellId-r16 CellGlobalIdNR-r16,

eutraReconnectCellId-r16 SEQUENCE {

cellGlobalId-r16 CellGlobalIdEUTRA,

trackingAreaCode-EPC-r16 TrackingAreaCode OPTIONAL,

trackingAreaCode-5GC-r16 TrackingAreaCode-5GC-r15 OPTIONAL

}

} OPTIONAL,

timeUntilReconnection-r16 TimeUntilReconnection-r16 OPTIONAL

]],

[[ measResultListNR-v1640 SEQUENCE {

carrierFreqNR-r16 ARFCN-ValueNR-r15

} OPTIONAL,

measResultListExtNR-r16 MeasResultFreqListNR-r16 OPTIONAL

]]

}

RLF-Report-v9e0 ::= SEQUENCE {

measResultListEUTRA-v9e0 MeasResultList2EUTRA-v9e0

}

MeasResultList2EUTRA-r9 ::= SEQUENCE (SIZE (1..maxFreq)) OF MeasResult2EUTRA-r9

MeasResultList2EUTRA-v9e0 ::= SEQUENCE (SIZE (1..maxFreq)) OF MeasResult2EUTRA-v9e0

MeasResultList2EUTRA-v1250 ::= SEQUENCE (SIZE (1..maxFreq)) OF MeasResult2EUTRA-v1250

MeasResult2EUTRA-r9 ::= SEQUENCE {

carrierFreq-r9 ARFCN-ValueEUTRA,

measResultList-r9 MeasResultListEUTRA

}

MeasResult2EUTRA-v9e0 ::= SEQUENCE {

carrierFreq-v9e0 ARFCN-ValueEUTRA-v9e0 OPTIONAL

}

MeasResult2EUTRA-v1250 ::= SEQUENCE {

rsrq-Type-r12 RSRQ-Type-r12 OPTIONAL

}

MeasResultList2UTRA-r9 ::= SEQUENCE (SIZE (1..maxFreq)) OF MeasResult2UTRA-r9

MeasResult2UTRA-r9 ::= SEQUENCE {

carrierFreq-r9 ARFCN-ValueUTRA,

measResultList-r9 MeasResultListUTRA

}

MeasResultList2CDMA2000-r9 ::= SEQUENCE (SIZE (1..maxFreq)) OF MeasResult2CDMA2000-r9

MeasResult2CDMA2000-r9 ::= SEQUENCE {

carrierFreq-r9 CarrierFreqCDMA2000,

measResultList-r9 MeasResultsCDMA2000

}

LogMeasReport-r10 ::= SEQUENCE {

absoluteTimeStamp-r10 AbsoluteTimeInfo-r10,

traceReference-r10 TraceReference-r10,

traceRecordingSessionRef-r10 OCTET STRING (SIZE (2)),

tce-Id-r10 OCTET STRING (SIZE (1)),

logMeasInfoList-r10 LogMeasInfoList-r10,

logMeasAvailable-r10 ENUMERATED {true} OPTIONAL,

...,

[[ logMeasAvailableBT-r15 ENUMERATED {true} OPTIONAL,

logMeasAvailableWLAN-r15 ENUMERATED {true} OPTIONAL

]]

}

LogMeasInfoList-r10 ::= SEQUENCE (SIZE (1..maxLogMeasReport-r10)) OF LogMeasInfo-r10

LogMeasInfo-r10 ::= SEQUENCE {

locationInfo-r10 LocationInfo-r10 OPTIONAL,

relativeTimeStamp-r10 INTEGER (0..7200),

servCellIdentity-r10 CellGlobalIdEUTRA,

measResultServCell-r10 SEQUENCE {

rsrpResult-r10 RSRP-Range,

rsrqResult-r10 RSRQ-Range

},

measResultNeighCells-r10 SEQUENCE {

measResultListEUTRA-r10 MeasResultList2EUTRA-r9 OPTIONAL,

measResultListUTRA-r10 MeasResultList2UTRA-r9 OPTIONAL,

measResultListGERAN-r10 MeasResultList2GERAN-r10 OPTIONAL,

measResultListCDMA2000-r10 MeasResultList2CDMA2000-r9 OPTIONAL

} OPTIONAL,

...,

[[ measResultListEUTRA-v1090 MeasResultList2EUTRA-v9e0 OPTIONAL

]],

[[ measResultListMBSFN-r12 MeasResultListMBSFN-r12 OPTIONAL,

measResultServCell-v1250 RSRQ-Range-v1250 OPTIONAL,

servCellRSRQ-Type-r12 RSRQ-Type-r12 OPTIONAL,

measResultListEUTRA-v1250 MeasResultList2EUTRA-v1250 OPTIONAL

]],

[[ inDeviceCoexDetected-r13 ENUMERATED {true} OPTIONAL

]],

[[ measResultServCell-v1360 RSRP-Range-v1360 OPTIONAL

]],

[[ logMeasResultListBT-r15 LogMeasResultListBT-r15 OPTIONAL,

logMeasResultListWLAN-r15 LogMeasResultListWLAN-r15 OPTIONAL

]],

[[ anyCellSelectionDetected-r15 ENUMERATED {true} OPTIONAL

]],

[[ measResultListNR-r16 MeasResultCellListNR-r15 OPTIONAL

]],

[[ measResultListNR-v1640 SEQUENCE {

carrierFreqNR-r16 ARFCN-ValueNR-r15

} OPTIONAL,

measResultListExtNR-r16 MeasResultFreqListNR-r16 OPTIONAL

]],

[[ uncomBarPreMeasResult-r17 OCTET STRING OPTIONAL

]]

}

MeasResultListMBSFN-r12 ::= SEQUENCE (SIZE (1..maxMBSFN-Area)) OF MeasResultMBSFN-r12

MeasResultMBSFN-r12 ::= SEQUENCE {

mbsfn-Area-r12 SEQUENCE {

mbsfn-AreaId-r12 MBSFN-AreaId-r12,

carrierFreq-r12 ARFCN-ValueEUTRA-r9

},

rsrpResultMBSFN-r12 RSRP-Range,

rsrqResultMBSFN-r12 MBSFN-RSRQ-Range-r12,

signallingBLER-Result-r12 BLER-Result-r12 OPTIONAL,

dataBLER-MCH-ResultList-r12 DataBLER-MCH-ResultList-r12 OPTIONAL,

...

}

DataBLER-MCH-ResultList-r12 ::= SEQUENCE (SIZE (1.. maxPMCH-PerMBSFN)) OF DataBLER-MCH-Result-r12

DataBLER-MCH-Result-r12 ::= SEQUENCE {

mch-Index-r12 INTEGER (1..maxPMCH-PerMBSFN),

dataBLER-Result-r12 BLER-Result-r12

}

BLER-Result-r12 ::= SEQUENCE {

bler-r12 BLER-Range-r12,

blocksReceived-r12 SEQUENCE {

n-r12 BIT STRING (SIZE (3)),

m-r12 BIT STRING (SIZE (8))

}

}

BLER-Range-r12 ::= INTEGER(0..31)

MeasResultList2GERAN-r10 ::= SEQUENCE (SIZE (1..maxCellListGERAN)) OF MeasResultListGERAN

MeasResultFreqListNR-r16::= SEQUENCE (SIZE (1..maxFreq-1-r16)) OF MeasResultFreqFailNR-r15

ConnEstFailReport-r11 ::= SEQUENCE {

failedCellId-r11 CellGlobalIdEUTRA,

locationInfo-r11 LocationInfo-r10 OPTIONAL,

measResultFailedCell-r11 SEQUENCE {

rsrpResult-r11 RSRP-Range,

rsrqResult-r11 RSRQ-Range OPTIONAL

},

measResultNeighCells-r11 SEQUENCE {

measResultListEUTRA-r11 MeasResultList2EUTRA-r9 OPTIONAL,

measResultListUTRA-r11 MeasResultList2UTRA-r9 OPTIONAL,

measResultListGERAN-r11 MeasResultListGERAN OPTIONAL,

measResultsCDMA2000-r11 MeasResultList2CDMA2000-r9 OPTIONAL

} OPTIONAL,

numberOfPreamblesSent-r11 NumberOfPreamblesSent-r11,

contentionDetected-r11 BOOLEAN,

maxTxPowerReached-r11 BOOLEAN,

timeSinceFailure-r11 TimeSinceFailure-r11,

measResultListEUTRA-v1130 MeasResultList2EUTRA-v9e0 OPTIONAL,

...,

[[ measResultFailedCell-v1250 RSRQ-Range-v1250 OPTIONAL,

failedCellRSRQ-Type-r12 RSRQ-Type-r12 OPTIONAL,

measResultListEUTRA-v1250 MeasResultList2EUTRA-v1250 OPTIONAL

]],

[[ measResultFailedCell-v1360 RSRP-Range-v1360 OPTIONAL

]],

[[ logMeasResultListBT-r15 LogMeasResultListBT-r15 OPTIONAL,

logMeasResultListWLAN-r15 LogMeasResultListWLAN-r15 OPTIONAL

]],

[[ measResultListNR-r16 MeasResultCellListNR-r15 OPTIONAL

]],

[[ measResultListNR-v1640 SEQUENCE {

carrierFreqNR-r16 ARFCN-ValueNR-r15

} OPTIONAL,

measResultListExtNR-r16 MeasResultFreqListNR-r16 OPTIONAL

]]

}

NumberOfPreamblesSent-r11::= INTEGER (1..200)

TimeSinceFailure-r11 ::= INTEGER (0..172800)

TimeUntilReconnection-r16 ::= INTEGER (0..172800)

MobilityHistoryReport-r12 ::= VisitedCellInfoList-r12

FlightPathInfoReport-r15 ::= SEQUENCE {

flightPath-r15 SEQUENCE (SIZE (1..maxWayPoint-r15)) OF WayPointLocation-r15 OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

WayPointLocation-r15 ::= SEQUENCE {

wayPointLocation-r15 LocationInfo-r10,

timeStamp-r15 AbsoluteTimeInfo-r10 OPTIONAL

}

-- ASN1STOP

| *UEInformationResponse* field descriptions |
| --- |
| ***absoluteTimeStamp***  Indicates the absolute time when the logged measurement configuration logging is provided, as indicated by E-UTRAN within *absoluteTimeInfo*. |
| ***anyCellSelectionDetected***  This field is used to indicate the detection of *any cell selection* state, as defined in TS 36.304 [4]. The UE sets this field when performing the logging of measurement results in RRC\_IDLE and there is no suitable cell or no acceptable cell. |
| ***bler***  Indicates the measured BLER value. The coding of BLER value is defined in TS 36.133 [16]. |
| ***blocksReceived***  Indicates total number of MCH blocks, which were received by the UE and used for the corresponding BLER calculation, within the measurement period as defined in TS 36.133 [16]. |
| ***carrierFreq***  In case the UE includes *carrierFreq-v9e0* and/ or *carrierFreq-v1090*, the UE shall set the corresponding entry of *carrierFreq-r9* and/ or *carrierFreq-r10* respectively to *maxEARFCN*. For E-UTRA and UTRA frequencies, the UE sets the ARFCN according to the band used when obtaining the concerned measurement results. |
| ***carrierFreqNR***  In case the UE includes *measResultListNR*, the UE uses this field to indicate the ARFCN value according to the band used when obtaining the concrned measurement results |
| ***connectionFailureType***  This field is used to indicate whether the connection failure is due to radio link failure or handover failure. |
| ***contentionDetected***  This field is used to indicate that contention was detected for at least one of the transmitted preambles, see TS 36.321 [6]. |
| ***c-RNTI***  This field indicates the C-RNTI used in the PCell upon detecting radio link failure or the C-RNTI used in the source PCell upon handover failure. |
| ***dataBLER-MCH-ResultList***  Includes a BLER result per MCH on subframes using *dataMCS*, with the applicable MCH(s) listed in the same order as in *pmch-InfoList* within *MBSFNAreaConfiguration*. |
| ***drb-EstablishedWithQCI-1***  This field is used to indicate the radio link failure occurred while a bearer with QCI value equal to 1 was configured, see TS 24.301 [35]. |
| ***edt-Fallback***  Value TRUE indicates the last successfully completed random access procedure was initiated with EDT PRACH resource and succeeded after receiving EDT fallback indication from lower layers. |
| ***failedCellId***  This field is used to indicate the cell in which connection establishment failed. |
| ***failedPCellId***  This field is used to indicate the PCell in which RLF is detected or the target PCell of the failed handover. The UE sets the EARFCN according to the band used for transmission/ reception when the failure occurred. |
| ***inDeviceCoexDetected***  Indicates that measurement logging is suspended due to IDC problem detection. |
| ***initialCEL***  Indicates the initial CE level used for the last successfully completed random access procedure for BL UEs and UEs in CE. |
| ***logMeasResultListBT***  This field refers to the Bluetooth measurement results. |
|  |
| ***logMeasResultListWLAN***  This field refers to the WLAN measurement results. |
| ***maxTxPowerReached***  This field is used to indicate whether or not the maximum power level was used for the last transmitted preamble, see TS 36.321 [6]. |
| ***mch-Index***  Indicates the MCH by referring to the entry as listed in *pmch-InfoList* within *MBSFNAreaConfiguration*. |
| ***measResultFailedCell***  This field refers to the last measurement results taken in the cell, where connection establishment failure happened. For UE supporting CE Mode B, when CE mode B is not restricted by upper layers, *measResultFailedCell-v1360* is reported if the measured RSRP is less than -140 dBm. |
| ***measResultLastServCell***  This field refers to the last measurement results taken in the PCell, where radio link failure or handover failure happened. For BL UEs or UEs in CE, when operating in CE Mode B, *measResultLastServCell-v1360* is reported if the measured RSRP is less than -140 dBm. |
| ***measResultListEUTRA***  If *measResultListEUTRA-v9e0*, *measResultListEUTRA-v1090* or *measResultListEUTRA-v1130* is included, the UE shall include the same number of entries, and listed in the same order, as in *measResultListEUTRA-r9*, *measResultListEUTRA-r10* and/ or *measResultListEUTRA-r11* respectively. |
| ***measResultListEUTRA-v1250***  If included in *RLF-Report-r9* the UE shall include the same number of entries, and listed in the same order, as in *measResultListEUTRA-r9*;  If included in *LogMeasInfo-r10* the UE shall include the same number of entries, and listed in the same order, as in *measResultListEUTRA-r10*;  If included in *ConnEstFailReport-r11* the UE shall include the same number of entries, and listed in the same order, as in *measResultListEUTRA-r11*; |
| ***measResultListIdle***  This field indicates the E-UTRA measurement results done during RRC\_IDLE and RRC\_INACTIVE at network request. |
| ***measResultListIdleNR***  This field indicates the NR measurement results done during RRC\_IDLE and RRC\_INACTIVE at network request. |
| ***measResultListNR, measResultListExtNR***  Includes NR measurement results, with *measResultListNR* including results of a first NR frequency and *measResultListExtNR* including results of additinal NR frequencies, if available. |
| ***measResultServCell***  This field refers to the log measurement results taken in the Serving cell. For UE supporting CE Mode B, when CE mode B is not restricted by upper layers, *measResultServCell-v1360* is reported if the measured RSRP is less than -140 dBm. |
| ***mobilityHistoryReport***  This field is used to indicate the time of stay in 16 most recently visited E-UTRA cells or of stay out of E-UTRA. |
| ***numberOfPreamblesSent***  This field is used to indicate the number of RACH preambles that were transmitted. Corresponds to parameter PREAMBLE\_TRANSMISSION\_COUNTER in TS 36.321 [6]. |
| ***previousPCellId***  This field is used to indicate the source PCell of the last handover (source PCell when the last *RRCConnectionReconfiguration* message including *mobilityControlInfo* was received). |
| ***previousUTRA-CellId***  This field is used to indicate the source UTRA cell of the last successful handover to E-UTRAN, when RLF occurred at the target PCell. The UE sets the ARFCN according to the band used for transmission/ reception on the concerned cell. |
| ***reconnectCellId***  This field is used to indicate the cell in which the UE comes back to connected after connection failure and after failing to perform reestablishment. If the UE comes back to RRC CONNECTED in an NR cell then *nrReconnectCellID* is included and if the UE comes back to RRC CONNECTED in an LTE cell then *eutraReconnectCellID* is included. |
| ***reestablishmentCellId***  This field is used to indicate the cell in which the re-establishment attempt was made after connection failure. |
| ***relativeTimeStamp***  Indicates the time of logging measurement results, measured relative to the *absoluteTimeStamp*. Value in seconds. |
| ***rlf-Cause***  This field is used to indicate the cause of the last radio link failure that was detected. In case of handover failure information reporting (i.e., the *connectionFailureType* is set to '*hof*'), the UE is allowed to set this field to any value. |
| ***selectedUTRA-CellId***  This field is used to indicate the UTRA cell that the UE selects after RLF is detected, while T311 is running. The UE sets the ARFCN according to the band selected for transmission/ reception on the concerned cell. |
| ***signallingBLER-Result***  Includes a BLER result of MBSFN subframes using *signallingMCS*. |
| ***tac-FailedPCell***  This field is used to indicate the Tracking Area Code of the PCell in which RLF is detected. |
| ***tce-Id***  Parameter Trace Collection Entity Id: See TS 32.422 [58]. |
| ***timeConnFailure***  This field is used to indicate the time elapsed since the last HO initialization until connection failure. Actual value = field value \* 100ms. The maximum value 1023 means 102.3s or longer. |
| ***timeSinceFailure***  This field is used to indicate the time that elapsed since the connection (establishment) failure. Value in seconds. The maximum value 172800 means 172800s or longer. |
| ***timeStamp***  Includes time stamps for the waypoints that describe planned locations for the UE. |
| ***timeUntilReconnection***  This field is used to indicate the time that elapsed between the connection (radio link or handover) failure and the next time the UE comes to RRC CONNECTED in an NR or EUTRA cell, after failing to perform reestablishment. Value in seconds. The maximum value 172800 means 172800s or longer. |
| ***traceRecordingSessionRef***  Parameter Trace Recording Session Reference: See TS 32.422 [58]. |
| ***uncomBarPreMeasResult***  This field provides barometric pressure measurements as *Sensor-MeasurementInformation* defined in TS 37.355 [XX]. The first/leftmost bit of the first octet contains the most significant bit. |
| ***wayPointLocation***  Includes location coordinates for a UE for Aerial UE operation. The waypoints describe planned locations for the UE. |

/\* end of seventh change \*/

/\* start of eigth change \*/

### 6.3.5 Measurement information elements

/\*Unaffected IEs are excluded\*/

#### – *MeasResults*

The IE *MeasResults* covers measured results for intra-frequency, inter-frequency and inter- RAT mobility and for idle/inactive measurements.

*MeasResults* information element

-- ASN1START

MeasResults ::= SEQUENCE {

measId MeasId,

measResultPCell SEQUENCE {

rsrpResult RSRP-Range,

rsrqResult RSRQ-Range

},

measResultNeighCells CHOICE {

measResultListEUTRA MeasResultListEUTRA,

measResultListUTRA MeasResultListUTRA,

measResultListGERAN MeasResultListGERAN,

measResultsCDMA2000 MeasResultsCDMA2000,

...,

measResultNeighCellListNR-r15 MeasResultCellListNR-r15

} OPTIONAL,

...,

[[ measResultForECID-r9 MeasResultForECID-r9 OPTIONAL

]],

[[ locationInfo-r10 LocationInfo-r10 OPTIONAL,

measResultServFreqList-r10 MeasResultServFreqList-r10 OPTIONAL

]],

[[ measId-v1250 MeasId-v1250 OPTIONAL,

measResultPCell-v1250 RSRQ-Range-v1250 OPTIONAL,

measResultCSI-RS-List-r12 MeasResultCSI-RS-List-r12 OPTIONAL

]],

[[ measResultForRSSI-r13 MeasResultForRSSI-r13 OPTIONAL,

measResultServFreqListExt-r13 MeasResultServFreqListExt-r13 OPTIONAL,

measResultSSTD-r13 MeasResultSSTD-r13 OPTIONAL,

measResultPCell-v1310 SEQUENCE {

rs-sinr-Result-r13 RS-SINR-Range-r13

} OPTIONAL,

ul-PDCP-DelayResultList-r13 UL-PDCP-DelayResultList-r13 OPTIONAL,

measResultListWLAN-r13 MeasResultListWLAN-r13 OPTIONAL

]],

[[ measResultPCell-v1360 RSRP-Range-v1360 OPTIONAL

]],

[[ measResultListCBR-r14 MeasResultListCBR-r14 OPTIONAL,

measResultListWLAN-r14 MeasResultListWLAN-r14 OPTIONAL

]],

[[ measResultServFreqListNR-r15 MeasResultServFreqListNR-r15 OPTIONAL,

measResultCellListSFTD-r15 MeasResultCellListSFTD-r15 OPTIONAL

]],

[[ logMeasResultListBT-r15 LogMeasResultListBT-r15 OPTIONAL,

logMeasResultListWLAN-r15 LogMeasResultListWLAN-r15 OPTIONAL,

measResultSensing-r15 MeasResultSensing-r15 OPTIONAL,

heightUE-r15 INTEGER (-400..8880) OPTIONAL

]],

[[ ul-PDCP-DelayValueResultList-r16 UL-PDCP-DelayValueResultList-r16 OPTIONAL,

measResultForRSSI-NR-r16 MeasResultForRSSI-NR-r16 OPTIONAL

]],

[[ uncomBarPreMeasResult-r17 OCTET STRING OPTIONAL

]]

}

MeasResultListEUTRA ::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultEUTRA

MeasResultEUTRA ::= SEQUENCE {

physCellId PhysCellId,

cgi-Info SEQUENCE {

cellGlobalId CellGlobalIdEUTRA,

trackingAreaCode TrackingAreaCode,

plmn-IdentityList PLMN-IdentityList2 OPTIONAL

} OPTIONAL,

measResult SEQUENCE {

rsrpResult RSRP-Range OPTIONAL,

rsrqResult RSRQ-Range OPTIONAL,

...,

[[ additionalSI-Info-r9 AdditionalSI-Info-r9 OPTIONAL

]],

[[ primaryPLMN-Suitable-r12 ENUMERATED {true} OPTIONAL,

measResult-v1250 RSRQ-Range-v1250 OPTIONAL

]],

[[ rs-sinr-Result-r13 RS-SINR-Range-r13 OPTIONAL,

cgi-Info-v1310 SEQUENCE {

freqBandIndicator-r13 FreqBandIndicator-r11 OPTIONAL,

multiBandInfoList-r13 MultiBandInfoList-r11 OPTIONAL,

freqBandIndicatorPriority-r13 ENUMERATED {true} OPTIONAL

} OPTIONAL

]],

[[

measResult-v1360 RSRP-Range-v1360 OPTIONAL

]],

[[

cgi-Info-5GC-r15 SEQUENCE (SIZE (1..maxPLMN-r11)) OF CellAccessRelatedInfo-5GC-r15 OPTIONAL

]]

}

}

MeasResultListIdle-r15 ::= SEQUENCE (SIZE (1..maxIdleMeasCarriers-r15)) OF MeasResultIdle-r15

MeasResultIdle-r15 ::= SEQUENCE {

measResultServingCell-r15 SEQUENCE {

rsrpResult-r15 RSRP-Range,

rsrqResult-r15 RSRQ-Range-r13

},

measResultNeighCells-r15 CHOICE {

measResultIdleListEUTRA-r15 MeasResultIdleListEUTRA-r15,

...

} OPTIONAL,

...

}

MeasResultIdleListEUTRA-r15 ::= SEQUENCE (SIZE (1..maxCellMeasIdle-r15)) OF MeasResultIdleEUTRA-r15

MeasResultIdleEUTRA-r15 ::= SEQUENCE {

carrierFreq-r15 ARFCN-ValueEUTRA-r9,

physCellId-r15 PhysCellId,

measResult-r15 SEQUENCE {

rsrpResult-r15 RSRP-Range,

rsrqResult-r15 RSRQ-Range-r13

},

...

}

MeasResultListExtIdle-r16 ::= SEQUENCE(SIZE (1..maxIdleMeasCarriersExt-r16)) OF MeasResultIdleListEUTRA-r15

MeasResultListIdleNR-r16 ::= SEQUENCE(SIZE (1..maxIdleMeasCarriers-r16)) OF MeasResultIdleNR-r16

MeasResultIdleNR-r16 ::= SEQUENCE {

carrierFreqNR-r16 ARFCN-ValueNR-r15,

measResultsPerCellListIdleNR-r16 SEQUENCE (SIZE (1..maxCellMeasIdle-r15)) OF MeasResultsPerCellIdleNR-r16,

...

}

MeasResultsPerCellIdleNR-r16 ::= SEQUENCE {

physCellIdNR-r16 PhysCellIdNR-r15,

measIdleResultNR-r16 SEQUENCE {

rsrpResultNR-r16 RSRP-RangeNR-r15 OPTIONAL,

rsrqResultNR-r16 RSRQ-RangeNR-r15 OPTIONAL,

resultRS-IndexList-r16 ResultsPerSSB-IndexList-r16 OPTIONAL

},

...

}

ResultsPerSSB-IndexList-r16 ::= SEQUENCE (SIZE (1..maxRS-IndexReport-r15)) OF ResultsPerSSB-IndexIdle-r16

ResultsPerSSB-IndexIdle-r16 ::= SEQUENCE {

ssb-Index-r16 RS-IndexNR-r15,

ssb-Results-r16 SEQUENCE {

ssb-RSRP-Result-r16 RSRP-RangeNR-r15 OPTIONAL,

ssb-RSRQ-Result-r16 RSRQ-RangeNR-r15 OPTIONAL

} OPTIONAL

}

MeasResultServFreqListNR-r15 ::= SEQUENCE (SIZE (1..maxServCell-r13)) OF MeasResultServFreqNR-r15

MeasResultServFreqNR-r15 ::= SEQUENCE {

carrierFreq-r15 ARFCN-ValueNR-r15,

measResultSCell-r15 MeasResultCellNR-r15 OPTIONAL,

measResultBestNeighCell-r15 MeasResultCellNR-r15 OPTIONAL,

...

}

MeasResultCellListNR-r15::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultCellNR-r15

MeasResultCellNR-r15 ::= SEQUENCE {

pci-r15 PhysCellIdNR-r15,

measResultCell-r15 MeasResultNR-r15,

measResultRS-IndexList-r15 MeasResultSSB-IndexList-r15 OPTIONAL,

...,

[[ cgi-Info-r15 CGI-InfoNR-r15 OPTIONAL

]]

}

MeasResultNR-r15 ::= SEQUENCE {

rsrpResult-r15 RSRP-RangeNR-r15 OPTIONAL,

rsrqResult-r15 RSRQ-RangeNR-r15 OPTIONAL,

rs-sinr-Result-r15 RS-SINR-RangeNR-r15 OPTIONAL,

...

}

MeasResultSSB-IndexList-r15::= SEQUENCE (SIZE (1..maxRS-IndexReport-r15)) OF MeasResultSSB-Index-r15

MeasResultSSB-Index-r15 ::= SEQUENCE {

ssb-Index-r15 RS-IndexNR-r15,

measResultSSB-Index-r15 MeasResultNR-r15 OPTIONAL,

...

}

MeasResultServFreqList-r10 ::= SEQUENCE (SIZE (1..maxServCell-r10)) OF MeasResultServFreq-r10

MeasResultServFreqListExt-r13 ::= SEQUENCE (SIZE (1..maxServCell-r13)) OF MeasResultServFreq-r13

MeasResultServFreq-r10 ::= SEQUENCE {

servFreqId-r10 ServCellIndex-r10,

measResultSCell-r10 SEQUENCE {

rsrpResultSCell-r10 RSRP-Range,

rsrqResultSCell-r10 RSRQ-Range

} OPTIONAL,

measResultBestNeighCell-r10 SEQUENCE {

physCellId-r10 PhysCellId,

rsrpResultNCell-r10 RSRP-Range,

rsrqResultNCell-r10 RSRQ-Range

} OPTIONAL,

...,

[[ measResultSCell-v1250 RSRQ-Range-v1250 OPTIONAL,

measResultBestNeighCell-v1250 RSRQ-Range-v1250 OPTIONAL

]],

[[ measResultSCell-v1310 SEQUENCE {

rs-sinr-Result-r13 RS-SINR-Range-r13

} OPTIONAL,

measResultBestNeighCell-v1310 SEQUENCE {

rs-sinr-Result-r13 RS-SINR-Range-r13

} OPTIONAL

]]

}

MeasResultServFreq-r13 ::= SEQUENCE {

servFreqId-r13 ServCellIndex-r13,

measResultSCell-r13 SEQUENCE {

rsrpResultSCell-r13 RSRP-Range,

rsrqResultSCell-r13 RSRQ-Range-r13,

rs-sinr-Result-r13 RS-SINR-Range-r13 OPTIONAL

} OPTIONAL,

measResultBestNeighCell-r13 SEQUENCE {

physCellId-r13 PhysCellId,

rsrpResultNCell-r13 RSRP-Range,

rsrqResultNCell-r13 RSRQ-Range-r13,

rs-sinr-Result-r13 RS-SINR-Range-r13 OPTIONAL

} OPTIONAL,

...,

[[ measResultBestNeighCell-v1360 SEQUENCE {

rsrpResultNCell-v1360 RSRP-Range-v1360

} OPTIONAL

]]

}

MeasResultCSI-RS-List-r12 ::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultCSI-RS-r12

MeasResultCSI-RS-r12 ::= SEQUENCE {

measCSI-RS-Id-r12 MeasCSI-RS-Id-r12,

csi-RSRP-Result-r12 CSI-RSRP-Range-r12,

...

}

MeasResultListUTRA ::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultUTRA

MeasResultUTRA ::= SEQUENCE {

physCellId CHOICE {

fdd PhysCellIdUTRA-FDD,

tdd PhysCellIdUTRA-TDD

},

cgi-Info SEQUENCE {

cellGlobalId CellGlobalIdUTRA,

locationAreaCode BIT STRING (SIZE (16)) OPTIONAL,

routingAreaCode BIT STRING (SIZE (8)) OPTIONAL,

plmn-IdentityList PLMN-IdentityList2 OPTIONAL

} OPTIONAL,

measResult SEQUENCE {

utra-RSCP INTEGER (-5..91) OPTIONAL,

utra-EcN0 INTEGER (0..49) OPTIONAL,

...,

[[ additionalSI-Info-r9 AdditionalSI-Info-r9 OPTIONAL

]],

[[ primaryPLMN-Suitable-r12 ENUMERATED {true} OPTIONAL

]]

}

}

MeasResultListGERAN ::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultGERAN

MeasResultGERAN ::= SEQUENCE {

carrierFreq CarrierFreqGERAN,

physCellId PhysCellIdGERAN,

cgi-Info SEQUENCE {

cellGlobalId CellGlobalIdGERAN,

routingAreaCode BIT STRING (SIZE (8)) OPTIONAL

} OPTIONAL,

measResult SEQUENCE {

rssi INTEGER (0..63),

...

}

}

MeasResultsCDMA2000 ::= SEQUENCE {

preRegistrationStatusHRPD BOOLEAN,

measResultListCDMA2000 MeasResultListCDMA2000

}

MeasResultListCDMA2000 ::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultCDMA2000

MeasResultCDMA2000 ::= SEQUENCE {

physCellId PhysCellIdCDMA2000,

cgi-Info CellGlobalIdCDMA2000 OPTIONAL,

measResult SEQUENCE {

pilotPnPhase INTEGER (0..32767) OPTIONAL,

pilotStrength INTEGER (0..63),

...

}

}

MeasResultListWLAN-r13 ::= SEQUENCE (SIZE (1..maxCellReport)) OF MeasResultWLAN-r13

MeasResultListWLAN-r14 ::= SEQUENCE (SIZE (1..maxWLAN-Id-Report-r14)) OF MeasResultWLAN-r13

MeasResultWLAN-r13 ::= SEQUENCE {

wlan-Identifiers-r13 WLAN-Identifiers-r12,

carrierInfoWLAN-r13 WLAN-CarrierInfo-r13 OPTIONAL,

bandWLAN-r13 WLAN-BandIndicator-r13 OPTIONAL,

rssiWLAN-r13 WLAN-RSSI-Range-r13,

availableAdmissionCapacityWLAN-r13 INTEGER (0..31250) OPTIONAL,

backhaulDL-BandwidthWLAN-r13 WLAN-backhaulRate-r12 OPTIONAL,

backhaulUL-BandwidthWLAN-r13 WLAN-backhaulRate-r12 OPTIONAL,

channelUtilizationWLAN-r13 INTEGER (0..255) OPTIONAL,

stationCountWLAN-r13 INTEGER (0..65535) OPTIONAL,

connectedWLAN-r13 ENUMERATED {true} OPTIONAL,

...

}

MeasResultListCBR-r14 ::= SEQUENCE (SIZE (1..maxCBR-Report-r14)) OF MeasResultCBR-r14

MeasResultCBR-r14 ::= SEQUENCE {

poolIdentity-r14 SL-V2X-TxPoolReportIdentity-r14,

cbr-PSSCH-r14 SL-CBR-r14,

cbr-PSCCH-r14 SL-CBR-r14 OPTIONAL

}

MeasResultSensing-r15 ::= SEQUENCE {

sl-SubframeRef-r15 INTEGER (0..10239),

sensingResult-r15 SEQUENCE (SIZE (0..400)) OF SensingResult-r15

}

SensingResult-r15 ::= SEQUENCE {

resourceIndex-r15 INTEGER (1..2000)

}

MeasResultForECID-r9 ::= SEQUENCE {

ue-RxTxTimeDiffResult-r9 INTEGER (0..4095),

currentSFN-r9 BIT STRING (SIZE (10))

}

PLMN-IdentityList2 ::= SEQUENCE (SIZE (1..5)) OF PLMN-Identity

AdditionalSI-Info-r9 ::= SEQUENCE {

csg-MemberStatus-r9 ENUMERATED {member} OPTIONAL,

csg-Identity-r9 CSG-Identity OPTIONAL

}

MeasResultForRSSI-r13 ::= SEQUENCE {

rssi-Result-r13 RSSI-Range-r13,

channelOccupancy-r13 INTEGER (0..100),

...

}

MeasResultForRSSI-NR-r16 ::= SEQUENCE {

rssi-ResultNR-r16 RSSI-Range-r13,

channelOccupancyNR-r16 INTEGER (0..100),

...

}

UL-PDCP-DelayResultList-r13 ::= SEQUENCE (SIZE (1..maxQCI-r13)) OF UL-PDCP-DelayResult-r13

UL-PDCP-DelayResult-r13 ::= SEQUENCE {

qci-Id-r13 ENUMERATED {qci1, qci2, qci3, qci4, spare4, spare3, spare2, spare1},

excessDelay-r13 INTEGER (0..31),

...

}

UL-PDCP-DelayValueResultList-r16 ::= SEQUENCE (SIZE (1..maxDRB)) OF UL-PDCP-DelayValueResult-r16

UL-PDCP-DelayValueResult-r16 ::= SEQUENCE {

drb-Id-r16 DRB-Identity,

averageDelay-r16 INTEGER (0..10000),

...

}

CGI-InfoNR-r15 ::= SEQUENCE {

plmn-IdentityInfoList-r15 PLMN-IdentityInfoListNR-r15 OPTIONAL,

frequencyBandList-r15 MultiFrequencyBandListNR-r15 OPTIONAL,

noSIB1-r15 SEQUENCE {

ssb-SubcarrierOffset-r15 INTEGER (0..15),

pdcch-ConfigSIB1-r15 INTEGER (0..255)

} OPTIONAL,

...

}

CellIdentityNR-r15 ::= BIT STRING (SIZE (36))

PLMN-IdentityListNR-r15 ::= SEQUENCE (SIZE (1.. maxPLMN-NR-r15)) OF PLMN-Identity

PLMN-IdentityInfoListNR-r15 ::= SEQUENCE (SIZE (1..maxPLMN-NR-r15)) OF PLMN-IdentityInfoNR-r15

PLMN-IdentityInfoNR-r15 ::= SEQUENCE {

plmn-IdentityList-r15 PLMN-IdentityListNR-r15,

trackingAreaCode-r15 TrackingAreaCodeNR-r15 OPTIONAL,

ran-AreaCode-r15 RAN-AreaCode-r15 OPTIONAL,

cellIdentity-r15 CellIdentityNR-r15

}

TrackingAreaCodeNR-r15 ::= BIT STRING (SIZE (24))

-- ASN1STOP

| *MeasResults* field descriptions |
| --- |
| ***availableAdmissionCapacityWLAN***  Indicates the available admission capacity of WLAN as defined in IEEE 802.11-2012 [67]. |
| ***averageDelay***  Indicates average delay for the packets during the reporting period, as specified in TS 38.314 [103]. Value 0 corresponds to 0 millisecond, value 1 corresponds to 0.1 millisecond, value 2 corresponds to 0.2 millisecond, and so on. |
| ***backhaulDL-BandwidthWLAN***  Indicates the backhaul available downlink bandwidth of WLAN, equal to Downlink Speed times Downlink Load defined in Wi-Fi Alliance Hotspot 2.0 [76]. |
| ***backhaulUL-BandwidthWLAN***  Indicates the backhaul available uplink bandwidth of WLAN, equal to Uplink Speed times Uplink Load defined in Wi-Fi Alliance Hotspot 2.0 [76]. |
| ***bandWLAN***  Indicates the WLAN band. |
| ***carrierFreq***  Indicates the E-UTRA carrier frequency. Within *MeasResultIdleListEUTRA-r15*, UE only includes measurements with the same carrier frequency. |
| ***carrierFreqNR***  Indicates the NR carrier frequency. |
| ***carrierInfoWLAN***  Indicates the WLAN channel information. |
| ***cbr-PSSCH***  Indicates the CBR measurement results on the PSSCH of the pool indicated by *poolIdentity*. If *adjacencyPSCCH-PSSCH* is set to *TRUE* for the pool indicated by *pooIIdentit*y, this field indicates the CBR measurement of both the PSSCH and PSCCH resources which are measured together. |
| ***cbr-PSCCH***  Indicates the CBR measurement results on the PSCCH of the pool indicated by *poolIdentity.* This field is only included if *adjacencyPSCCH-PSSCH* is set to *FALSE* for the pool indicated by *pooIIdentity*. |
| ***channelOccupancy***  Indicates the percentage of samples when the RSSI was above the configured *channelOccupancyThreshold* for the associated *reportConfig*. |
| ***channelUtilizationWLAN***  Indicates WLAN channel utilization as defined in IEEE 802.11-2012 [67]. |
| ***connectedWLAN***  Indicates whether the UE is connected to the WLAN for which the measurement results are applicable. |
| ***csg-MemberStatus***  Indicates whether or not the UE is a member of the CSG of the neighbour cell. |
| ***currentSFN***  Indicates the current system frame number when receiving the UE Rx-Tx time difference measurement results from lower layer. |
| ***drb-Id***  Indicates the identity of DRB for which UL PDCP Packet Delay value is provided, according to TS 38.314 [103]. |
| ***excessDelay***  Indicates excess queueing delay ratio in UL, according to excess delay ratio measurement report mapping table, as defined in TS 36.314 [71], Table 4.2.1.1.1-1. |
| ***heightUE***  Indicates height of the UE in meters relative to the sea level. Value 0 corresponds to sea level (i.e., negative value indicates depth of the UE below sea level). Value -400 corresponds to -400 m, value -399 corresponds to -399 m and so on. |
| ***locationAreaCode***  A fixed length code identifying the location area within a PLMN, as defined in TS 23.003 [27]. |
| ***measId***  Identifies the measurement identity for which the reporting is being performed. If the *measId-v1250* is included, the *measId* (i.e. without a suffix) is ignored by eNB. |
| ***measIdleResultNR***  Idle/inactive measurement results for an NR cell (optionally including beam level measurements). |
| ***measResult***  Measured result of an E‑UTRA cell;  Measured result of a UTRA cell;  Measured result of a GERAN cell or frequency;  Measured result of a CDMA2000 cell;  Measured result of a WLAN;  Measured result of UE Rx–Tx time difference;  Measured result of UE SFN, radio frame and subframe timing difference; or  Measured result of RSSI and channel occupancy. |
| ***measResultCSI-RS-List***  Measured results of the CSI-RS resources in discovery signals measurement. |
| ***measResultListCDMA2000***  List of measured results for the maximum number of reported best cells for a CDMA2000 measurement identity. |
| ***measResultListEUTRA***  List of measured results for the maximum number of reported best cells for an E‑UTRA measurement identity. For UE supporting CE Mode B, when CE mode B is not restricted by upper layers, *measResult-v1360* is reported if the measured RSRP is less than -140 dBm. |
| ***measResultListGERAN***  List of measured results for the maximum number of reported best cells or frequencies for a GERAN measurement identity. |
| ***measResultListIdle***  List of measured results for E-UTRA idle/inactive measurements. |
| ***measResultListIdleNR***  List of measured results for NR idle/inactive measurements. |
| ***measResultListSFTD***  List of measured SFTD results for the reported cells for a NR measurement identity. |
| ***measResultListUTRA***  List of measured results for the maximum number of reported best cells for a UTRA measurement identity. |
| ***measResultListWLAN***  List of measured results for the maximum number of reported best WLAN outside the WLAN mobility set and connected WLAN, if any, for a WLAN measurement identity. |
| ***measResultPCell***  Measured result of the PCell. For BL UEs or UEs in CE, when operating in CE Mode B, *measResultPCell-v1360* is reported if the measured RSRP is less than -140 dBm. If sending of the MeasurementReport message is triggered by a measurement configured by the field *sl-ConfigDedicatedEUTRA* that was received within an NR RRCReconfiguration message (i.e. CBR measurements), *measResultPCell* is not applicable, its contents is invalid and ignored by the network. |
| ***measResultsCDMA2000***  Contains the CDMA2000 HRPD pre-registration status and the list of CDMA2000 measurements. |
| ***measResultServFreqList***  Measured results of the serving frequencies: the measurement result of each SCell, if any, and of the best neighbouring cell on each serving frequency. For UE supporting CE Mode B, when CE mode B is not restricted by upper layers, *measResultBestNeighCell-v1360* is reported if the measured RSRP is less than -140 dBm. |
| ***measResultServingCell***  Measured results of the serving cell (i.e., PCell) from idle/inactive measurements. |
| ***measResultsPerCellListIdleNR***  List of idle/inactive measured results for the maximum number of reported best cells for a given NR carrier. |
| ***noSIB1***  Contains *ssb-SubcarrierOffset* and *pdcch-ConfigSIB1* fields acquired by the UE from MIB of the cell for which report CGI procedure was requested by the network in case SIB1 was not broadcast by the cell. |
| ***pilotPnPhase***  Indicates the arrival time of a CDMA2000 pilot, measured relative to the UE's time reference in units of PN chips, see C.S0005 [25]. This information is used in either SRVCC handover or enhanced 1xRTT CS fallback procedure to CDMA2000 1xRTT. |
| ***pilotStrength***  CDMA2000 Pilot Strength, the ratio of pilot power to total power in the signal bandwidth of a CDMA2000 Forward Channel. See C.S0005 [25] for CDMA2000 1xRTT and C.S0024 [26] for CDMA2000 HRPD. |
| ***poolIdentity***  The identity of the transmission resource pool which is corresponding to the *poolReportId* configured ina resource pool for V2X sidelink communication. |
| ***plmn-IdentityList***  The list of PLMN Identity read from broadcast information when the multiple PLMN Identities are broadcast. |
| ***preRegistrationStatusHRPD***  Set to TRUE if the UE is currently pre-registered with CDMA2000 HRPD. Otherwise set to FALSE. This can be ignored by the eNB for CDMA2000 1xRTT. |
| ***qci-Id***  Indicates QCI value for which *excessDelay* is provided, according to TS 36.314 [71]. |
| ***resourceIndex***  Indicates the available resource candidates within the [T1, T2] window as specified in TS 36.213 [23]. clause 14.1.1.6. Value 1 indicates the resource candidate on the subframe indicated by *sl-SubframeRe*f, from subchannel 0 to *sensingSubchannelNumber*-1. Value 2 indicates the resource candidate on the first subframe following the subframe indicated by *sl-SubframeRef*, from subchannel 0 to *sensingSubchannelNumber*-1 (Value 101 indicates the resource candidate on the subframe indicated by *sl-SubframeRef*, from subchannel 1 to *sensingSubchannelNumber*, if the *numSubchannel* of the resource pool is larger than *sensingSubchannelNumber*) and so on. |
| ***resultRS-IndexList***  Beam level measurement results (indexes and optionally, beam measurements). |
| ***routingAreaCode***  The RAC identity read from broadcast information, as defined in TS 23.003 [27]. |
| ***rsrpResult***  Measured RSRP result of an E‑UTRA cell.  The *rsrpResult* is only reported if configured by the eNB. |
| ***rsrpResultNR***  Measured RSRP result of an NR cell.  The *rsrpResultNR* is only reported if configured by the eNB. |
| ***rsrqResult***  Measured RSRQ result of an E‑UTRA cell.  The *rsrqResult* is only reported if configured by the eNB.  If the measurement is performed in RRC\_CONNECTED and measurements based on RSS is enabled in the cell in *measRSS-DedicatedConfig-r16*, E-UTRAN ignores *rsrqResult*. |
| ***rsrqResultNR***  Measured RSRQ result of an NR cell.  The *rsrqResultNR* is only reported if configured by the eNB. |
| ***rssi***  GERAN Carrier RSSI. RXLEV is mapped to a value between 0 and 63, TS 45.008 [28]. When mapping the RXLEV value to the RSSI bit string, the first/leftmost bit of the bit string contains the most significant bit. |
| ***rssi-Result***  Measured RSSI result in dBm. |
| ***rs-sinr-Result***  Measured RS-SINR result of an E‑UTRA or NR cell. The *rs-sinr-Result* is only reported if configured by the eNB. |
| ***rssiWLAN***  Measured WLAN RSSI result in dBm. |
| ***sl-SubframeRef***  Indicates the subframe corresponding to n+T1 used to obtain the sensing measurement results (see TS 36.213 [23]). Specifically, the value indicates the timing offset with respect to subframe#0 of DFN#0 in milliseconds. |
| ***stationCountWLAN***  Indicates the total number stations currently associated with this WLAN as defined in IEEE 802.11-2012 [67]. |
| ***ue-RxTxTimeDiffResult***  UE Rx-Tx time difference measurement result of the PCell, provided by lower layers. If *ue-RxTxTimeDiffPeriodicalTDD-r13* is set to *TRUE*, the measurement mapping is according to EUTRAN TDD UE Rx-Tx time difference report mapping in TS 36.133 [16] and measurement result includes *NTAoffset*, else the measurement mapping is according to EUTRAN FDD UE Rx-Tx time difference report mapping in TS 36.133 [16]. |
| ***uncomBarPreMeasResult***  This field provides barometric pressure measurements as *Sensor-MeasurementInformation* defined in TS 37.355 [XX]. The first/leftmost bit of the first octet contains the most significant bit. |
| ***utra-EcN0***  According to CPICH\_Ec/No in TS 25.133 [29] for FDD. Fourteen spare values. The field is not present for TDD. |
| ***utra-RSCP***  According to CPICH\_RSCP in TS 25.133 [29] for FDD and P-CCPCH\_RSCP in TS 25.123 [30] for TDD. Thirty-one spare values. |
| ***wlan-Identifiers***  Indicates the WLAN parameters used for identification of the WLAN for which the measurement results are applicable. |

/\*Unaffected IEs are excluded\*/

#### – *ReportConfigEUTRA*

The IE *ReportConfigEUTRA* specifies criteria for triggering of an E‑UTRA measurement reporting or conditional reconfiguration (i.e. conditional handover) event. The E‑UTRA measurement reporting events concerning CRS are labelled A*N* with *N* equal to 1, 2 and so on.

Event A1: Serving becomes better than absolute threshold;

Event A2: Serving becomes worse than absolute threshold;

Event A3: Neighbour becomes amount of offset better than PCell/ PSCell;

Event A4: Neighbour becomes better than absolute threshold;

Event A5: PCell/ PSCell becomes worse than absolute threshold1 AND Neighbour becomes better than another absolute threshold2;

Event A6: Neighbour becomes amount of offset better than SCell.

The E‑UTRA measurement reporting events concerning CRS for conditional reconfigurations are labelled A*N* with *N* equal to 3 or 5.

CondEvent A3: Conditional reconfiguration candidate becomes amount of offset better than PCell;

CondEvent A5: PCell becomes worse than absolute threshold1 AND conditional reconfiguration candidate becomes better than another absolute threshold2;

The E‑UTRA measurement reporting events concerning CSI-RS are labelled C*N* with *N* equal to 1 and 2.

Event C1: CSI-RS resource becomes better than absolute threshold;

Event C2: CSI-RS resource becomes amount of offset better than reference CSI-RS resource.

The E-UTRA measurement reporting events concerning CBR are labelled VN with N equal to 1 and 2.

Event V1: CBR becomes larger than absolute threshold;

Event V2: CBR becomes smaller than absolute threshold.

The E-UTRA reporting events concerning Aerial UE height are labelled H*N* with *N* equal to 1 and 2.

Event H1: Aerial UE height becomes higher than absolute threshold;

Event H2: Aerial UE height becomes lower than absolute threshold.

*ReportConfigEUTRA* information element

-- ASN1START

ReportConfigEUTRA ::= SEQUENCE {

triggerType CHOICE {

event SEQUENCE {

eventId CHOICE {

eventA1 SEQUENCE {

a1-Threshold ThresholdEUTRA

},

eventA2 SEQUENCE {

a2-Threshold ThresholdEUTRA

},

eventA3 SEQUENCE {

a3-Offset INTEGER (-30..30),

reportOnLeave BOOLEAN

},

eventA4 SEQUENCE {

a4-Threshold ThresholdEUTRA

},

eventA5 SEQUENCE {

a5-Threshold1 ThresholdEUTRA,

a5-Threshold2 ThresholdEUTRA

},

...,

eventA6-r10 SEQUENCE {

a6-Offset-r10 INTEGER (-30..30),

a6-ReportOnLeave-r10 BOOLEAN

},

eventC1-r12 SEQUENCE {

c1-Threshold-r12 ThresholdEUTRA-v1250,

c1-ReportOnLeave-r12 BOOLEAN

},

eventC2-r12 SEQUENCE {

c2-RefCSI-RS-r12 MeasCSI-RS-Id-r12,

c2-Offset-r12 INTEGER (-30..30),

c2-ReportOnLeave-r12 BOOLEAN

},

eventV1-r14 SEQUENCE {

v1-Threshold-r14 SL-CBR-r14

},

eventV2-r14 SEQUENCE {

v2-Threshold-r14 SL-CBR-r14

},

eventH1-r15 SEQUENCE {

h1-ThresholdOffset-r15 INTEGER (0..300),

h1-Hysteresis-r15 INTEGER (1..16)

},

eventH2-r15 SEQUENCE {

h2-ThresholdOffset-r15 INTEGER (0..300),

h2-Hysteresis-r15 INTEGER (1..16)

}

},

hysteresis Hysteresis,

timeToTrigger TimeToTrigger

},

periodical SEQUENCE {

purpose ENUMERATED {

reportStrongestCells, reportCGI}

}

},

triggerQuantity ENUMERATED {rsrp, rsrq},

reportQuantity ENUMERATED {sameAsTriggerQuantity, both},

maxReportCells INTEGER (1..maxCellReport),

reportInterval ReportInterval,

reportAmount ENUMERATED {r1, r2, r4, r8, r16, r32, r64, infinity},

...,

[[ si-RequestForHO-r9 ENUMERATED {setup} OPTIONAL, -- Cond reportCGI

ue-RxTxTimeDiffPeriodical-r9 ENUMERATED {setup} OPTIONAL -- Need OR

]],

[[ includeLocationInfo-r10 ENUMERATED {true} OPTIONAL, -- Need OR

reportAddNeighMeas-r10 ENUMERATED {setup} OPTIONAL -- Need OR

]],

[[ alternativeTimeToTrigger-r12 CHOICE {

release NULL,

setup TimeToTrigger

} OPTIONAL, -- Need ON

useT312-r12 BOOLEAN OPTIONAL, -- Need ON

usePSCell-r12 BOOLEAN OPTIONAL, -- Need ON

aN-Threshold1-v1250 RSRQ-RangeConfig-r12 OPTIONAL, -- Need ON

a5-Threshold2-v1250 RSRQ-RangeConfig-r12 OPTIONAL, -- Need ON

reportStrongestCSI-RSs-r12 BOOLEAN OPTIONAL, -- Need ON

reportCRS-Meas-r12 BOOLEAN OPTIONAL, -- Need ON

triggerQuantityCSI-RS-r12 BOOLEAN OPTIONAL -- Need ON

]],

[[ reportSSTD-Meas-r13 BOOLEAN OPTIONAL, -- Need ON

rs-sinr-Config-r13 CHOICE {

release NULL,

setup SEQUENCE {

triggerQuantity-v1310 ENUMERATED {sinr} OPTIONAL, -- Need ON

aN-Threshold1-r13 RS-SINR-Range-r13 OPTIONAL, -- Need ON

a5-Threshold2-r13 RS-SINR-Range-r13 OPTIONAL, -- Need ON

reportQuantity-v1310 ENUMERATED {rsrpANDsinr, rsrqANDsinr, all}

}

} OPTIONAL, -- Need ON

useWhiteCellList-r13 BOOLEAN OPTIONAL, -- Need ON

measRSSI-ReportConfig-r13 MeasRSSI-ReportConfig-r13 OPTIONAL, -- Need ON

includeMultiBandInfo-r13 ENUMERATED {true} OPTIONAL, -- Cond reportCGI

ul-DelayConfig-r13 UL-DelayConfig-r13 OPTIONAL -- Need ON

]],

[[ ue-RxTxTimeDiffPeriodicalTDD-r13 BOOLEAN OPTIONAL -- Need ON

]],

[[

purpose-v1430 ENUMERATED {reportLocation, sidelink, spare2, spare1}

OPTIONAL -- Need ON

]],

[[

maxReportRS-Index-r15 INTEGER (0..maxRS-IndexReport-r15) OPTIONAL -- Need ON

]],

[[ includeBT-Meas-r15 BT-NameListConfig-r15 OPTIONAL, -- Need ON

includeWLAN-Meas-r15 WLAN-NameListConfig-r15 OPTIONAL, -- Need ON

purpose-r15 ENUMERATED {sensing} OPTIONAL, -- Need ON

numberOfTriggeringCells-r15 INTEGER (2..maxCellReport) OPTIONAL, -- Cond a3a4a5

a4-a5-ReportOnLeave-r15 BOOLEAN OPTIONAL -- Cond a4a5

]],

[[ condReconfigurationTriggerEUTRA-r16 CondReconfigurationTriggerEUTRA-r16 OPTIONAL,

-- Need ON

ul-DelayValueConfig-r16 UL-DelayValueConfig-r16 OPTIONAL -- Need ON

]],

[[ includeUncomBarPreMeas-r17 BOOLEAN OPTIONAL -- Need ON

]]

}

CondReconfigurationTriggerEUTRA-r16 ::= SEQUENCE {

condEventId-r16 CHOICE {

condEventA3-r16 SEQUENCE {

a3-Offset-r16 INTEGER (-30..30),

hysteresis-r16 Hysteresis,

timeToTrigger-r16 TimeToTrigger

},

condEventA5-r16 SEQUENCE {

a5-Threshold1-r16 ThresholdEUTRA,

a5-Threshold2-r16 ThresholdEUTRA,

hysteresis-r16 Hysteresis,

timeToTrigger-r16 TimeToTrigger

},

...

}

}

RSRQ-RangeConfig-r12 ::= CHOICE {

release NULL,

setup RSRQ-Range-v1250

}

ThresholdEUTRA ::= CHOICE{

threshold-RSRP RSRP-Range,

threshold-RSRQ RSRQ-Range

}

ThresholdEUTRA-v1250 ::= CSI-RSRP-Range-r12

MeasRSSI-ReportConfig-r13 ::= SEQUENCE {

channelOccupancyThreshold-r13 RSSI-Range-r13 OPTIONAL -- Need OR

}

-- ASN1STOP

| *ReportConfigEUTRA* field descriptions |
| --- |
| ***a3-Offset/ a6-Offset/ c2-Offset***  Offset value to be used in EUTRA measurement report triggering condition for event a3/ a6/ c2, or to be used in conditional reconfiguration trigger condition for cond event a3. The actual value is field value \* 0.5 dB. |
| ***a5-Threshold1/ a5-Threshold2***  Threshold value associated to the selected trigger quantity (e.g. RSRP, RSRQ, SINR) to be used in conditional reconfiguration trigger condition for cond event a5. In the same *condeventA5*, the network configures the same quantity for the *TriggerQuantity* of the *a5-Threshold1* and for the *MeasTriggerQuantity* of the *a5-Threshold2*. |
| ***alternativeTimeToTrigger***  Indicates the time to trigger applicable for cells specified in *altTTT-CellsToAddModList* of the associated measurement object, if configured |
| ***aN-ThresholdM/ cN-ThresholdM***  Threshold to be used in EUTRA measurement report triggering condition for event number aN/ cN. If multiple thresholds are defined for event number aN/ cN, the thresholds are differentiated by M. E-UTRAN configures *aN-Threshold1* only for events A1, A2, A4, A5 and *a5-Threshold2* only for event A5. |
| ***c1-ReportOnLeave/ c2-ReportOnLeave***  Indicates whether or not the UE shall initiate the measurement reporting procedure when the leaving condition is met for a CSI-RS resource in *csi-RS-TriggeredList*, as specified in 5.5.4.1. |
| ***c2-RefCSI-RS***  Identity of the CSI-RS resource from the *measCSI-RS-ToAddModList* of the associated *measObject*, to be used as the reference CSI-RS resource in EUTRA measurement report triggering condition for event c2. |
| ***channelOccupancyThreshold***  RSSI threshold which is used for channel occupancy evaluation. |
| ***condEventId***  Choice of conditional reconfiguration event triggered criteria. |
| ***condReconfigurationTriggerEUTRA***  Event configured for conditional reconfiguration. If this field is configured, the UE shall ignore the configuration of *triggerType, reportQuantity, maxReportCells, reportInterval,* and *reportAmount.* |
| ***eventId***  Choice of E‑UTRA event triggered reporting criteria. EUTRAN may set this field to *eventC1* or *eventC2* only if *measDS-Config* is configured in the associated *measObject* with one or more CSI-RS resources. The *eventC1* and *eventC2* are not applicable for the *eventId* if RS-SINR is configured as *triggerQuantity* or *reportQuantity*. |
| ***h1-Hysteresis, h2-Hysteresis***  This parameter is used within the entry and leave condition of an event triggered reporting condition for event H1 and event H2. The actual value is field value. If this field is configured UE shall ignore parameter *hysteresis.* |
| ***h1-ThresholdOffset, h2-ThresholdOffset***  An offset value to *heightThreshRef* to obtain the threshold to be used in EUTRA height report triggering condition for event H1 and event H2. The value for h1-ThresholdOffset and h2-ThresholdOffset is expressed in meters such that granularity is 2meters. Value 0 corresponds to offset value 0m, value 1 corresponds to offset value 2m, value 2 correspond to offset value 4m, and so on. |
| ***includeMultiBandInfo***  If this field is present, the UE shall acquire and include multi band information in the measurement report. | |
| ***maxReportCells***  Max number of cells, excluding the serving cell, to include in the measurement report concerning CRS, and max number of CSI-RS resources to include in the measurement report concerning CSI-RS. |
| ***measRSSI-ReportConfig***  If this field is present, the UE shall perform measurement reporting for RSSI and channel occupancy and ignore the *triggerQuantity*, *reportQuantity* and *maxReportCells* fields. E-UTRAN sets this field to *true* only when setting *triggerType* to *periodical* and *purpose* to *reportStrongestCells*. |
| ***numberOfTriggeringCells***  Indicates the number of cells detected that are required to fulfill an event for a measurement report to be triggered. This field is set only for the events concerning neighbor cells, i.e. *eventA3*, *eventA4, eventA5*. |
| ***reportAmount***  Number of measurement reports applicable for *triggerType* *event* as well as for *triggerType* *periodical*. In case *purpose* is set to *reportCGI* or *reportSSTD-Meas* is set to *true*, only value 1 applies. |
| ***reportCRS-Meas***  If this field is set to *TRUE* the UE shall include rsrp, rsrq together with csi-rsrp in the measurement report, if possible. |
| ***reportOnLeave/ a6-ReportOnLeave/ a4-a5-ReportOnLeave***  Indicates whether or not the UE shall initiate the measurement reporting procedure when the leaving condition is met for a cell in *cellsTriggeredList*, as specified in 5.5.4.1. |
| ***reportQuantity***  The quantities to be included in the measurement report***.*** The value both means that both the rsrp and rsrq quantities are to be included in the measurement report. The value *rsrpANDsinr* and *rsrqANDsinr* mean that both *rsrp* and *rs-sinr* quantities, and both *rsrq* and *rs-sinr* quantities are to be included respectively in the measurement report. The value *all* means that *rsrp*, *rsrq* and *rs-sinr* are to be included in the measurement report. In case *triggerQuantityCSI-RS* is set to *TRUE*, only value *sameAsTriggerQuantity* applies. If *reportQuantity*-v*1310* is configured, the UE only considers this extension (and ignores *reportQuantity* i.e. without suffix). |
| ***reportSSTD-Meas***  If this field is set to *true*, the UE shall measure SSTD between the PCell and the PSCell as specified in TS 36.214 [48] and ignore the *triggerQuantity*, *reportQuantity* and *maxReportCells* fields. E-UTRAN sets this field to *true* only when setting *triggerType* to *periodical* and *purpose* to *reportStrongestCells*. |
| ***reportStrongestCSI-RSs***  Indicates that periodical CSI-RS measurement report is performed. EUTRAN configures value *TRUE* only if *measDS-Config* is configured in the associated *measObject* with one or more CSI-RS resources. |
| ***si-RequestForHO***  The field applies to the *reportCGI* functionality, and when the field is included, the UE is allowed to use autonomous gaps in acquiring system information from the neighbour cell, applies a different value for T321, and includes different fields in the measurement report. |
| ***ThresholdEUTRA***  For RSRP: RSRP based threshold for event evaluation. The actual value is field value – 140 dBm.  For RSRQ: RSRQ based threshold for event evaluation. The actual value is (field value – 40)/2 dB.  For RS-SINR: RS-SINR based threshold for event evaluation. The actual value is (field value -46)/2 dB.  For CSI-RSRP: CSI-RSRP based threshold for event evaluation. The actual value is field value – 140 dBm.  EUTRAN configures the same threshold quantity for all the thresholds of an event. |
| ***timeToTrigger***  Time during which specific criteria for the event needs to be met in order to trigger a measurement report, or to execute the conditional reconfiguration evaluation. |
| ***triggerQuantity***  The quantity used to evaluate the triggering condition for the event concerning CRS***.*** EUTRAN sets the value according to the quantity of the *ThresholdEUTRA* for this event. The values rsrp, rsrq and *sinr* correspond to Reference Signal Received Power (RSRP), Reference Signal Received Quality (RSRQ) and Reference Signal Signal to Noise and Interference Ratio (RS-SINR), see TS 36.214 [48]. If *triggerQuantity-v1310* is configured, the UE only considers this extension (and ignores *triggerQuantity* i.e. without suffix). |
| ***triggerQuantityCSI-RS***  The quantity used to evaluate the triggering condition for the event concerning CSI-RS***.*** The value *TRUE* corresponds to CSI Reference Signal Received Power (CSI-RSRP), see TS 36.214 [48]. E-UTRAN configures value *TRUE* if and only if the measurement reporting event concerns CSI-RS. |
| ***ue-RxTxTimeDiffPeriodical***  If this field is present, the UE shall perform UE Rx-Tx time difference measurement reporting and ignore the fields *triggerQuantity*, *reportQuantity* and *maxReportCells*. If the field is present, the only applicable values for the corresponding *triggerType* and *purpose* are periodical and reportStrongestCells respectively. |
| ***ue-RxTxTimeDiffPeriodicalTDD***  If this field is set to *TRUE*, the UE shall performUE Rx-Tx time difference measurement reporting according to EUTRAN TDD UE Rx-Tx time difference report mapping in TS 36.133 [16]. If the field is configured, the *ue-RxTxTimeDiffPeriodical* shall be configured. The field is applicable for TDD only. |
| ***usePSCell***  If this field is set to *TRUE* the UE shall use the PSCell instead of the PCell. E-UTRAN configures value *TRUE* only for events A3 and A5, see 5.5.4.4 and 5.5.4.6. |
| ***useT312***  If value *TRUE* is configured, the UE shall use the timer T312 with the value *t312* as specified in the corresponding *measObject*. If the corresponding *measObject* does not include the timer T312 then the timer T312 is considered as not configured. E-UTRAN configures value *TRUE* only if *triggerType* is set to *event*. |
| ***useWhiteCellList***  Indicates whether only the cells included in the white-list of the associated *measObject* are applicable as specified in 5.5.4.1. E-UTRAN does not configure the field for events A1, A2, C1 and C2. |
| ***ul-DelayConfig***  If the field is present, E-UTRAN configures UL PDCP Packet Delay per QCI measurement and the UE shall ignore the fields *triggerQuantity* and *maxReportCells*. The applicable values for the corresponding *triggerType* and *reportInterval* are *periodical* and (one of the) ms1024, ms2048, ms5120 or ms10240respectively.The *reportInterval* indicates the periodicity for performing and reporting of UL PDCP Delay per QCI measurement as specified in TS 36.314 [71]. |
| ***ul-DelayValueConfig***  If the field is present, the UE shall perform the UL PDCP Packet Delay measurement per DRB as specified in TS 38.314 [103] and the UE shall ignore the fields *reportQuantityCell* and *maxReportCells*. The applicable values for the corresponding *reportInterval* are (one of the) { ms120, ms240, ms480, ms640, ms1024, ms2048, ms5120, ms10240, min1, min6, min12, min30, min60}. The *reportInterval* indicates the periodicity for performing and reporting of UL PDCP Packet Delay per DRB measurement as specified in TS 38.314 [103]. | |

| Conditional presence | Explanation |
| --- | --- |
| *reportCGI* | The field is optional, need OR, in case *purpose* is included and set to *reportCGI*; otherwise the field is not present and the UE shall delete any existing value for this field. |
| *a3a4a5* | This field is optional, need OR, in case eventId is set to eventA3 or eventA4 or eventA5; otherwise, this field is not present and the UE shall delete any existing value of this field. |
| *a4a5* | This field is optional, need OR, in case eventId is set to eventA4 or eventA5; otherwise, this field is not present and the UE shall delete any existing value of this field. |

/\* end of eigth change \*/

/\* start of ninth change \*/

### 6.3.6 Other information elements

/\*Unaffected IEs are excluded\*/

#### – *OtherConfig*

The IE *OtherConfig* contains configuration related to other configuration.

*OtherConfig* information element

-- ASN1START

OtherConfig-r9 ::= SEQUENCE {

reportProximityConfig-r9 ReportProximityConfig-r9 OPTIONAL, -- Need ON

...,

[[ idc-Config-r11 IDC-Config-r11 OPTIONAL, -- Need ON

powerPrefIndicationConfig-r11 PowerPrefIndicationConfig-r11 OPTIONAL, -- Need ON

obtainLocationConfig-r11 ObtainLocationConfig-r11 OPTIONAL -- Need ON

]],

[[ bw-PreferenceIndicationTimer-r14 ENUMERATED {s0, s0dot5, s1, s2, s5, s10, s20,

s30, s60, s90, s120, s300, s600, spare3,

spare2, spare1} OPTIONAL, -- Need OR

sps-AssistanceInfoReport-r14 BOOLEAN OPTIONAL, -- Need ON

delayBudgetReportingConfig-r14 CHOICE{

release NULL,

setup SEQUENCE{

delayBudgetReportingProhibitTimer-r14 ENUMERATED {

s0, s0dot4, s0dot8,

s1dot6, s3, s6, s12, s30}

}

} OPTIONAL, -- Need ON

rlm-ReportConfig-r14 CHOICE {

release NULL,

setup SEQUENCE{

rlmReportTimer-r14 ENUMERATED {s0, s0dot5, s1, s2, s5, s10, s20, s30,

s60, s90, s120, s300, s600, spare3, spare2, spare1},

rlmReportRep-MPDCCH-r14 ENUMERATED {setup} OPTIONAL -- Need OR

}

} OPTIONAL -- Need ON

]],

[[ overheatingAssistanceConfig-r14 CHOICE{

release NULL,

setup SEQUENCE{

overheatingIndicationProhibitTimer-r14 ENUMERATED {s0, s0dot5, s1, s2, s5, s10,

s20, s30, s60, s90, s120, s300, s600,

spare3, spare2, spare1}

}

} OPTIONAL -- Need ON

]],

[[ measConfigAppLayer-r15 CHOICE{

release NULL,

setup SEQUENCE{

measConfigAppLayerContainer-r15 OCTET STRING (SIZE(1..1000)),

serviceType-r15 ENUMERATED {qoe, qoemtsi, spare6, spare5, spare4, spare3, spare2, spare1}

}

} OPTIONAL, -- Need ON

ailc-BitConfig-r15 BOOLEAN OPTIONAL, -- Need ON

bt-NameListConfig-r15 BT-NameListConfig-r15 OPTIONAL, --Need ON

wlan-NameListConfig-r15 WLAN-NameListConfig-r15 OPTIONAL --Need ON

]],

[[ overheatingAssistanceConfigForSCG-r16 BOOLEAN OPTIONAL -- Cond overheating

]],

[[ measUncomBarPre-r17 BOOLEAN OPTIONAL --Need ON

]]

}

IDC-Config-r11 ::= SEQUENCE {

idc-Indication-r11 ENUMERATED {setup} OPTIONAL, -- Need OR

autonomousDenialParameters-r11 SEQUENCE {

autonomousDenialSubframes-r11 ENUMERATED {n2, n5, n10, n15,

n20, n30, spare2, spare1},

autonomousDenialValidity-r11 ENUMERATED {

sf200, sf500, sf1000, sf2000,

spare4, spare3, spare2, spare1}

} OPTIONAL, -- Need OR

...,

[[ idc-Indication-UL-CA-r11 ENUMERATED {setup} OPTIONAL -- Cond idc-Ind

]],

[[ idc-HardwareSharingIndication-r13 ENUMERATED {setup} OPTIONAL -- Need OR

]],

[[ idc-Indication-MRDC-r15 CHOICE{

release NULL,

setup CandidateServingFreqListNR-r15

} OPTIONAL -- Cond idc-Ind

]]

}

ObtainLocationConfig-r11 ::= SEQUENCE {

obtainLocation-r11 ENUMERATED {setup} OPTIONAL -- Need OR

}

PowerPrefIndicationConfig-r11 ::= CHOICE{

release NULL,

setup SEQUENCE{

powerPrefIndicationTimer-r11 ENUMERATED {s0, s0dot5, s1, s2, s5, s10, s20,

s30, s60, s90, s120, s300, s600, spare3,

spare2, spare1}

}

}

ReportProximityConfig-r9 ::= SEQUENCE {

proximityIndicationEUTRA-r9 ENUMERATED {enabled} OPTIONAL, -- Need OR

proximityIndicationUTRA-r9 ENUMERATED {enabled} OPTIONAL -- Need OR

}

CandidateServingFreqListNR-r15 ::= SEQUENCE (SIZE (1..maxFreqIDC-r11)) OF ARFCN-ValueNR-r15

-- ASN1STOP

| *OtherConfig* field descriptions |
| --- |
| ***ailc-BitConfig***  Indicates whether the UE is allowed to provide assistance information bit for local cache. If configured, the UE shall only apply to a DRB configured with 12-bit PDCP SN format as specified in TS 36.323 [8]. |
| ***autonomousDenialSubframes***  Indicates the maximum number of the UL subframes for which the UE is allowed to deny any UL transmission. Value n2 corresponds to 2 subframes, n5 to 5 subframes and so on. E-UTRAN does not configure autonomous denial for frequencies on which SCG cells are configured. |
| ***autonomousDenialValidity***  Indicates the validity period over which the UL autonomous denial subframes shall be counted. Value sf200 corresponds to 200 subframes, sf500 corresponds to 500 subframes and so on. |
| ***bw-PreferenceIndicationTimer***  Prohibit timer for bandwidth preference indication reporting. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***CandidateServingFreqListNR***  Indicates for each candidate NR serving cells, the center frequency around which UE is requested to report IDC issues for MR-DC. |
| ***delayBudgetReportingProhibitTimer***  Prohibit timer for delay budget reporting. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot4 means prohibit timer is set to 0.4 second, and so on. |
| ***idc-HardwareSharingIndication***  The field is used to indicate whether the UE is allowed indicate in *InDeviceCoexIndication* that the cause of the problems are due to hardware sharing, and whether the UE is allowed to omit the TDM assistance information. |
| ***idc-Indication***  The field is used to indicate whether the UE is configured to initiate transmission of the *InDeviceCoexIndication* message to the network. |
| ***idc-Indication-MRDC***  The field is used to indicate whether the UE is configured to provide IDC indications for MR-DC using the InDeviceCoexIndication message. |
| ***idc-Indication-UL-CA***  The field is used to indicate whether the UE is configured to provide IDC indications for UL CA using the *InDeviceCoexIndication* message. |
| ***measConfigAppLayerContainer***  The field contains configuration of application layer measurements, see Annex L (normative) in TS 26.247 [90] and clause 16.5 in TS 26.114 [99]. |
| ***serviceType***  Indicates the type of application layer measurement. Value qoe indicates Quality of Experience Measurement Collection for streaming services, value qoemtsi indicates Enhanced Quality of Experience Measurement Collection for MTSI. |
| ***obtainLocation***  Requests the UE to attempt to have detailed location information available using GNSS. E-UTRAN configures the field only if *includeLocationInfo* is configured for one or more measurements. |
| ***overheatingAssistanceConfig***  Configuration for the UE to report assistance information to inform the eNB about UE detected internal overheating. |
| ***overheatingAssistanceConfigForSCG***  The field is used to indicate whether the UE is configured to provide overheating assistance information for NR SCG. E-UTRAN configures value *TRUE* only when the UE is configured with an NR SCG. |
| ***overheatingIndicationProhibitTimer***  Prohibit timer for overheating assistance information reporting. Value in seconds. Value s0 means prohibit timer is set to 0 seconds, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***powerPrefIndicationTimer***  Prohibit timer for Power Preference Indication reporting. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***reportProximityConfig***  Indicates, for each of the applicable RATs (EUTRA, UTRA), whether or not proximity indication is enabled for CSG member cell(s) of the concerned RAT. Note. |
| ***rlmReportTimer***  Prohibit timer for RLM event reporting, i.e. "early-out-of-sync" and "early-in-sync" event reporting, as specified in clause 5.6.10. Value in seconds. Value s0 means prohibit timer is set to 0 second, value s0dot5 means prohibit timer is set to 0.5 second, value s1 means prohibit timer is set to 1 second and so on. |
| ***rlmReportRep-MPDCCH***  The field is used to indicate whether the UE is configured to report excess repetitions on MPDCCH. |
| ***sps-AssistanceInfoReport***  Value TRUE indicates that the UE is allowed to report SPS-AssistanceInformation. If the *sl-V2X-SPS-Config* is provided by an E-UTRA *RRCConnectionReconfiguration* message embedded within an NR *RRCReconfiguration* for V2X sidelink communication (i.e. *sl-ConfigDedicatedEUTRA*) as in TS 38.331 [82], the network should configure the *otherConfig* and set this field to TRUE. |

NOTE: Enabling/ disabling of proximity indication includes enabling/ disabling of the related functionality e.g. autonomous search in connected mode.

| Conditional presence | Explanation |
| --- | --- |
| *idc-Ind* | The field is optionally present if *idc-Indication* is present, need OR. Otherwise the field is not present. |
| *overheating* | The field is optionally present, need ON, if *overheatingAssistanceConfig* is included and set to *setup*; otherwise, the field is not present and the UE shall delete any existing value for this field. |

/\* Unaffected IEs are excluded\*/

#### – *UE-EUTRA-Capability*

The IE *UE-EUTRA-Capability* is used to convey the E-UTRA UE Radio Access Capability Parameters, see TS 36.306 [5], and the Feature Group Indicators for mandatory features (defined in Annexes B.1 and C.1) to the network. The IE *UE-EUTRA-Capability* is transferred in E-UTRA or in another RAT.

NOTE 0: For (UE capability specific) guidelines on the use of keyword OPTIONAL, see Annex A.3.5.

*UE-EUTRA-Capability* information element

-- ASN1START

UE-EUTRA-Capability ::= SEQUENCE {

accessStratumRelease AccessStratumRelease,

ue-Category INTEGER (1..5),

pdcp-Parameters PDCP-Parameters,

phyLayerParameters PhyLayerParameters,

rf-Parameters RF-Parameters,

measParameters MeasParameters,

featureGroupIndicators BIT STRING (SIZE (32)) OPTIONAL,

interRAT-Parameters SEQUENCE {

utraFDD IRAT-ParametersUTRA-FDD OPTIONAL,

utraTDD128 IRAT-ParametersUTRA-TDD128 OPTIONAL,

utraTDD384 IRAT-ParametersUTRA-TDD384 OPTIONAL,

utraTDD768 IRAT-ParametersUTRA-TDD768 OPTIONAL,

geran IRAT-ParametersGERAN OPTIONAL,

cdma2000-HRPD IRAT-ParametersCDMA2000-HRPD OPTIONAL,

cdma2000-1xRTT IRAT-ParametersCDMA2000-1XRTT OPTIONAL

},

nonCriticalExtension UE-EUTRA-Capability-v920-IEs OPTIONAL

}

-- Late non critical extensions

UE-EUTRA-Capability-v9a0-IEs ::= SEQUENCE {

featureGroupIndRel9Add-r9 BIT STRING (SIZE (32)) OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-r9 UE-EUTRA-CapabilityAddXDD-Mode-r9 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-r9 UE-EUTRA-CapabilityAddXDD-Mode-r9 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v9c0-IEs OPTIONAL

}

UE-EUTRA-Capability-v9c0-IEs ::= SEQUENCE {

interRAT-ParametersUTRA-v9c0 IRAT-ParametersUTRA-v9c0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v9d0-IEs OPTIONAL

}

UE-EUTRA-Capability-v9d0-IEs ::= SEQUENCE {

phyLayerParameters-v9d0 PhyLayerParameters-v9d0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v9e0-IEs OPTIONAL

}

UE-EUTRA-Capability-v9e0-IEs ::= SEQUENCE {

rf-Parameters-v9e0 RF-Parameters-v9e0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v9h0-IEs OPTIONAL

}

UE-EUTRA-Capability-v9h0-IEs ::= SEQUENCE {

interRAT-ParametersUTRA-v9h0 IRAT-ParametersUTRA-v9h0 OPTIONAL,

-- Following field is only to be used for late REL-9 extensions

lateNonCriticalExtension OCTET STRING OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v10c0-IEs OPTIONAL

}

UE-EUTRA-Capability-v10c0-IEs ::= SEQUENCE {

otdoa-PositioningCapabilities-r10 OTDOA-PositioningCapabilities-r10 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v10f0-IEs OPTIONAL

}

UE-EUTRA-Capability-v10f0-IEs ::= SEQUENCE {

rf-Parameters-v10f0 RF-Parameters-v10f0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v10i0-IEs OPTIONAL

}

UE-EUTRA-Capability-v10i0-IEs ::= SEQUENCE {

rf-Parameters-v10i0 RF-Parameters-v10i0 OPTIONAL,

-- Following field is only to be used for late REL-10 extensions

lateNonCriticalExtension OCTET STRING (CONTAINING UE-EUTRA-Capability-v10j0-IEs) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v11d0-IEs OPTIONAL

}

UE-EUTRA-Capability-v10j0-IEs ::= SEQUENCE {

rf-Parameters-v10j0 RF-Parameters-v10j0 OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

UE-EUTRA-Capability-v11d0-IEs ::= SEQUENCE {

rf-Parameters-v11d0 RF-Parameters-v11d0 OPTIONAL,

otherParameters-v11d0 Other-Parameters-v11d0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v11x0-IEs OPTIONAL

}

UE-EUTRA-Capability-v11x0-IEs ::= SEQUENCE {

-- Following field is only to be used for late REL-11 extensions

lateNonCriticalExtension OCTET STRING OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v12b0-IEs OPTIONAL

}

UE-EUTRA-Capability-v12b0-IEs ::= SEQUENCE {

rf-Parameters-v12b0 RF-Parameters-v12b0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v12x0-IEs OPTIONAL

}

UE-EUTRA-Capability-v12x0-IEs ::= SEQUENCE {

-- Following field is only to be used for late REL-12 extensions

lateNonCriticalExtension OCTET STRING OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1370-IEs OPTIONAL

}

UE-EUTRA-Capability-v1370-IEs ::= SEQUENCE {

ce-Parameters-v1370 CE-Parameters-v1370 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1370 UE-EUTRA-CapabilityAddXDD-Mode-v1370 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1370 UE-EUTRA-CapabilityAddXDD-Mode-v1370 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1380-IEs OPTIONAL

}

UE-EUTRA-Capability-v1380-IEs ::= SEQUENCE {

rf-Parameters-v1380 RF-Parameters-v1380 OPTIONAL,

ce-Parameters-v1380 CE-Parameters-v1380,

fdd-Add-UE-EUTRA-Capabilities-v1380 UE-EUTRA-CapabilityAddXDD-Mode-v1380,

tdd-Add-UE-EUTRA-Capabilities-v1380 UE-EUTRA-CapabilityAddXDD-Mode-v1380,

nonCriticalExtension UE-EUTRA-Capability-v1390-IEs OPTIONAL

}

UE-EUTRA-Capability-v1390-IEs ::= SEQUENCE {

rf-Parameters-v1390 RF-Parameters-v1390 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v13e0a-IEs OPTIONAL

}

UE-EUTRA-Capability-v13e0a-IEs ::= SEQUENCE {

lateNonCriticalExtension OCTET STRING (CONTAINING UE-EUTRA-Capability-v13e0b-IEs) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1470-IEs OPTIONAL

}

UE-EUTRA-Capability-v13e0b-IEs ::= SEQUENCE {

phyLayerParameters-v13e0 PhyLayerParameters-v13e0,

-- Following field is only to be used for late REL-13 extensions

nonCriticalExtension SEQUENCE {} OPTIONAL

}

UE-EUTRA-Capability-v1470-IEs ::= SEQUENCE {

mbms-Parameters-v1470 MBMS-Parameters-v1470 OPTIONAL,

phyLayerParameters-v1470 PhyLayerParameters-v1470 OPTIONAL,

rf-Parameters-v1470 RF-Parameters-v1470 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v14a0-IEs OPTIONAL

}

UE-EUTRA-Capability-v14a0-IEs ::= SEQUENCE {

phyLayerParameters-v14a0 PhyLayerParameters-v14a0,

-- Following field is only to be used for late REL-14 extensions

nonCriticalExtension UE-EUTRA-Capability-v14b0-IEs OPTIONAL

}

UE-EUTRA-Capability-v14b0-IEs ::= SEQUENCE {

rf-Parameters-v14b0 RF-Parameters-v14b0 OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

-- Regular non critical extensions

UE-EUTRA-Capability-v920-IEs ::= SEQUENCE {

phyLayerParameters-v920 PhyLayerParameters-v920,

interRAT-ParametersGERAN-v920 IRAT-ParametersGERAN-v920,

interRAT-ParametersUTRA-v920 IRAT-ParametersUTRA-v920 OPTIONAL,

interRAT-ParametersCDMA2000-v920 IRAT-ParametersCDMA2000-1XRTT-v920 OPTIONAL,

deviceType-r9 ENUMERATED {noBenFromBatConsumpOpt} OPTIONAL,

csg-ProximityIndicationParameters-r9 CSG-ProximityIndicationParameters-r9,

neighCellSI-AcquisitionParameters-r9 NeighCellSI-AcquisitionParameters-r9,

son-Parameters-r9 SON-Parameters-r9,

nonCriticalExtension UE-EUTRA-Capability-v940-IEs OPTIONAL

}

UE-EUTRA-Capability-v940-IEs ::= SEQUENCE {

lateNonCriticalExtension OCTET STRING (CONTAINING UE-EUTRA-Capability-v9a0-IEs) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1020-IEs OPTIONAL

}

UE-EUTRA-Capability-v1020-IEs ::= SEQUENCE {

ue-Category-v1020 INTEGER (6..8) OPTIONAL,

phyLayerParameters-v1020 PhyLayerParameters-v1020 OPTIONAL,

rf-Parameters-v1020 RF-Parameters-v1020 OPTIONAL,

measParameters-v1020 MeasParameters-v1020 OPTIONAL,

featureGroupIndRel10-r10 BIT STRING (SIZE (32)) OPTIONAL,

interRAT-ParametersCDMA2000-v1020 IRAT-ParametersCDMA2000-1XRTT-v1020 OPTIONAL,

ue-BasedNetwPerfMeasParameters-r10 UE-BasedNetwPerfMeasParameters-r10 OPTIONAL,

interRAT-ParametersUTRA-TDD-v1020 IRAT-ParametersUTRA-TDD-v1020 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1060-IEs OPTIONAL

}

UE-EUTRA-Capability-v1060-IEs ::= SEQUENCE {

fdd-Add-UE-EUTRA-Capabilities-v1060 UE-EUTRA-CapabilityAddXDD-Mode-v1060 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1060 UE-EUTRA-CapabilityAddXDD-Mode-v1060 OPTIONAL,

rf-Parameters-v1060 RF-Parameters-v1060 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1090-IEs OPTIONAL

}

UE-EUTRA-Capability-v1090-IEs ::= SEQUENCE {

rf-Parameters-v1090 RF-Parameters-v1090 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1130-IEs OPTIONAL

}

UE-EUTRA-Capability-v1130-IEs ::= SEQUENCE {

pdcp-Parameters-v1130 PDCP-Parameters-v1130,

phyLayerParameters-v1130 PhyLayerParameters-v1130 OPTIONAL,

rf-Parameters-v1130 RF-Parameters-v1130,

measParameters-v1130 MeasParameters-v1130,

interRAT-ParametersCDMA2000-v1130 IRAT-ParametersCDMA2000-v1130,

otherParameters-r11 Other-Parameters-r11,

fdd-Add-UE-EUTRA-Capabilities-v1130 UE-EUTRA-CapabilityAddXDD-Mode-v1130 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1130 UE-EUTRA-CapabilityAddXDD-Mode-v1130 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1170-IEs OPTIONAL

}

UE-EUTRA-Capability-v1170-IEs ::= SEQUENCE {

phyLayerParameters-v1170 PhyLayerParameters-v1170 OPTIONAL,

ue-Category-v1170 INTEGER (9..10) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1180-IEs OPTIONAL

}

UE-EUTRA-Capability-v1180-IEs ::= SEQUENCE {

rf-Parameters-v1180 RF-Parameters-v1180 OPTIONAL,

mbms-Parameters-r11 MBMS-Parameters-r11 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1180 UE-EUTRA-CapabilityAddXDD-Mode-v1180 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1180 UE-EUTRA-CapabilityAddXDD-Mode-v1180 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v11a0-IEs OPTIONAL

}

UE-EUTRA-Capability-v11a0-IEs ::= SEQUENCE {

ue-Category-v11a0 INTEGER (11..12) OPTIONAL,

measParameters-v11a0 MeasParameters-v11a0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1250-IEs OPTIONAL

}

UE-EUTRA-Capability-v1250-IEs ::= SEQUENCE {

phyLayerParameters-v1250 PhyLayerParameters-v1250 OPTIONAL,

rf-Parameters-v1250 RF-Parameters-v1250 OPTIONAL,

rlc-Parameters-r12 RLC-Parameters-r12 OPTIONAL,

ue-BasedNetwPerfMeasParameters-v1250 UE-BasedNetwPerfMeasParameters-v1250 OPTIONAL,

ue-CategoryDL-r12 INTEGER (0..14) OPTIONAL,

ue-CategoryUL-r12 INTEGER (0..13) OPTIONAL,

wlan-IW-Parameters-r12 WLAN-IW-Parameters-r12 OPTIONAL,

measParameters-v1250 MeasParameters-v1250 OPTIONAL,

dc-Parameters-r12 DC-Parameters-r12 OPTIONAL,

mbms-Parameters-v1250 MBMS-Parameters-v1250 OPTIONAL,

mac-Parameters-r12 MAC-Parameters-r12 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1250 UE-EUTRA-CapabilityAddXDD-Mode-v1250 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1250 UE-EUTRA-CapabilityAddXDD-Mode-v1250 OPTIONAL,

sl-Parameters-r12 SL-Parameters-r12 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1260-IEs OPTIONAL

}

UE-EUTRA-Capability-v1260-IEs ::= SEQUENCE {

ue-CategoryDL-v1260 INTEGER (15..16) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1270-IEs OPTIONAL

}

UE-EUTRA-Capability-v1270-IEs ::= SEQUENCE {

rf-Parameters-v1270 RF-Parameters-v1270 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1280-IEs OPTIONAL

}

UE-EUTRA-Capability-v1280-IEs ::= SEQUENCE {

phyLayerParameters-v1280 PhyLayerParameters-v1280 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1310-IEs OPTIONAL

}

UE-EUTRA-Capability-v1310-IEs ::= SEQUENCE {

ue-CategoryDL-v1310 ENUMERATED {n17, m1} OPTIONAL,

ue-CategoryUL-v1310 ENUMERATED {n14, m1} OPTIONAL,

pdcp-Parameters-v1310 PDCP-Parameters-v1310,

rlc-Parameters-v1310 RLC-Parameters-v1310,

mac-Parameters-v1310 MAC-Parameters-v1310 OPTIONAL,

phyLayerParameters-v1310 PhyLayerParameters-v1310 OPTIONAL,

rf-Parameters-v1310 RF-Parameters-v1310 OPTIONAL,

measParameters-v1310 MeasParameters-v1310 OPTIONAL,

dc-Parameters-v1310 DC-Parameters-v1310 OPTIONAL,

sl-Parameters-v1310 SL-Parameters-v1310 OPTIONAL,

scptm-Parameters-r13 SCPTM-Parameters-r13 OPTIONAL,

ce-Parameters-r13 CE-Parameters-r13 OPTIONAL,

interRAT-ParametersWLAN-r13IRAT-ParametersWLAN-r13,

laa-Parameters-r13 LAA-Parameters-r13 OPTIONAL,

lwa-Parameters-r13 LWA-Parameters-r13 OPTIONAL,

wlan-IW-Parameters-v1310 WLAN-IW-Parameters-v1310,

lwip-Parameters-r13 LWIP-Parameters-r13,

fdd-Add-UE-EUTRA-Capabilities-v1310 UE-EUTRA-CapabilityAddXDD-Mode-v1310 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1310 UE-EUTRA-CapabilityAddXDD-Mode-v1310 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1320-IEs OPTIONAL

}

UE-EUTRA-Capability-v1320-IEs ::= SEQUENCE {

ce-Parameters-v1320 CE-Parameters-v1320 OPTIONAL,

phyLayerParameters-v1320 PhyLayerParameters-v1320 OPTIONAL,

rf-Parameters-v1320 RF-Parameters-v1320 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1320 UE-EUTRA-CapabilityAddXDD-Mode-v1320 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1320 UE-EUTRA-CapabilityAddXDD-Mode-v1320 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1330-IEs OPTIONAL

}

UE-EUTRA-Capability-v1330-IEs ::= SEQUENCE {

ue-CategoryDL-v1330 INTEGER (18..19) OPTIONAL,

phyLayerParameters-v1330 PhyLayerParameters-v1330 OPTIONAL,

ue-CE-NeedULGaps-r13 ENUMERATED {true} OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1340-IEs OPTIONAL

}

UE-EUTRA-Capability-v1340-IEs ::= SEQUENCE {

ue-CategoryUL-v1340 INTEGER (15) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1350-IEs OPTIONAL

}

UE-EUTRA-Capability-v1350-IEs ::= SEQUENCE {

ue-CategoryDL-v1350 ENUMERATED {oneBis} OPTIONAL,

ue-CategoryUL-v1350 ENUMERATED {oneBis} OPTIONAL,

ce-Parameters-v1350 CE-Parameters-v1350,

nonCriticalExtension UE-EUTRA-Capability-v1360-IEs OPTIONAL

}

UE-EUTRA-Capability-v1360-IEs ::= SEQUENCE {

other-Parameters-v1360 Other-Parameters-v1360 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1430-IEs OPTIONAL

}

UE-EUTRA-Capability-v1430-IEs ::= SEQUENCE {

phyLayerParameters-v1430 PhyLayerParameters-v1430,

ue-CategoryDL-v1430 ENUMERATED {m2} OPTIONAL,

ue-CategoryUL-v1430 ENUMERATED {n16, n17, n18, n19, n20, m2} OPTIONAL,

ue-CategoryUL-v1430b ENUMERATED {n21} OPTIONAL,

mac-Parameters-v1430 MAC-Parameters-v1430 OPTIONAL,

measParameters-v1430 MeasParameters-v1430 OPTIONAL,

pdcp-Parameters-v1430 PDCP-Parameters-v1430 OPTIONAL,

rlc-Parameters-v1430 RLC-Parameters-v1430,

rf-Parameters-v1430 RF-Parameters-v1430 OPTIONAL,

laa-Parameters-v1430 LAA-Parameters-v1430 OPTIONAL,

lwa-Parameters-v1430 LWA-Parameters-v1430 OPTIONAL,

lwip-Parameters-v1430 LWIP-Parameters-v1430 OPTIONAL,

otherParameters-v1430 Other-Parameters-v1430,

mmtel-Parameters-r14 MMTEL-Parameters-r14 OPTIONAL,

mobilityParameters-r14 MobilityParameters-r14 OPTIONAL,

ce-Parameters-v1430 CE-Parameters-v1430,

fdd-Add-UE-EUTRA-Capabilities-v1430 UE-EUTRA-CapabilityAddXDD-Mode-v1430 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1430 UE-EUTRA-CapabilityAddXDD-Mode-v1430 OPTIONAL,

mbms-Parameters-v1430 MBMS-Parameters-v1430 OPTIONAL,

sl-Parameters-v1430 SL-Parameters-v1430 OPTIONAL,

ue-BasedNetwPerfMeasParameters-v1430 UE-BasedNetwPerfMeasParameters-v1430 OPTIONAL,

highSpeedEnhParameters-r14 HighSpeedEnhParameters-r14 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1440-IEs OPTIONAL

}

UE-EUTRA-Capability-v1440-IEs ::= SEQUENCE {

lwa-Parameters-v1440 LWA-Parameters-v1440,

mac-Parameters-v1440 MAC-Parameters-v1440,

nonCriticalExtension UE-EUTRA-Capability-v1450-IEs OPTIONAL

}

UE-EUTRA-Capability-v1450-IEs ::= SEQUENCE {

phyLayerParameters-v1450 PhyLayerParameters-v1450 OPTIONAL,

rf-Parameters-v1450 RF-Parameters-v1450 OPTIONAL,

otherParameters-v1450 OtherParameters-v1450,

ue-CategoryDL-v1450 INTEGER (20) OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1460-IEs OPTIONAL

}

UE-EUTRA-Capability-v1460-IEs ::= SEQUENCE {

ue-CategoryDL-v1460 INTEGER (21) OPTIONAL,

otherParameters-v1460 Other-Parameters-v1460,

nonCriticalExtension UE-EUTRA-Capability-v1510-IEs OPTIONAL

}

UE-EUTRA-Capability-v1510-IEs ::= SEQUENCE {

irat-ParametersNR-r15 IRAT-ParametersNR-r15 OPTIONAL,

featureSetsEUTRA-r15 FeatureSetsEUTRA-r15 OPTIONAL,

pdcp-ParametersNR-r15 PDCP-ParametersNR-r15 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1510 UE-EUTRA-CapabilityAddXDD-Mode-v1510 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1510 UE-EUTRA-CapabilityAddXDD-Mode-v1510 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1520-IEs OPTIONAL

}

UE-EUTRA-Capability-v1520-IEs ::= SEQUENCE {

measParameters-v1520 MeasParameters-v1520,

nonCriticalExtension UE-EUTRA-Capability-v1530-IEs OPTIONAL

}

UE-EUTRA-Capability-v1530-IEs ::= SEQUENCE {

measParameters-v1530 MeasParameters-v1530 OPTIONAL,

otherParameters-v1530 Other-Parameters-v1530 OPTIONAL,

neighCellSI-AcquisitionParameters-v1530 NeighCellSI-AcquisitionParameters-v1530 OPTIONAL,

mac-Parameters-v1530 MAC-Parameters-v1530 OPTIONAL,

phyLayerParameters-v1530 PhyLayerParameters-v1530 OPTIONAL,

rf-Parameters-v1530 RF-Parameters-v1530 OPTIONAL,

pdcp-Parameters-v1530 PDCP-Parameters-v1530 OPTIONAL,

ue-CategoryDL-v1530 INTEGER (22..26) OPTIONAL,

ue-BasedNetwPerfMeasParameters-v1530 UE-BasedNetwPerfMeasParameters-v1530 OPTIONAL,

rlc-Parameters-v1530 RLC-Parameters-v1530 OPTIONAL,

sl-Parameters-v1530 SL-Parameters-v1530 OPTIONAL,

extendedNumberOfDRBs-r15 ENUMERATED {supported} OPTIONAL,

reducedCP-Latency-r15 ENUMERATED {supported} OPTIONAL,

laa-Parameters-v1530 LAA-Parameters-v1530 OPTIONAL,

ue-CategoryUL-v1530 INTEGER (22..26) OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1530 UE-EUTRA-CapabilityAddXDD-Mode-v1530 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1530 UE-EUTRA-CapabilityAddXDD-Mode-v1530 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1540-IEs OPTIONAL

}

UE-EUTRA-Capability-v1540-IEs ::= SEQUENCE {

phyLayerParameters-v1540 PhyLayerParameters-v1540 OPTIONAL,

otherParameters-v1540 Other-Parameters-v1540,

fdd-Add-UE-EUTRA-Capabilities-v1540 UE-EUTRA-CapabilityAddXDD-Mode-v1540 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1540 UE-EUTRA-CapabilityAddXDD-Mode-v1540 OPTIONAL,

sl-Parameters-v1540 SL-Parameters-v1540 OPTIONAL,

irat-ParametersNR-v1540 IRAT-ParametersNR-v1540 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1550-IEs OPTIONAL

}

UE-EUTRA-Capability-v1550-IEs ::= SEQUENCE {

neighCellSI-AcquisitionParameters-v1550 NeighCellSI-AcquisitionParameters-v1550 OPTIONAL,

phyLayerParameters-v1550 PhyLayerParameters-v1550,

mac-Parameters-v1550 MAC-Parameters-v1550,

fdd-Add-UE-EUTRA-Capabilities-v1550 UE-EUTRA-CapabilityAddXDD-Mode-v1550,

tdd-Add-UE-EUTRA-Capabilities-v1550 UE-EUTRA-CapabilityAddXDD-Mode-v1550,

nonCriticalExtension UE-EUTRA-Capability-v1560-IEs OPTIONAL

}

UE-EUTRA-Capability-v1560-IEs ::= SEQUENCE {

pdcp-ParametersNR-v1560 PDCP-ParametersNR-v1560,

irat-ParametersNR-v1560 IRAT-ParametersNR-v1560,

appliedCapabilityFilterCommon-r15 OCTET STRING OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1560 UE-EUTRA-CapabilityAddXDD-Mode-v1560,

tdd-Add-UE-EUTRA-Capabilities-v1560 UE-EUTRA-CapabilityAddXDD-Mode-v1560,

nonCriticalExtension UE-EUTRA-Capability-v1570-IEs OPTIONAL

}

UE-EUTRA-Capability-v1570-IEs ::= SEQUENCE {

rf-Parameters-v1570 RF-Parameters-v1570 OPTIONAL,

irat-ParametersNR-v1570 IRAT-ParametersNR-v1570 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v15a0-IEs OPTIONAL

}

UE-EUTRA-Capability-v15a0-IEs ::= SEQUENCE {

neighCellSI-AcquisitionParameters-v15a0 NeighCellSI-AcquisitionParameters-v15a0,

eutra-5GC-Parameters-r15 EUTRA-5GC-Parameters-r15 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v15a0 UE-EUTRA-CapabilityAddXDD-Mode-v15a0 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v15a0 UE-EUTRA-CapabilityAddXDD-Mode-v15a0 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1610-IEs OPTIONAL

}

UE-EUTRA-Capability-v1610-IEs ::= SEQUENCE {

highSpeedEnhParameters-v1610 HighSpeedEnhParameters-v1610 OPTIONAL,

neighCellSI-AcquisitionParameters-v1610 NeighCellSI-AcquisitionParameters-v1610 OPTIONAL,

mbms-Parameters-v1610 MBMS-Parameters-v1610 OPTIONAL,

pdcp-Parameters-v1610 PDCP-Parameters-v1610 OPTIONAL,

mac-Parameters-v1610 MAC-Parameters-v1610 OPTIONAL,

phyLayerParameters-v1610 PhyLayerParameters-v1610 OPTIONAL,

measParameters-v1610 MeasParameters-v1610 OPTIONAL,

pur-Parameters-r16 PUR-Parameters-r16 OPTIONAL,

eutra-5GC-Parameters-v1610 EUTRA-5GC-Parameters-v1610 OPTIONAL,

otherParameters-v1610 Other-Parameters-v1610 OPTIONAL,

dl-DedicatedMessageSegmentation-r16 ENUMERATED {supported} OPTIONAL,

mmtel-Parameters-v1610 MMTEL-Parameters-v1610,

irat-ParametersNR-v1610 IRAT-ParametersNR-v1610 OPTIONAL,

rf-Parameters-v1610 RF-Parameters-v1610 OPTIONAL,

mobilityParameters-v1610 MobilityParameters-v1610 OPTIONAL,

ue-BasedNetwPerfMeasParameters-v1610 UE-BasedNetwPerfMeasParameters-v1610,

sl-Parameters-v1610 SL-Parameters-v1610 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1610 UE-EUTRA-CapabilityAddXDD-Mode-v1610 OPTIONAL,

tdd-Add-UE-EUTRA-Capabilities-v1610 UE-EUTRA-CapabilityAddXDD-Mode-v1610 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1630-IEs OPTIONAL

}

UE-EUTRA-Capability-v1630-IEs ::= SEQUENCE {

rf-Parameters-v1630 RF-Parameters-v1630 OPTIONAL,

sl-Parameters-v1630 SL-Parameters-v1630 OPTIONAL,

earlySecurityReactivation-r16 ENUMERATED {supported} OPTIONAL,

mac-Parameters-v1630 MAC-Parameters-v1630,

measParameters-v1630 MeasParameters-v1630 OPTIONAL,

fdd-Add-UE-EUTRA-Capabilities-v1630 UE-EUTRA-CapabilityAddXDD-Mode-v1630,

tdd-Add-UE-EUTRA-Capabilities-v1630 UE-EUTRA-CapabilityAddXDD-Mode-v1630,

nonCriticalExtension UE-EUTRA-Capability-v1650-IEs OPTIONAL

}

UE-EUTRA-Capability-v1650-IEs ::= SEQUENCE {

otherParameters-v1650 Other-Parameters-v1650 OPTIONAL,

nonCriticalExtension UE-EUTRA-Capability-v1660-IEs OPTIONAL

}

UE-EUTRA-Capability-v1660-IEs ::= SEQUENCE {

irat-ParametersNR-v1660 IRAT-ParametersNR-v1660,

nonCriticalExtension UE-EUTRA-Capability-v17xy-IEs OPTIONAL

}

UE-EUTRA-Capability-v17xy-IEs ::= SEQUENCE {

ue-BasedNetwPerfMeasParameters-v17xy UE-BasedNetwPerfMeasParameters-v17xy OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-r9 ::= SEQUENCE {

phyLayerParameters-r9 PhyLayerParameters OPTIONAL,

featureGroupIndicators-r9 BIT STRING (SIZE (32)) OPTIONAL,

featureGroupIndRel9Add-r9 BIT STRING (SIZE (32)) OPTIONAL,

interRAT-ParametersGERAN-r9 IRAT-ParametersGERAN OPTIONAL,

interRAT-ParametersUTRA-r9 IRAT-ParametersUTRA-v920 OPTIONAL,

interRAT-ParametersCDMA2000-r9 IRAT-ParametersCDMA2000-1XRTT-v920 OPTIONAL,

neighCellSI-AcquisitionParameters-r9 NeighCellSI-AcquisitionParameters-r9 OPTIONAL,

...

}

UE-EUTRA-CapabilityAddXDD-Mode-v1060 ::= SEQUENCE {

phyLayerParameters-v1060 PhyLayerParameters-v1020 OPTIONAL,

featureGroupIndRel10-v1060 BIT STRING (SIZE (32)) OPTIONAL,

interRAT-ParametersCDMA2000-v1060 IRAT-ParametersCDMA2000-1XRTT-v1020 OPTIONAL,

interRAT-ParametersUTRA-TDD-v1060 IRAT-ParametersUTRA-TDD-v1020 OPTIONAL,

...,

[[ otdoa-PositioningCapabilities-r10 OTDOA-PositioningCapabilities-r10 OPTIONAL

]]

}

UE-EUTRA-CapabilityAddXDD-Mode-v1130 ::= SEQUENCE {

phyLayerParameters-v1130 PhyLayerParameters-v1130 OPTIONAL,

measParameters-v1130 MeasParameters-v1130 OPTIONAL,

otherParameters-r11 Other-Parameters-r11 OPTIONAL,

...

}

UE-EUTRA-CapabilityAddXDD-Mode-v1180 ::= SEQUENCE {

mbms-Parameters-r11 MBMS-Parameters-r11

}

UE-EUTRA-CapabilityAddXDD-Mode-v1250 ::= SEQUENCE {

phyLayerParameters-v1250 PhyLayerParameters-v1250 OPTIONAL,

measParameters-v1250 MeasParameters-v1250 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1310 ::= SEQUENCE {

phyLayerParameters-v1310 PhyLayerParameters-v1310 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1320 ::= SEQUENCE {

phyLayerParameters-v1320 PhyLayerParameters-v1320 OPTIONAL,

scptm-Parameters-r13 SCPTM-Parameters-r13 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1370 ::= SEQUENCE {

ce-Parameters-v1370 CE-Parameters-v1370 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1380 ::= SEQUENCE {

ce-Parameters-v1380 CE-Parameters-v1380

}

UE-EUTRA-CapabilityAddXDD-Mode-v1430 ::= SEQUENCE {

phyLayerParameters-v1430 PhyLayerParameters-v1430 OPTIONAL,

mmtel-Parameters-r14 MMTEL-Parameters-r14 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1510 ::= SEQUENCE {

pdcp-ParametersNR-r15 PDCP-ParametersNR-r15 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1530 ::= SEQUENCE {

neighCellSI-AcquisitionParameters-v1530 NeighCellSI-AcquisitionParameters-v1530 OPTIONAL,

reducedCP-Latency-r15 ENUMERATED {supported} OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1540 ::= SEQUENCE {

eutra-5GC-Parameters-r15 EUTRA-5GC-Parameters-r15 OPTIONAL,

irat-ParametersNR-v1540 IRAT-ParametersNR-v1540 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1550 ::= SEQUENCE {

neighCellSI-AcquisitionParameters-v1550 NeighCellSI-AcquisitionParameters-v1550 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1560 ::= SEQUENCE {

pdcp-ParametersNR-v1560 PDCP-ParametersNR-v1560

}

UE-EUTRA-CapabilityAddXDD-Mode-v15a0 ::= SEQUENCE {

phyLayerParameters-v1530 PhyLayerParameters-v1530 OPTIONAL,

phyLayerParameters-v1540 PhyLayerParameters-v1540 OPTIONAL,

phyLayerParameters-v1550 PhyLayerParameters-v1550 OPTIONAL,

neighCellSI-AcquisitionParameters-v15a0 NeighCellSI-AcquisitionParameters-v15a0

}

UE-EUTRA-CapabilityAddXDD-Mode-v1610 ::= SEQUENCE {

phyLayerParameters-v1610 PhyLayerParameters-v1610 OPTIONAL,

pur-Parameters-r16 PUR-Parameters-r16 OPTIONAL,

measParameters-v1610 MeasParameters-v1610 OPTIONAL,

eutra-5GC-Parameters-v1610 EUTRA-5GC-Parameters-v1610 OPTIONAL,

irat-ParametersNR-v1610 IRAT-ParametersNR-v1610 OPTIONAL,

neighCellSI-AcquisitionParameters-v1610 NeighCellSI-AcquisitionParameters-v1610 OPTIONAL,

mobilityParameters-v1610 MobilityParameters-v1610 OPTIONAL

}

UE-EUTRA-CapabilityAddXDD-Mode-v1630 ::= SEQUENCE {

measParameters-v1630 MeasParameters-v1630

}

AccessStratumRelease ::= ENUMERATED {

rel8, rel9, rel10, rel11, rel12, rel13,

rel14, rel15, ..., rel16}

FeatureSetsEUTRA-r15 ::= SEQUENCE {

featureSetsDL-r15 SEQUENCE (SIZE (1..maxFeatureSets-r15)) OF FeatureSetDL-r15 OPTIONAL,

featureSetsDL-PerCC-r15 SEQUENCE (SIZE (1..maxPerCC-FeatureSets-r15)) OF FeatureSetDL-PerCC-r15 OPTIONAL,

featureSetsUL-r15 SEQUENCE (SIZE (1..maxFeatureSets-r15)) OF FeatureSetUL-r15 OPTIONAL,

featureSetsUL-PerCC-r15 SEQUENCE (SIZE (1..maxPerCC-FeatureSets-r15)) OF FeatureSetUL-PerCC-r15 OPTIONAL,

...,

[[ featureSetsDL-v1550 SEQUENCE (SIZE (1..maxFeatureSets-r15)) OF FeatureSetDL-v1550 OPTIONAL

]]

}

MobilityParameters-r14 ::= SEQUENCE {

makeBeforeBreak-r14 ENUMERATED {supported} OPTIONAL,

rach-Less-r14 ENUMERATED {supported} OPTIONAL

}

MobilityParameters-v1610 ::= SEQUENCE {

cho-r16 ENUMERATED {supported} OPTIONAL,

cho-FDD-TDD-r16 ENUMERATED {supported} OPTIONAL,

cho-Failure-r16 ENUMERATED {supported} OPTIONAL,

cho-TwoTriggerEvents-r16 ENUMERATED {supported} OPTIONAL

}

DC-Parameters-r12 ::= SEQUENCE {

drb-TypeSplit-r12 ENUMERATED {supported} OPTIONAL,

drb-TypeSCG-r12 ENUMERATED {supported} OPTIONAL

}

DC-Parameters-v1310 ::= SEQUENCE {

pdcp-TransferSplitUL-r13 ENUMERATED {supported} OPTIONAL,

ue-SSTD-Meas-r13 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-r12 ::= SEQUENCE {

logicalChannelSR-ProhibitTimer-r12 ENUMERATED {supported} OPTIONAL,

longDRX-Command-r12 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1310 ::= SEQUENCE {

extendedMAC-LengthField-r13 ENUMERATED {supported} OPTIONAL,

extendedLongDRX-r13 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1430 ::= SEQUENCE {

shortSPS-IntervalFDD-r14 ENUMERATED {supported} OPTIONAL,

shortSPS-IntervalTDD-r14 ENUMERATED {supported} OPTIONAL,

skipUplinkDynamic-r14 ENUMERATED {supported} OPTIONAL,

skipUplinkSPS-r14 ENUMERATED {supported} OPTIONAL,

multipleUplinkSPS-r14 ENUMERATED {supported} OPTIONAL,

dataInactMon-r14 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1440 ::= SEQUENCE {

rai-Support-r14 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1530 ::= SEQUENCE {

min-Proc-TimelineSubslot-r15 SEQUENCE (SIZE(1..3)) OF ProcessingTimelineSet-r15 OPTIONAL,

skipSubframeProcessing-r15 SkipSubframeProcessing-r15 OPTIONAL,

earlyData-UP-r15 ENUMERATED {supported} OPTIONAL,

dormantSCellState-r15 ENUMERATED {supported} OPTIONAL,

directSCellActivation-r15 ENUMERATED {supported} OPTIONAL,

directSCellHibernation-r15 ENUMERATED {supported} OPTIONAL,

extendedLCID-Duplication-r15 ENUMERATED {supported} OPTIONAL,

sps-ServingCell-r15 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1550 ::= SEQUENCE {

eLCID-Support-r15 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1610 ::= SEQUENCE {

directMCG-SCellActivationResume-r16 ENUMERATED {supported} OPTIONAL,

directSCG-SCellActivationResume-r16 ENUMERATED {supported} OPTIONAL,

earlyData-UP-5GC-r16 ENUMERATED {supported} OPTIONAL,

rai-SupportEnh-r16 ENUMERATED {supported} OPTIONAL

}

MAC-Parameters-v1630 ::= SEQUENCE {

directSCG-SCellActivationNEDC-r16 ENUMERATED {supported} OPTIONAL

}

ProcessingTimelineSet-r15 ::= ENUMERATED {set1, set2}

RLC-Parameters-r12 ::= SEQUENCE {

extended-RLC-LI-Field-r12 ENUMERATED {supported}

}

RLC-Parameters-v1310 ::= SEQUENCE {

extendedRLC-SN-SO-Field-r13 ENUMERATED {supported} OPTIONAL

}

RLC-Parameters-v1430 ::= SEQUENCE {

extendedPollByte-r14 ENUMERATED {supported} OPTIONAL

}

RLC-Parameters-v1530 ::= SEQUENCE {

flexibleUM-AM-Combinations-r15 ENUMERATED {supported} OPTIONAL,

rlc-AM-Ooo-Delivery-r15 ENUMERATED {supported} OPTIONAL,

rlc-UM-Ooo-Delivery-r15 ENUMERATED {supported} OPTIONAL

}

PDCP-Parameters ::= SEQUENCE {

supportedROHC-Profiles ROHC-ProfileSupportList-r15,

maxNumberROHC-ContextSessions ENUMERATED {

cs2, cs4, cs8, cs12, cs16, cs24, cs32,

cs48, cs64, cs128, cs256, cs512, cs1024,

cs16384, spare2, spare1} DEFAULT cs16,

...

}

PDCP-Parameters-v1130 ::= SEQUENCE {

pdcp-SN-Extension-r11 ENUMERATED {supported} OPTIONAL,

supportRohcContextContinue-r11 ENUMERATED {supported} OPTIONAL

}

PDCP-Parameters-v1310 ::= SEQUENCE {

pdcp-SN-Extension-18bits-r13 ENUMERATED {supported} OPTIONAL

}

PDCP-Parameters-v1430 ::= SEQUENCE {

supportedUplinkOnlyROHC-Profiles-r14 SEQUENCE {

profile0x0006-r14 BOOLEAN

},

maxNumberROHC-ContextSessions-r14 ENUMERATED {

cs2, cs4, cs8, cs12, cs16, cs24, cs32,

cs48, cs64, cs128, cs256, cs512, cs1024,

cs16384, spare2, spare1} DEFAULT cs16

}

PDCP-Parameters-v1530 ::= SEQUENCE {

supportedUDC-r15 SupportedUDC-r15 OPTIONAL,

pdcp-Duplication-r15 ENUMERATED {supported} OPTIONAL

}

PDCP-Parameters-v1610 ::= SEQUENCE {

pdcp-VersionChangeWithoutHO-r16 ENUMERATED {supported} OPTIONAL,

ehc-r16 ENUMERATED {supported} OPTIONAL,

continueEHC-Context-r16 ENUMERATED {supported} OPTIONAL,

maxNumberEHC-Contexts-r16 ENUMERATED {cs2, cs4, cs8, cs16, cs32, cs64, cs128, cs256,

cs512, cs1024, cs2048, cs4096, cs8192, cs16384,

cs32768, cs65536} OPTIONAL,

jointEHC-ROHC-Config-r16 ENUMERATED {supported} OPTIONAL

}

SupportedUDC-r15 ::= SEQUENCE {

supportedStandardDic-r15 ENUMERATED {supported} OPTIONAL,

supportedOperatorDic-r15 SupportedOperatorDic-r15 OPTIONAL

}

SupportedOperatorDic-r15 ::= SEQUENCE {

versionOfDictionary-r15 INTEGER (0..15),

associatedPLMN-ID-r15 PLMN-Identity

}

PhyLayerParameters ::= SEQUENCE {

ue-TxAntennaSelectionSupported BOOLEAN,

ue-SpecificRefSigsSupported BOOLEAN

}

PhyLayerParameters-v920 ::= SEQUENCE {

enhancedDualLayerFDD-r9 ENUMERATED {supported} OPTIONAL,

enhancedDualLayerTDD-r9 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v9d0 ::= SEQUENCE {

tm5-FDD-r9 ENUMERATED {supported} OPTIONAL,

tm5-TDD-r9 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1020 ::= SEQUENCE {

twoAntennaPortsForPUCCH-r10 ENUMERATED {supported} OPTIONAL,

tm9-With-8Tx-FDD-r10 ENUMERATED {supported} OPTIONAL,

pmi-Disabling-r10 ENUMERATED {supported} OPTIONAL,

crossCarrierScheduling-r10 ENUMERATED {supported} OPTIONAL,

simultaneousPUCCH-PUSCH-r10 ENUMERATED {supported} OPTIONAL,

multiClusterPUSCH-WithinCC-r10 ENUMERATED {supported} OPTIONAL,

nonContiguousUL-RA-WithinCC-List-r10 NonContiguousUL-RA-WithinCC-List-r10 OPTIONAL

}

PhyLayerParameters-v1130 ::= SEQUENCE {

crs-InterfHandl-r11 ENUMERATED {supported} OPTIONAL,

ePDCCH-r11 ENUMERATED {supported} OPTIONAL,

multiACK-CSI-Reporting-r11 ENUMERATED {supported} OPTIONAL,

ss-CCH-InterfHandl-r11 ENUMERATED {supported} OPTIONAL,

tdd-SpecialSubframe-r11 ENUMERATED {supported} OPTIONAL,

txDiv-PUCCH1b-ChSelect-r11 ENUMERATED {supported} OPTIONAL,

ul-CoMP-r11 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1170 ::= SEQUENCE {

interBandTDD-CA-WithDifferentConfig-r11 BIT STRING (SIZE (2)) OPTIONAL

}

PhyLayerParameters-v1250 ::= SEQUENCE {

e-HARQ-Pattern-FDD-r12 ENUMERATED {supported} OPTIONAL,

enhanced-4TxCodebook-r12 ENUMERATED {supported} OPTIONAL,

tdd-FDD-CA-PCellDuplex-r12 BIT STRING (SIZE (2)) OPTIONAL,

phy-TDD-ReConfig-TDD-PCell-r12 ENUMERATED {supported} OPTIONAL,

phy-TDD-ReConfig-FDD-PCell-r12 ENUMERATED {supported} OPTIONAL,

pusch-FeedbackMode-r12 ENUMERATED {supported} OPTIONAL,

pusch-SRS-PowerControl-SubframeSet-r12 ENUMERATED {supported} OPTIONAL,

csi-SubframeSet-r12 ENUMERATED {supported} OPTIONAL,

noResourceRestrictionForTTIBundling-r12 ENUMERATED {supported} OPTIONAL,

discoverySignalsInDeactSCell-r12 ENUMERATED {supported} OPTIONAL,

naics-Capability-List-r12 NAICS-Capability-List-r12 OPTIONAL

}

PhyLayerParameters-v1280 ::= SEQUENCE {

alternativeTBS-Indices-r12 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1310 ::= SEQUENCE {

aperiodicCSI-Reporting-r13 BIT STRING (SIZE (2)) OPTIONAL,

codebook-HARQ-ACK-r13 BIT STRING (SIZE (2)) OPTIONAL,

crossCarrierScheduling-B5C-r13 ENUMERATED {supported} OPTIONAL,

fdd-HARQ-TimingTDD-r13 ENUMERATED {supported} OPTIONAL,

maxNumberUpdatedCSI-Proc-r13 INTEGER(5..32) OPTIONAL,

pucch-Format4-r13 ENUMERATED {supported} OPTIONAL,

pucch-Format5-r13 ENUMERATED {supported} OPTIONAL,

pucch-SCell-r13 ENUMERATED {supported} OPTIONAL,

spatialBundling-HARQ-ACK-r13 ENUMERATED {supported} OPTIONAL,

supportedBlindDecoding-r13 SEQUENCE {

maxNumberDecoding-r13 INTEGER(1..32) OPTIONAL,

pdcch-CandidateReductions-r13 ENUMERATED {supported} OPTIONAL,

skipMonitoringDCI-Format0-1A-r13 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

uci-PUSCH-Ext-r13 ENUMERATED {supported} OPTIONAL,

crs-InterfMitigationTM10-r13 ENUMERATED {supported} OPTIONAL,

pdsch-CollisionHandling-r13 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1320 ::= SEQUENCE {

mimo-UE-Parameters-r13 MIMO-UE-Parameters-r13 OPTIONAL

}

PhyLayerParameters-v1330 ::= SEQUENCE {

cch-InterfMitigation-RefRecTypeA-r13 ENUMERATED {supported} OPTIONAL,

cch-InterfMitigation-RefRecTypeB-r13 ENUMERATED {supported} OPTIONAL,

cch-InterfMitigation-MaxNumCCs-r13 INTEGER (1.. maxServCell-r13) OPTIONAL,

crs-InterfMitigationTM1toTM9-r13 INTEGER (1.. maxServCell-r13) OPTIONAL

}

PhyLayerParameters-v13e0 ::= SEQUENCE {

mimo-UE-Parameters-v13e0 MIMO-UE-Parameters-v13e0

}

PhyLayerParameters-v1430 ::= SEQUENCE {

ce-PUSCH-NB-MaxTBS-r14 ENUMERATED {supported} OPTIONAL,

ce-PDSCH-PUSCH-MaxBandwidth-r14 ENUMERATED {bw5, bw20} OPTIONAL,

ce-HARQ-AckBundling-r14 ENUMERATED {supported} OPTIONAL,

ce-PDSCH-TenProcesses-r14 ENUMERATED {supported} OPTIONAL,

ce-RetuningSymbols-r14 ENUMERATED {n0, n1} OPTIONAL,

ce-PDSCH-PUSCH-Enhancement-r14 ENUMERATED {supported} OPTIONAL,

ce-SchedulingEnhancement-r14 ENUMERATED {supported} OPTIONAL,

ce-SRS-Enhancement-r14 ENUMERATED {supported} OPTIONAL,

ce-PUCCH-Enhancement-r14 ENUMERATED {supported} OPTIONAL,

ce-ClosedLoopTxAntennaSelection-r14 ENUMERATED {supported} OPTIONAL,

tdd-SpecialSubframe-r14 ENUMERATED {supported} OPTIONAL,

tdd-TTI-Bundling-r14 ENUMERATED {supported} OPTIONAL,

dmrs-LessUpPTS-r14 ENUMERATED {supported} OPTIONAL,

mimo-UE-Parameters-v1430 MIMO-UE-Parameters-v1430 OPTIONAL,

alternativeTBS-Index-r14 ENUMERATED {supported} OPTIONAL,

feMBMS-Unicast-Parameters-r14 FeMBMS-Unicast-Parameters-r14 OPTIONAL

}

PhyLayerParameters-v1450 ::= SEQUENCE {

ce-SRS-EnhancementWithoutComb4-r14 ENUMERATED {supported} OPTIONAL,

crs-LessDwPTS-r14 ENUMERATED {supported} OPTIONAL}

PhyLayerParameters-v1470 ::= SEQUENCE {

mimo-UE-Parameters-v1470 MIMO-UE-Parameters-v1470 OPTIONAL,

srs-UpPTS-6sym-r14 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v14a0 ::= SEQUENCE {

ssp10-TDD-Only-r14 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1530 ::= SEQUENCE {

stti-SPT-Capabilities-r15 SEQUENCE {

aperiodicCsi-ReportingSTTI-r15 ENUMERATED {supported} OPTIONAL,

dmrs-BasedSPDCCH-MBSFN-r15 ENUMERATED {supported} OPTIONAL,

dmrs-BasedSPDCCH-nonMBSFN-r15 ENUMERATED {supported} OPTIONAL,

dmrs-PositionPattern-r15 ENUMERATED {supported} OPTIONAL,

dmrs-SharingSubslotPDSCH-r15 ENUMERATED {supported} OPTIONAL,

dmrs-RepetitionSubslotPDSCH-r15 ENUMERATED {supported} OPTIONAL,

epdcch-SPT-differentCells-r15 ENUMERATED {supported} OPTIONAL,

epdcch-STTI-differentCells-r15 ENUMERATED {supported} OPTIONAL,

maxLayersSlotOrSubslotPUSCH-r15 ENUMERATED {oneLayer,twoLayers,fourLayers}

OPTIONAL,

maxNumberUpdatedCSI-Proc-SPT-r15 INTEGER(5..32) OPTIONAL,

maxNumberUpdatedCSI-Proc-STTI-Comb77-r15 INTEGER(1..32) OPTIONAL,

maxNumberUpdatedCSI-Proc-STTI-Comb27-r15 INTEGER(1..32) OPTIONAL,

maxNumberUpdatedCSI-Proc-STTI-Comb22-Set1-r15 INTEGER(1..32) OPTIONAL,

maxNumberUpdatedCSI-Proc-STTI-Comb22-Set2-r15 INTEGER(1..32) OPTIONAL,

mimo-UE-ParametersSTTI-r15 MIMO-UE-Parameters-r13 OPTIONAL,

mimo-UE-ParametersSTTI-v1530 MIMO-UE-Parameters-v1430 OPTIONAL,

numberOfBlindDecodesUSS-r15 INTEGER(4..32) OPTIONAL,

pdsch-SlotSubslotPDSCH-Decoding-r15 ENUMERATED {supported} OPTIONAL,

powerUCI-SlotPUSCH ENUMERATED {supported} OPTIONAL,

powerUCI-SubslotPUSCH ENUMERATED {supported} OPTIONAL,

slotPDSCH-TxDiv-TM9and10 ENUMERATED {supported} OPTIONAL,

subslotPDSCH-TxDiv-TM9and10 ENUMERATED {supported} OPTIONAL,

spdcch-differentRS-types-r15 ENUMERATED {supported} OPTIONAL,

srs-DCI7-TriggeringFS2-r15 ENUMERATED {supported} OPTIONAL,

sps-cyclicShift-r15 ENUMERATED {supported} OPTIONAL,

spdcch-Reuse-r15 ENUMERATED {supported} OPTIONAL,

sps-STTI-r15 ENUMERATED {slot, subslot, slotAndSubslot}

OPTIONAL,

tm8-slotPDSCH-r15 ENUMERATED {supported} OPTIONAL,

tm9-slotSubslot-r15 ENUMERATED {supported} OPTIONAL,

tm9-slotSubslotMBSFN-r15 ENUMERATED {supported} OPTIONAL,

tm10-slotSubslot-r15 ENUMERATED {supported} OPTIONAL,

tm10-slotSubslotMBSFN-r15 ENUMERATED {supported} OPTIONAL,

txDiv-SPUCCH-r15 ENUMERATED {supported} OPTIONAL,

ul-AsyncHarqSharingDiff-TTI-Lengths-r15 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

ce-Capabilities-r15 SEQUENCE {

ce-CRS-IntfMitig-r15 ENUMERATED {supported} OPTIONAL,

ce-CQI-AlternativeTable-r15 ENUMERATED {supported} OPTIONAL,

ce-PDSCH-FlexibleStartPRB-CE-ModeA-r15 ENUMERATED {supported} OPTIONAL,

ce-PDSCH-FlexibleStartPRB-CE-ModeB-r15 ENUMERATED {supported} OPTIONAL,

ce-PDSCH-64QAM-r15 ENUMERATED {supported} OPTIONAL,

ce-PUSCH-FlexibleStartPRB-CE-ModeA-r15 ENUMERATED {supported} OPTIONAL,

ce-PUSCH-FlexibleStartPRB-CE-ModeB-r15 ENUMERATED {supported} OPTIONAL,

ce-PUSCH-SubPRB-Allocation-r15 ENUMERATED {supported} OPTIONAL,

ce-UL-HARQ-ACK-Feedback-r15 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

shortCQI-ForSCellActivation-r15 ENUMERATED {supported} OPTIONAL,

mimo-CBSR-AdvancedCSI-r15 ENUMERATED {supported} OPTIONAL,

crs-IntfMitig-r15 ENUMERATED {supported} OPTIONAL,

ul-PowerControlEnhancements-r15 ENUMERATED {supported} OPTIONAL,

urllc-Capabilities-r15 SEQUENCE {

pdsch-RepSubframe-r15 ENUMERATED {supported} OPTIONAL,

pdsch-RepSlot-r15 ENUMERATED {supported} OPTIONAL,

pdsch-RepSubslot-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-MultiConfigSubframe-r15 INTEGER (0..6) OPTIONAL,

pusch-SPS-MaxConfigSubframe-r15 INTEGER (0..31) OPTIONAL,

pusch-SPS-MultiConfigSlot-r15 INTEGER (0..6) OPTIONAL,

pusch-SPS-MaxConfigSlot-r15 INTEGER (0..31) OPTIONAL,

pusch-SPS-MultiConfigSubslot-r15 INTEGER (0..6) OPTIONAL,

pusch-SPS-MaxConfigSubslot-r15 INTEGER (0..31) OPTIONAL,

pusch-SPS-SlotRepPCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SlotRepPSCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SlotRepSCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SubframeRepPCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SubframeRepPSCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SubframeRepSCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SubslotRepPCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SubslotRepPSCell-r15 ENUMERATED {supported} OPTIONAL,

pusch-SPS-SubslotRepSCell-r15 ENUMERATED {supported} OPTIONAL,

semiStaticCFI-r15 ENUMERATED {supported} OPTIONAL,

semiStaticCFI-Pattern-r15 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

altMCS-Table-r15 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1540 ::= SEQUENCE {

stti-SPT-Capabilities-v1540 SEQUENCE {

slotPDSCH-TxDiv-TM8-r15 ENUMERATED {supported}

} OPTIONAL,

crs-IM-TM1-toTM9-OneRX-Port-v1540 ENUMERATED {supported} OPTIONAL,

cch-IM-RefRecTypeA-OneRX-Port-v1540 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1550 ::= SEQUENCE {

dmrs-OverheadReduction-r15 ENUMERATED {supported} OPTIONAL

}

PhyLayerParameters-v1610 ::= SEQUENCE {

ce-Capabilities-v1610 SEQUENCE {

ce-CSI-RS-Feedback-r16 ENUMERATED {supported} OPTIONAL,

ce-CSI-RS-FeedbackCodebookRestriction-r16 ENUMERATED {supported} OPTIONAL,

crs-ChEstMPDCCH-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

crs-ChEstMPDCCH-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

crs-ChEstMPDCCH-CSI-r16 ENUMERATED {supported} OPTIONAL,

crs-ChEstMPDCCH-ReciprocityTDD-r16 ENUMERATED {supported} OPTIONAL,

etws-CMAS-RxInConnCE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

etws-CMAS-RxInConnCE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

mpdcch-InLteControlRegionCE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

mpdcch-InLteControlRegionCE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

pdsch-InLteControlRegionCE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pdsch-InLteControlRegionCE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

multiTB-Parameters-r16 CE-MultiTB-Parameters-r16 OPTIONAL,

resourceResvParameters-r16 CE-ResourceResvParameters-r16 OPTIONAL

} OPTIONAL,

widebandPRG-Slot-r16 ENUMERATED {supported} OPTIONAL,

widebandPRG-Subslot-r16 ENUMERATED {supported} OPTIONAL,

widebandPRG-Subframe-r16 ENUMERATED {supported} OPTIONAL,

addSRS-r16 SEQUENCE {

addSRS-FrequencyHopping-r16 ENUMERATED {supported} OPTIONAL,

addSRS-AntennaSwitching-r16 ENUMERATED {useBasic} OPTIONAL,

addSRS-CarrierSwitching-r16 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

virtualCellID-BasicSRS-r16 ENUMERATED {supported} OPTIONAL,

virtualCellID-AddSRS-r16 ENUMERATED {supported} OPTIONAL

}

MIMO-UE-Parameters-r13 ::= SEQUENCE {

parametersTM9-r13 MIMO-UE-ParametersPerTM-r13 OPTIONAL,

parametersTM10-r13 MIMO-UE-ParametersPerTM-r13 OPTIONAL,

srs-EnhancementsTDD-r13 ENUMERATED {supported} OPTIONAL,

srs-Enhancements-r13 ENUMERATED {supported} OPTIONAL,

interferenceMeasRestriction-r13 ENUMERATED {supported} OPTIONAL

}

MIMO-UE-Parameters-v13e0 ::= SEQUENCE {

mimo-WeightedLayersCapabilities-r13 MIMO-WeightedLayersCapabilities-r13 OPTIONAL

}

MIMO-UE-Parameters-v1430 ::= SEQUENCE {

parametersTM9-v1430 MIMO-UE-ParametersPerTM-v1430 OPTIONAL,

parametersTM10-v1430 MIMO-UE-ParametersPerTM-v1430 OPTIONAL

}

MIMO-UE-Parameters-v1470 ::= SEQUENCE {

parametersTM9-v1470 MIMO-UE-ParametersPerTM-v1470,

parametersTM10-v1470 MIMO-UE-ParametersPerTM-v1470

}

MIMO-UE-ParametersPerTM-r13 ::= SEQUENCE {

nonPrecoded-r13 MIMO-NonPrecodedCapabilities-r13 OPTIONAL,

beamformed-r13 MIMO-UE-BeamformedCapabilities-r13 OPTIONAL,

channelMeasRestriction-r13 ENUMERATED {supported} OPTIONAL,

dmrs-Enhancements-r13 ENUMERATED {supported} OPTIONAL,

csi-RS-EnhancementsTDD-r13 ENUMERATED {supported} OPTIONAL

}

MIMO-UE-ParametersPerTM-v1430 ::= SEQUENCE {

nzp-CSI-RS-AperiodicInfo-r14 SEQUENCE {

nMaxProc-r14 INTEGER(5..32),

nMaxResource-r14 ENUMERATED {n1, n2, n4, n8}

} OPTIONAL,

nzp-CSI-RS-PeriodicInfo-r14 SEQUENCE {

nMaxResource-r14 ENUMERATED {n1, n2, n4, n8}

} OPTIONAL,

zp-CSI-RS-AperiodicInfo-r14 ENUMERATED {supported} OPTIONAL,

ul-dmrs-Enhancements-r14 ENUMERATED {supported} OPTIONAL,

densityReductionNP-r14 ENUMERATED {supported} OPTIONAL,

densityReductionBF-r14 ENUMERATED {supported} OPTIONAL,

hybridCSI-r14 ENUMERATED {supported} OPTIONAL,

semiOL-r14 ENUMERATED {supported} OPTIONAL,

csi-ReportingNP-r14 ENUMERATED {supported} OPTIONAL,

csi-ReportingAdvanced-r14 ENUMERATED {supported} OPTIONAL

}

MIMO-UE-ParametersPerTM-v1470 ::= SEQUENCE {

csi-ReportingAdvancedMaxPorts-r14 ENUMERATED {n8, n12, n16, n20, n24, n28} OPTIONAL

}

MIMO-CA-ParametersPerBoBC-r13 ::= SEQUENCE {

parametersTM9-r13 MIMO-CA-ParametersPerBoBCPerTM-r13 OPTIONAL,

parametersTM10-r13 MIMO-CA-ParametersPerBoBCPerTM-r13 OPTIONAL

}

MIMO-CA-ParametersPerBoBC-r15 ::= SEQUENCE {

parametersTM9-r15 MIMO-CA-ParametersPerBoBCPerTM-r15 OPTIONAL,

parametersTM10-r15 MIMO-CA-ParametersPerBoBCPerTM-r15 OPTIONAL

}

MIMO-CA-ParametersPerBoBC-v1430 ::= SEQUENCE {

parametersTM9-v1430 MIMO-CA-ParametersPerBoBCPerTM-v1430 OPTIONAL,

parametersTM10-v1430 MIMO-CA-ParametersPerBoBCPerTM-v1430 OPTIONAL

}

MIMO-CA-ParametersPerBoBC-v1470 ::= SEQUENCE {

parametersTM9-v1470 MIMO-CA-ParametersPerBoBCPerTM-v1470,

parametersTM10-v1470 MIMO-CA-ParametersPerBoBCPerTM-v1470

}

MIMO-CA-ParametersPerBoBCPerTM-r13 ::= SEQUENCE {

nonPrecoded-r13 MIMO-NonPrecodedCapabilities-r13 OPTIONAL,

beamformed-r13 MIMO-BeamformedCapabilityList-r13 OPTIONAL,

dmrs-Enhancements-r13 ENUMERATED {different} OPTIONAL

}

MIMO-CA-ParametersPerBoBCPerTM-v1430 ::= SEQUENCE {

csi-ReportingNP-r14 ENUMERATED {different} OPTIONAL,

csi-ReportingAdvanced-r14 ENUMERATED {different} OPTIONAL

}

MIMO-CA-ParametersPerBoBCPerTM-v1470 ::= SEQUENCE {

csi-ReportingAdvancedMaxPorts-r14 ENUMERATED {n8, n12, n16, n20, n24, n28} OPTIONAL

}

MIMO-CA-ParametersPerBoBCPerTM-r15 ::= SEQUENCE {

nonPrecoded-r13 MIMO-NonPrecodedCapabilities-r13 OPTIONAL,

beamformed-r13 MIMO-BeamformedCapabilityList-r13 OPTIONAL,

dmrs-Enhancements-r13 ENUMERATED {different} OPTIONAL,

csi-ReportingNP-r14 ENUMERATED {different} OPTIONAL,

csi-ReportingAdvanced-r14 ENUMERATED {different} OPTIONAL

}

MIMO-NonPrecodedCapabilities-r13 ::= SEQUENCE {

config1-r13 ENUMERATED {supported} OPTIONAL,

config2-r13 ENUMERATED {supported} OPTIONAL,

config3-r13 ENUMERATED {supported} OPTIONAL,

config4-r13 ENUMERATED {supported} OPTIONAL

}

MIMO-UE-BeamformedCapabilities-r13 ::= SEQUENCE {

altCodebook-r13 ENUMERATED {supported} OPTIONAL,

mimo-BeamformedCapabilities-r13 MIMO-BeamformedCapabilityList-r13

}

MIMO-BeamformedCapabilityList-r13 ::= SEQUENCE (SIZE (1..maxCSI-Proc-r11)) OF MIMO-BeamformedCapabilities-r13

MIMO-BeamformedCapabilities-r13 ::= SEQUENCE {

k-Max-r13 INTEGER (1..8),

n-MaxList-r13 BIT STRING (SIZE (1..7)) OPTIONAL

}

MIMO-WeightedLayersCapabilities-r13 ::= SEQUENCE {

relWeightTwoLayers-r13 ENUMERATED {v1, v1dot25, v1dot5, v1dot75, v2, v2dot5, v3, v4},

relWeightFourLayers-r13 ENUMERATED {v1, v1dot25, v1dot5, v1dot75, v2, v2dot5, v3, v4} OPTIONAL,

relWeightEightLayers-r13 ENUMERATED {v1, v1dot25, v1dot5, v1dot75, v2, v2dot5, v3, v4} OPTIONAL,

totalWeightedLayers-r13 INTEGER (2..128)

}

NonContiguousUL-RA-WithinCC-List-r10 ::= SEQUENCE (SIZE (1..maxBands)) OF NonContiguousUL-RA-WithinCC-r10

NonContiguousUL-RA-WithinCC-r10 ::= SEQUENCE {

nonContiguousUL-RA-WithinCC-Info-r10 ENUMERATED {supported} OPTIONAL

}

RF-Parameters ::= SEQUENCE {

supportedBandListEUTRA SupportedBandListEUTRA

}

RF-Parameters-v9e0 ::= SEQUENCE {

supportedBandListEUTRA-v9e0 SupportedBandListEUTRA-v9e0 OPTIONAL

}

RF-Parameters-v1020 ::= SEQUENCE {

supportedBandCombination-r10 SupportedBandCombination-r10

}

RF-Parameters-v1060 ::= SEQUENCE {

supportedBandCombinationExt-r10 SupportedBandCombinationExt-r10

}

RF-Parameters-v1090 ::= SEQUENCE {

supportedBandCombination-v1090 SupportedBandCombination-v1090 OPTIONAL

}

RF-Parameters-v10f0 ::= SEQUENCE {

modifiedMPR-Behavior-r10 BIT STRING (SIZE (32)) OPTIONAL

}

RF-Parameters-v10i0 ::= SEQUENCE {

supportedBandCombination-v10i0 SupportedBandCombination-v10i0 OPTIONAL

}

RF-Parameters-v10j0 ::= SEQUENCE {

multiNS-Pmax-r10 ENUMERATED {supported} OPTIONAL

}

RF-Parameters-v1130 ::= SEQUENCE {

supportedBandCombination-v1130 SupportedBandCombination-v1130 OPTIONAL

}

RF-Parameters-v1180 ::= SEQUENCE {

freqBandRetrieval-r11 ENUMERATED {supported} OPTIONAL,

requestedBands-r11 SEQUENCE (SIZE (1.. maxBands)) OF FreqBandIndicator-r11 OPTIONAL,

supportedBandCombinationAdd-r11 SupportedBandCombinationAdd-r11 OPTIONAL

}

RF-Parameters-v11d0 ::= SEQUENCE {

supportedBandCombinationAdd-v11d0 SupportedBandCombinationAdd-v11d0 OPTIONAL

}

RF-Parameters-v1250 ::= SEQUENCE {

supportedBandListEUTRA-v1250 SupportedBandListEUTRA-v1250 OPTIONAL,

supportedBandCombination-v1250 SupportedBandCombination-v1250 OPTIONAL,

supportedBandCombinationAdd-v1250 SupportedBandCombinationAdd-v1250 OPTIONAL,

freqBandPriorityAdjustment-r12 ENUMERATED {supported} OPTIONAL

}

RF-Parameters-v1270 ::= SEQUENCE {

supportedBandCombination-v1270 SupportedBandCombination-v1270 OPTIONAL,

supportedBandCombinationAdd-v1270 SupportedBandCombinationAdd-v1270 OPTIONAL

}

RF-Parameters-v1310 ::= SEQUENCE {

eNB-RequestedParameters-r13 SEQUENCE {

reducedIntNonContCombRequested-r13 ENUMERATED {true} OPTIONAL,

requestedCCsDL-r13 INTEGER (2..32) OPTIONAL,

requestedCCsUL-r13 INTEGER (2..32) OPTIONAL,

skipFallbackCombRequested-r13 ENUMERATED {true} OPTIONAL

} OPTIONAL,

maximumCCsRetrieval-r13 ENUMERATED {supported} OPTIONAL,

skipFallbackCombinations-r13 ENUMERATED {supported} OPTIONAL,

reducedIntNonContComb-r13 ENUMERATED {supported} OPTIONAL,

supportedBandListEUTRA-v1310 SupportedBandListEUTRA-v1310 OPTIONAL,

supportedBandCombinationReduced-r13 SupportedBandCombinationReduced-r13 OPTIONAL

}

RF-Parameters-v1320 ::= SEQUENCE {

supportedBandListEUTRA-v1320 SupportedBandListEUTRA-v1320 OPTIONAL,

supportedBandCombination-v1320 SupportedBandCombination-v1320 OPTIONAL,

supportedBandCombinationAdd-v1320 SupportedBandCombinationAdd-v1320 OPTIONAL,

supportedBandCombinationReduced-v1320 SupportedBandCombinationReduced-v1320 OPTIONAL

}

RF-Parameters-v1380 ::= SEQUENCE {

supportedBandCombination-v1380 SupportedBandCombination-v1380 OPTIONAL,

supportedBandCombinationAdd-v1380 SupportedBandCombinationAdd-v1380 OPTIONAL,

supportedBandCombinationReduced-v1380 SupportedBandCombinationReduced-v1380 OPTIONAL

}

RF-Parameters-v1390 ::= SEQUENCE {

supportedBandCombination-v1390 SupportedBandCombination-v1390 OPTIONAL,

supportedBandCombinationAdd-v1390 SupportedBandCombinationAdd-v1390 OPTIONAL,

supportedBandCombinationReduced-v1390 SupportedBandCombinationReduced-v1390 OPTIONAL

}

RF-Parameters-v12b0 ::= SEQUENCE {

maxLayersMIMO-Indication-r12 ENUMERATED {supported} OPTIONAL

}

RF-Parameters-v1430 ::= SEQUENCE {

supportedBandCombination-v1430 SupportedBandCombination-v1430 OPTIONAL,

supportedBandCombinationAdd-v1430 SupportedBandCombinationAdd-v1430 OPTIONAL,

supportedBandCombinationReduced-v1430 SupportedBandCombinationReduced-v1430 OPTIONAL,

eNB-RequestedParameters-v1430 SEQUENCE {

requestedDiffFallbackCombList-r14 BandCombinationList-r14

} OPTIONAL,

diffFallbackCombReport-r14 ENUMERATED {supported} OPTIONAL

}

RF-Parameters-v1450 ::= SEQUENCE {

supportedBandCombination-v1450 SupportedBandCombination-v1450 OPTIONAL,

supportedBandCombinationAdd-v1450 SupportedBandCombinationAdd-v1450 OPTIONAL,

supportedBandCombinationReduced-v1450 SupportedBandCombinationReduced-v1450 OPTIONAL

}

RF-Parameters-v1470 ::= SEQUENCE {

supportedBandCombination-v1470 SupportedBandCombination-v1470 OPTIONAL,

supportedBandCombinationAdd-v1470 SupportedBandCombinationAdd-v1470 OPTIONAL,

supportedBandCombinationReduced-v1470 SupportedBandCombinationReduced-v1470 OPTIONAL

}

RF-Parameters-v14b0 ::= SEQUENCE {

supportedBandCombination-v14b0 SupportedBandCombination-v14b0 OPTIONAL,

supportedBandCombinationAdd-v14b0 SupportedBandCombinationAdd-v14b0 OPTIONAL,

supportedBandCombinationReduced-v14b0 SupportedBandCombinationReduced-v14b0 OPTIONAL

}

RF-Parameters-v1530 ::= SEQUENCE {

sTTI-SPT-Supported-r15 ENUMERATED {supported} OPTIONAL,

supportedBandCombination-v1530 SupportedBandCombination-v1530 OPTIONAL,

supportedBandCombinationAdd-v1530 SupportedBandCombinationAdd-v1530 OPTIONAL,

supportedBandCombinationReduced-v1530 SupportedBandCombinationReduced-v1530 OPTIONAL,

powerClass-14dBm-r15 ENUMERATED {supported} OPTIONAL

}

RF-Parameters-v1570 ::= SEQUENCE {

dl-1024QAM-ScalingFactor-r15 ENUMERATED {v1, v1dot2, v1dot25},

dl-1024QAM-TotalWeightedLayers-r15 INTEGER (0..10)

}

RF-Parameters-v1610 ::= SEQUENCE {

supportedBandCombination-v1610 SupportedBandCombination-v1610 OPTIONAL,

supportedBandCombinationAdd-v1610 SupportedBandCombinationAdd-v1610 OPTIONAL,

supportedBandCombinationReduced-v1610 SupportedBandCombinationReduced-v1610 OPTIONAL

}

RF-Parameters-v1630 ::= SEQUENCE {

supportedBandCombination-v1630 SupportedBandCombination-v1630 OPTIONAL,

supportedBandCombinationAdd-v1630 SupportedBandCombinationAdd-v1630 OPTIONAL,

supportedBandCombinationReduced-v1630 SupportedBandCombinationReduced-v1630 OPTIONAL

}

SkipSubframeProcessing-r15 ::= SEQUENCE {

skipProcessingDL-Slot-r15 INTEGER (0..3) OPTIONAL,

skipProcessingDL-SubSlot-r15 INTEGER (0..3) OPTIONAL,

skipProcessingUL-Slot-r15 INTEGER (0..3) OPTIONAL,

skipProcessingUL-SubSlot-r15 INTEGER (0..3) OPTIONAL

}

SPT-Parameters-r15 ::= SEQUENCE {

frameStructureType-SPT-r15 BIT STRING (SIZE (3)) OPTIONAL,

maxNumberCCs-SPT-r15 INTEGER (1..32) OPTIONAL

}

STTI-SPT-BandParameters-r15 ::= SEQUENCE {

dl-1024QAM-Slot-r15 ENUMERATED {supported} OPTIONAL,

dl-1024QAM-SubslotTA-1-r15 ENUMERATED {supported} OPTIONAL,

dl-1024QAM-SubslotTA-2-r15 ENUMERATED {supported} OPTIONAL,

simultaneousTx-differentTx-duration-r15 ENUMERATED {supported} OPTIONAL,

sTTI-CA-MIMO-ParametersDL-r15 CA-MIMO-ParametersDL-r15 OPTIONAL,

sTTI-CA-MIMO-ParametersUL-r15 CA-MIMO-ParametersUL-r15,

sTTI-FD-MIMO-Coexistence ENUMERATED {supported} OPTIONAL,

sTTI-MIMO-CA-ParametersPerBoBCs-r15 MIMO-CA-ParametersPerBoBC-r13 OPTIONAL,

sTTI-MIMO-CA-ParametersPerBoBCs-v1530 MIMO-CA-ParametersPerBoBC-v1430 OPTIONAL,

sTTI-SupportedCombinations-r15 STTI-SupportedCombinations-r15 OPTIONAL,

sTTI-SupportedCSI-Proc-r15 ENUMERATED {n1, n3, n4} OPTIONAL,

ul-256QAM-Slot-r15 ENUMERATED {supported} OPTIONAL,

ul-256QAM-Subslot-r15 ENUMERATED {supported} OPTIONAL,

...

}

STTI-SupportedCombinations-r15 ::= SEQUENCE {

combination-22-r15 DL-UL-CCs-r15 OPTIONAL,

combination-77-r15 DL-UL-CCs-r15 OPTIONAL,

combination-27-r15 DL-UL-CCs-r15 OPTIONAL,

combination-22-27-r15 SEQUENCE (SIZE (1..2)) OF DL-UL-CCs-r15 OPTIONAL,

combination-77-22-r15 SEQUENCE (SIZE (1..2)) OF DL-UL-CCs-r15 OPTIONAL,

combination-77-27-r15 SEQUENCE (SIZE (1..2)) OF DL-UL-CCs-r15 OPTIONAL

}

DL-UL-CCs-r15 ::= SEQUENCE {

maxNumberDL-CCs-r15 INTEGER (1..32) OPTIONAL,

maxNumberUL-CCs-r15 INTEGER (1..32) OPTIONAL

}

SupportedBandCombination-r10 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-r10

SupportedBandCombinationExt-r10 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParametersExt-r10

SupportedBandCombination-v1090 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1090

SupportedBandCombination-v10i0 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v10i0

SupportedBandCombination-v1130 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1130

SupportedBandCombination-v1250 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1250

SupportedBandCombination-v1270 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1270

SupportedBandCombination-v1320 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1320

SupportedBandCombination-v1380 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1380

SupportedBandCombination-v1390 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1390

SupportedBandCombination-v1430 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1430

SupportedBandCombination-v1450 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1450

SupportedBandCombination-v1470 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1470

SupportedBandCombination-v14b0 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v14b0

SupportedBandCombination-v1530 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1530

SupportedBandCombination-v1610 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1610

SupportedBandCombination-v1630 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandCombinationParameters-v1630

SupportedBandCombinationAdd-r11 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-r11

SupportedBandCombinationAdd-v11d0 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v10i0

SupportedBandCombinationAdd-v1250 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1250

SupportedBandCombinationAdd-v1270 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1270

SupportedBandCombinationAdd-v1320 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1320

SupportedBandCombinationAdd-v1380 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1380

SupportedBandCombinationAdd-v1390 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1390

SupportedBandCombinationAdd-v1430 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1430

SupportedBandCombinationAdd-v1450 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1450

SupportedBandCombinationAdd-v1470 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1470

SupportedBandCombinationAdd-v14b0 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v14b0

SupportedBandCombinationAdd-v1530 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1530

SupportedBandCombinationAdd-v1610 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1610

SupportedBandCombinationAdd-v1630 ::= SEQUENCE (SIZE (1..maxBandComb-r11)) OF BandCombinationParameters-v1630

SupportedBandCombinationReduced-r13 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-r13

SupportedBandCombinationReduced-v1320 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1320

SupportedBandCombinationReduced-v1380 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1380

SupportedBandCombinationReduced-v1390 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1390

SupportedBandCombinationReduced-v1430 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1430

SupportedBandCombinationReduced-v1450 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1450

SupportedBandCombinationReduced-v1470 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1470

SupportedBandCombinationReduced-v14b0 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v14b0

SupportedBandCombinationReduced-v1530 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1530

SupportedBandCombinationReduced-v1610 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1610

SupportedBandCombinationReduced-v1630 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF BandCombinationParameters-v1630

BandCombinationParameters-r10 ::= SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF BandParameters-r10

BandCombinationParametersExt-r10 ::= SEQUENCE {

supportedBandwidthCombinationSet-r10 SupportedBandwidthCombinationSet-r10 OPTIONAL

}

BandCombinationParameters-v1090 ::= SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF BandParameters-v1090

BandCombinationParameters-v10i0::= SEQUENCE {

bandParameterList-v10i0 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v10i0 OPTIONAL

}

BandCombinationParameters-v1130 ::= SEQUENCE {

multipleTimingAdvance-r11 ENUMERATED {supported} OPTIONAL,

simultaneousRx-Tx-r11 ENUMERATED {supported} OPTIONAL,

bandParameterList-r11 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF BandParameters-v1130 OPTIONAL,

...

}

BandCombinationParameters-r11 ::= SEQUENCE {

bandParameterList-r11 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-r11,

supportedBandwidthCombinationSet-r11 SupportedBandwidthCombinationSet-r10 OPTIONAL,

multipleTimingAdvance-r11 ENUMERATED {supported} OPTIONAL,

simultaneousRx-Tx-r11 ENUMERATED {supported} OPTIONAL,

bandInfoEUTRA-r11 BandInfoEUTRA,

...

}

BandCombinationParameters-v1250::= SEQUENCE {

dc-Support-r12 SEQUENCE {

asynchronous-r12 ENUMERATED {supported} OPTIONAL,

supportedCellGrouping-r12 CHOICE {

threeEntries-r12 BIT STRING (SIZE(3)),

fourEntries-r12 BIT STRING (SIZE(7)),

fiveEntries-r12 BIT STRING (SIZE(15))

} OPTIONAL

} OPTIONAL,

supportedNAICS-2CRS-AP-r12 BIT STRING (SIZE (1..maxNAICS-Entries-r12)) OPTIONAL,

commSupportedBandsPerBC-r12 BIT STRING (SIZE (1.. maxBands)) OPTIONAL,

...

}

BandCombinationParameters-v1270 ::= SEQUENCE {

bandParameterList-v1270 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v1270 OPTIONAL

}

BandCombinationParameters-r13 ::= SEQUENCE {

differentFallbackSupported-r13 ENUMERATED {true} OPTIONAL,

bandParameterList-r13 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF BandParameters-r13,

supportedBandwidthCombinationSet-r13 SupportedBandwidthCombinationSet-r10 OPTIONAL,

multipleTimingAdvance-r13 ENUMERATED {supported} OPTIONAL,

simultaneousRx-Tx-r13 ENUMERATED {supported} OPTIONAL,

bandInfoEUTRA-r13 BandInfoEUTRA,

dc-Support-r13 SEQUENCE {

asynchronous-r13 ENUMERATED {supported} OPTIONAL,

supportedCellGrouping-r13 CHOICE {

threeEntries-r13 BIT STRING (SIZE(3)),

fourEntries-r13 BIT STRING (SIZE(7)),

fiveEntries-r13 BIT STRING (SIZE(15))

} OPTIONAL

} OPTIONAL,

supportedNAICS-2CRS-AP-r13 BIT STRING (SIZE (1..maxNAICS-Entries-r12)) OPTIONAL,

commSupportedBandsPerBC-r13 BIT STRING (SIZE (1.. maxBands)) OPTIONAL

}

BandCombinationParameters-v1320 ::= SEQUENCE {

bandParameterList-v1320 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v1320 OPTIONAL,

additionalRx-Tx-PerformanceReq-r13 ENUMERATED {supported} OPTIONAL

}

BandCombinationParameters-v1380 ::= SEQUENCE {

bandParameterList-v1380 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v1380 OPTIONAL

}

BandCombinationParameters-v1390 ::= SEQUENCE {

ue-CA-PowerClass-N-r13 ENUMERATED {class2} OPTIONAL

}

BandCombinationParameters-v1430 ::= SEQUENCE {

bandParameterList-v1430 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v1430 OPTIONAL,

v2x-SupportedTxBandCombListPerBC-r14 BIT STRING (SIZE (1.. maxBandComb-r13)) OPTIONAL,

v2x-SupportedRxBandCombListPerBC-r14 BIT STRING (SIZE (1.. maxBandComb-r13)) OPTIONAL

}

BandCombinationParameters-v1450 ::= SEQUENCE {

bandParameterList-v1450 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v1450 OPTIONAL

}

BandCombinationParameters-v1470 ::= SEQUENCE {

bandParameterList-v1470 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v1470 OPTIONAL,

srs-MaxSimultaneousCCs-r14 INTEGER (1..31) OPTIONAL

}

BandCombinationParameters-v14b0 ::= SEQUENCE {

bandParameterList-v14b0 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

BandParameters-v14b0 OPTIONAL

}

BandCombinationParameters-v1530 ::= SEQUENCE {

bandParameterList-v1530 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF BandParameters-v1530 OPTIONAL,

spt-Parameters-r15 SPT-Parameters-r15 OPTIONAL

}

-- If an additional band combination parameter is defined, which is supported for MR-DC,

-- it shall be defined in the IE CA-ParametersEUTRA in TS 38.331 [82].

BandCombinationParameters-v1610 ::= SEQUENCE {

measGapInfoNR MeasGapInfoNR OPTIONAL,

bandParameterList-v1610 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF BandParameters-v1610 OPTIONAL,

interFreqDAPS-r16 SEQUENCE {

interFreqAsyncDAPS-r16 ENUMERATED {supported} OPTIONAL,

interFreqMultiUL-TransmissionDAPS-r16 ENUMERATED {supported} OPTIONAL

} OPTIONAL

}

BandCombinationParameters-v1630 ::= SEQUENCE {

v2x-SupportedTxBandCombListPerBC-v1630 BIT STRING (SIZE (1..maxBandCombSidelinkNR-r16)) OPTIONAL,

v2x-SupportedRxBandCombListPerBC-v1630 BIT STRING (SIZE (1..maxBandCombSidelinkNR-r16)) OPTIONAL,

scalingFactorTxSidelink-r16 SEQUENCE (SIZE (1..maxBandCombSidelinkNR-r16)) OF ScalingFactorSidelink-r16 OPTIONAL,

scalingFactorRxSidelink-r16 SEQUENCE (SIZE (1..maxBandCombSidelinkNR-r16)) OF ScalingFactorSidelink-r16 OPTIONAL,

interBandPowerSharingSyncDAPS-r16 ENUMERATED {supported} OPTIONAL,

interBandPowerSharingAsyncDAPS-r16 ENUMERATED {supported} OPTIONAL

}

ScalingFactorSidelink-r16 ::= ENUMERATED {f0p4, f0p75, f0p8, f1}

SupportedBandwidthCombinationSet-r10 ::= BIT STRING (SIZE (1..maxBandwidthCombSet-r10))

BandParameters-r10 ::= SEQUENCE {

bandEUTRA-r10 FreqBandIndicator,

bandParametersUL-r10 BandParametersUL-r10 OPTIONAL,

bandParametersDL-r10 BandParametersDL-r10 OPTIONAL

}

BandParameters-v1090 ::= SEQUENCE {

bandEUTRA-v1090 FreqBandIndicator-v9e0 OPTIONAL,

...

}

BandParameters-v10i0::= SEQUENCE {

bandParametersDL-v10i0 SEQUENCE (SIZE (1..maxBandwidthClass-r10)) OF CA-MIMO-ParametersDL-v10i0

}

BandParameters-v1130 ::= SEQUENCE {

supportedCSI-Proc-r11 ENUMERATED {n1, n3, n4}

}

BandParameters-r11 ::= SEQUENCE {

bandEUTRA-r11 FreqBandIndicator-r11,

bandParametersUL-r11 BandParametersUL-r10 OPTIONAL,

bandParametersDL-r11 BandParametersDL-r10 OPTIONAL,

supportedCSI-Proc-r11 ENUMERATED {n1, n3, n4} OPTIONAL

}

BandParameters-v1270 ::= SEQUENCE {

bandParametersDL-v1270 SEQUENCE (SIZE (1..maxBandwidthClass-r10)) OF CA-MIMO-ParametersDL-v1270

}

BandParameters-r13 ::= SEQUENCE {

bandEUTRA-r13 FreqBandIndicator-r11,

bandParametersUL-r13 BandParametersUL-r13 OPTIONAL,

bandParametersDL-r13 BandParametersDL-r13 OPTIONAL,

supportedCSI-Proc-r13 ENUMERATED {n1, n3, n4} OPTIONAL

}

BandParameters-v1320 ::= SEQUENCE {

bandParametersDL-v1320 MIMO-CA-ParametersPerBoBC-r13

}

BandParameters-v1380 ::= SEQUENCE {

txAntennaSwitchDL-r13 INTEGER (1..32) OPTIONAL,

txAntennaSwitchUL-r13 INTEGER (1..32) OPTIONAL

}

BandParameters-v1430 ::= SEQUENCE {

bandParametersDL-v1430 MIMO-CA-ParametersPerBoBC-v1430 OPTIONAL,

ul-256QAM-r14 ENUMERATED {supported} OPTIONAL,

ul-256QAM-perCC-InfoList-r14 SEQUENCE (SIZE (2..maxServCell-r13)) OF UL-256QAM-perCC-Info-r14 OPTIONAL,

srs-CapabilityPerBandPairList-r14 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

SRS-CapabilityPerBandPair-r14 OPTIONAL

}

BandParameters-v1450 ::= SEQUENCE {

must-CapabilityPerBand-r14 MUST-Parameters-r14 OPTIONAL

}

BandParameters-v1470 ::= SEQUENCE {

bandParametersDL-v1470 MIMO-CA-ParametersPerBoBC-v1470 OPTIONAL

}

BandParameters-v14b0 ::= SEQUENCE {

srs-CapabilityPerBandPairList-v14b0 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF SRS-CapabilityPerBandPair-v14b0 OPTIONAL

}

BandParameters-v1530 ::= SEQUENCE {

ue-TxAntennaSelection-SRS-1T4R-r15 ENUMERATED {supported} OPTIONAL,

ue-TxAntennaSelection-SRS-2T4R-2Pairs-r15 ENUMERATED {supported} OPTIONAL,

ue-TxAntennaSelection-SRS-2T4R-3Pairs-r15 ENUMERATED {supported} OPTIONAL,

dl-1024QAM-r15 ENUMERATED {supported} OPTIONAL,

qcl-TypeC-Operation-r15 ENUMERATED {supported} OPTIONAL,

qcl-CRI-BasedCSI-Reporting-r15 ENUMERATED {supported} OPTIONAL,

stti-SPT-BandParameters-r15 STTI-SPT-BandParameters-r15 OPTIONAL

}

BandParameters-v1610 ::= SEQUENCE {

intraFreqDAPS-r16 SEQUENCE {

intraFreqAsyncDAPS-r16 ENUMERATED {supported} OPTIONAL,

dummy ENUMERATED {supported} OPTIONAL,

intraFreqTwoTAGs-DAPS-r16 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

addSRS-FrequencyHopping-r16 ENUMERATED {supported} OPTIONAL,

addSRS-AntennaSwitching-r16 SEQUENCE {

addSRS-1T2R-r16 ENUMERATED {supported} OPTIONAL,

addSRS-1T4R-r16 ENUMERATED {supported} OPTIONAL,

addSRS-2T4R-2pairs-r16 ENUMERATED {supported} OPTIONAL,

addSRS-2T4R-3pairs-r16 ENUMERATED {supported} OPTIONAL

} OPTIONAL,

srs-CapabilityPerBandPairList-v1610 SEQUENCE (SIZE (1..maxSimultaneousBands-r10)) OF

SRS-CapabilityPerBandPair-v1610 OPTIONAL

}

V2X-BandParameters-r14 ::= SEQUENCE {

v2x-FreqBandEUTRA-r14 FreqBandIndicator-r11,

bandParametersTxSL-r14 BandParametersTxSL-r14 OPTIONAL,

bandParametersRxSL-r14 BandParametersRxSL-r14 OPTIONAL

}

V2X-BandParameters-v1530 ::= SEQUENCE {

v2x-EnhancedHighReception-r15 ENUMERATED {supported} OPTIONAL

}

BandParametersTxSL-r14 ::= SEQUENCE {

v2x-BandwidthClassTxSL-r14 V2X-BandwidthClassSL-r14,

v2x-eNB-Scheduled-r14 ENUMERATED {supported} OPTIONAL,

v2x-HighPower-r14 ENUMERATED {supported} OPTIONAL

}

BandParametersRxSL-r14 ::= SEQUENCE {

v2x-BandwidthClassRxSL-r14 V2X-BandwidthClassSL-r14,

v2x-HighReception-r14 ENUMERATED {supported} OPTIONAL

}

V2X-BandwidthClassSL-r14 ::= SEQUENCE (SIZE (1..maxBandwidthClass-r10)) OF V2X-BandwidthClass-r14

UL-256QAM-perCC-Info-r14 ::= SEQUENCE {

ul-256QAM-perCC-r14 ENUMERATED {supported} OPTIONAL

}

FeatureSetDL-r15 ::= SEQUENCE {

mimo-CA-ParametersPerBoBC-r15 MIMO-CA-ParametersPerBoBC-r15 OPTIONAL,

featureSetPerCC-ListDL-r15 SEQUENCE (SIZE (1..maxServCell-r13)) OF FeatureSetDL-PerCC-Id-r15

}

FeatureSetDL-v1550 ::= SEQUENCE {

dl-1024QAM-r15 ENUMERATED {supported} OPTIONAL

}

FeatureSetDL-PerCC-r15 ::= SEQUENCE {

fourLayerTM3-TM4-r15 ENUMERATED {supported} OPTIONAL,

supportedMIMO-CapabilityDL-MRDC-r15 MIMO-CapabilityDL-r10 OPTIONAL,

supportedCSI-Proc-r15 ENUMERATED {n1, n3, n4} OPTIONAL

}

FeatureSetUL-r15 ::= SEQUENCE {

featureSetPerCC-ListUL-r15 SEQUENCE (SIZE(1..maxServCell-r13)) OF FeatureSetUL-PerCC-Id-r15

}

FeatureSetUL-PerCC-r15 ::= SEQUENCE {

supportedMIMO-CapabilityUL-r15 MIMO-CapabilityUL-r10 OPTIONAL,

ul-256QAM-r15 ENUMERATED {supported} OPTIONAL

}

FeatureSetDL-PerCC-Id-r15 ::= INTEGER (0..maxPerCC-FeatureSets-r15)

FeatureSetUL-PerCC-Id-r15 ::= INTEGER (0..maxPerCC-FeatureSets-r15)

BandParametersUL-r10 ::= SEQUENCE (SIZE (1..maxBandwidthClass-r10)) OF CA-MIMO-ParametersUL-r10

BandParametersUL-r13 ::= CA-MIMO-ParametersUL-r10

CA-MIMO-ParametersUL-r10 ::= SEQUENCE {

ca-BandwidthClassUL-r10 CA-BandwidthClass-r10,

supportedMIMO-CapabilityUL-r10 MIMO-CapabilityUL-r10 OPTIONAL

}

CA-MIMO-ParametersUL-r15 ::= SEQUENCE {

supportedMIMO-CapabilityUL-r15 MIMO-CapabilityUL-r10 OPTIONAL

}

BandParametersDL-r10 ::= SEQUENCE (SIZE (1..maxBandwidthClass-r10)) OF CA-MIMO-ParametersDL-r10

BandParametersDL-r13 ::= CA-MIMO-ParametersDL-r13

CA-MIMO-ParametersDL-r10 ::= SEQUENCE {

ca-BandwidthClassDL-r10 CA-BandwidthClass-r10,

supportedMIMO-CapabilityDL-r10 MIMO-CapabilityDL-r10 OPTIONAL

}

CA-MIMO-ParametersDL-v10i0 ::= SEQUENCE {

fourLayerTM3-TM4-r10 ENUMERATED {supported} OPTIONAL

}

CA-MIMO-ParametersDL-v1270 ::= SEQUENCE {

intraBandContiguousCC-InfoList-r12 SEQUENCE (SIZE (1..maxServCell-r10)) OF IntraBandContiguousCC-Info-r12

}

CA-MIMO-ParametersDL-r13 ::= SEQUENCE {

ca-BandwidthClassDL-r13 CA-BandwidthClass-r10,

supportedMIMO-CapabilityDL-r13 MIMO-CapabilityDL-r10 OPTIONAL,

fourLayerTM3-TM4-r13 ENUMERATED {supported} OPTIONAL,

intraBandContiguousCC-InfoList-r13 SEQUENCE (SIZE (1..maxServCell-r13)) OF IntraBandContiguousCC-Info-r12

}

CA-MIMO-ParametersDL-r15 ::= SEQUENCE {

supportedMIMO-CapabilityDL-r15 MIMO-CapabilityDL-r10 OPTIONAL,

fourLayerTM3-TM4-r15 ENUMERATED {supported} OPTIONAL,

intraBandContiguousCC-InfoList-r15 SEQUENCE (SIZE (1..maxServCell-r13)) OF

IntraBandContiguousCC-Info-r12 OPTIONAL

}

IntraBandContiguousCC-Info-r12 ::= SEQUENCE {

fourLayerTM3-TM4-perCC-r12 ENUMERATED {supported} OPTIONAL,

supportedMIMO-CapabilityDL-r12 MIMO-CapabilityDL-r10 OPTIONAL,

supportedCSI-Proc-r12 ENUMERATED {n1, n3, n4} OPTIONAL

}

CA-BandwidthClass-r10 ::= ENUMERATED {a, b, c, d, e, f, ...}

V2X-BandwidthClass-r14 ::= ENUMERATED {a, b, c, d, e, f, ..., c1-v1530}

MIMO-CapabilityUL-r10 ::= ENUMERATED {twoLayers, fourLayers}

MIMO-CapabilityDL-r10 ::= ENUMERATED {twoLayers, fourLayers, eightLayers}

MUST-Parameters-r14 ::= SEQUENCE {

must-TM234-UpTo2Tx-r14 ENUMERATED {supported} OPTIONAL,

must-TM89-UpToOneInterferingLayer-r14 ENUMERATED {supported} OPTIONAL,

must-TM10-UpToOneInterferingLayer-r14 ENUMERATED {supported} OPTIONAL,

must-TM89-UpToThreeInterferingLayers-r14 ENUMERATED {supported} OPTIONAL,

must-TM10-UpToThreeInterferingLayers-r14 ENUMERATED {supported} OPTIONAL

}

SupportedBandListEUTRA ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandEUTRA

SupportedBandListEUTRA-v9e0::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandEUTRA-v9e0

SupportedBandListEUTRA-v1250 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandEUTRA-v1250

SupportedBandListEUTRA-v1310 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandEUTRA-v1310

SupportedBandListEUTRA-v1320 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandEUTRA-v1320

SupportedBandEUTRA ::= SEQUENCE {

bandEUTRA FreqBandIndicator,

halfDuplex BOOLEAN

}

SupportedBandEUTRA-v9e0 ::= SEQUENCE {

bandEUTRA-v9e0 FreqBandIndicator-v9e0 OPTIONAL

}

SupportedBandEUTRA-v1250 ::= SEQUENCE {

dl-256QAM-r12 ENUMERATED {supported} OPTIONAL,

ul-64QAM-r12 ENUMERATED {supported} OPTIONAL

}

SupportedBandEUTRA-v1310 ::= SEQUENCE {

ue-PowerClass-5-r13 ENUMERATED {supported} OPTIONAL

}

SupportedBandEUTRA-v1320 ::= SEQUENCE {

intraFreq-CE-NeedForGaps-r13 ENUMERATED {supported} OPTIONAL,

ue-PowerClass-N-r13 ENUMERATED {class1, class2, class4} OPTIONAL

}

MeasParameters ::= SEQUENCE {

bandListEUTRA BandListEUTRA

}

MeasParameters-v1020 ::= SEQUENCE {

bandCombinationListEUTRA-r10 BandCombinationListEUTRA-r10

}

MeasParameters-v1130 ::= SEQUENCE {

rsrqMeasWideband-r11 ENUMERATED {supported} OPTIONAL

}

MeasParameters-v11a0 ::= SEQUENCE {

benefitsFromInterruption-r11 ENUMERATED {true} OPTIONAL

}

MeasParameters-v1250 ::= SEQUENCE {

timerT312-r12 ENUMERATED {supported} OPTIONAL,

alternativeTimeToTrigger-r12 ENUMERATED {supported} OPTIONAL,

incMonEUTRA-r12 ENUMERATED {supported} OPTIONAL,

incMonUTRA-r12 ENUMERATED {supported} OPTIONAL,

extendedMaxMeasId-r12 ENUMERATED {supported} OPTIONAL,

extendedRSRQ-LowerRange-r12 ENUMERATED {supported} OPTIONAL,

rsrq-OnAllSymbols-r12 ENUMERATED {supported} OPTIONAL,

crs-DiscoverySignalsMeas-r12 ENUMERATED {supported} OPTIONAL,

csi-RS-DiscoverySignalsMeas-r12 ENUMERATED {supported} OPTIONAL

}

MeasParameters-v1310 ::= SEQUENCE {

rs-SINR-Meas-r13 ENUMERATED {supported} OPTIONAL,

whiteCellList-r13 ENUMERATED {supported} OPTIONAL,

extendedMaxObjectId-r13 ENUMERATED {supported} OPTIONAL,

ul-PDCP-Delay-r13 ENUMERATED {supported} OPTIONAL,

extendedFreqPriorities-r13 ENUMERATED {supported} OPTIONAL,

multiBandInfoReport-r13 ENUMERATED {supported} OPTIONAL,

rssi-AndChannelOccupancyReporting-r13 ENUMERATED {supported} OPTIONAL

}

MeasParameters-v1430 ::= SEQUENCE {

ceMeasurements-r14 ENUMERATED {supported} OPTIONAL,

ncsg-r14 ENUMERATED {supported} OPTIONAL,

shortMeasurementGap-r14 ENUMERATED {supported} OPTIONAL,

perServingCellMeasurementGap-r14 ENUMERATED {supported} OPTIONAL,

nonUniformGap-r14 ENUMERATED {supported} OPTIONAL

}

MeasParameters-v1520 ::= SEQUENCE {

measGapPatterns-r15 BIT STRING (SIZE (8)) OPTIONAL

}

MeasParameters-v1530 ::= SEQUENCE {

qoe-MeasReport-r15 ENUMERATED {supported} OPTIONAL,

qoe-MTSI-MeasReport-r15 ENUMERATED {supported} OPTIONAL,

ca-IdleModeMeasurements-r15 ENUMERATED {supported} OPTIONAL,

ca-IdleModeValidityArea-r15 ENUMERATED {supported} OPTIONAL,

heightMeas-r15 ENUMERATED {supported} OPTIONAL,

multipleCellsMeasExtension-r15 ENUMERATED {supported} OPTIONAL

}

MeasParameters-v1610 ::= SEQUENCE {

bandInfoNR-v1610 SEQUENCE (SIZE (1..maxBands)) OF MeasGapInfoNR OPTIONAL,

altFreqPriority-r16 ENUMERATED {supported} OPTIONAL,

ce-DL-ChannelQualityReporting-r16 ENUMERATED {supported} OPTIONAL,

ce-MeasRSS-Dedicated-r16 ENUMERATED {supported} OPTIONAL,

eutra-IdleInactiveMeasurements-r16 ENUMERATED {supported} OPTIONAL,

nr-IdleInactiveMeasFR1-r16 ENUMERATED {supported} OPTIONAL,

nr-IdleInactiveMeasFR2-r16 ENUMERATED {supported} OPTIONAL,

idleInactiveValidityAreaList-r16 ENUMERATED {supported} OPTIONAL,

measGapPatterns-NRonly-r16 ENUMERATED {supported} OPTIONAL,

measGapPatterns-NRonly-ENDC-r16 ENUMERATED {supported} OPTIONAL

}

MeasParameters-v1630 ::= SEQUENCE {

nr-IdleInactiveBeamMeasFR1-r16 ENUMERATED {supported} OPTIONAL,

nr-IdleInactiveBeamMeasFR2-r16 ENUMERATED {supported} OPTIONAL,

ce-MeasRSS-DedicatedSameRBs-r16 ENUMERATED {supported} OPTIONAL

}

MeasGapInfoNR ::= SEQUENCE {

interRAT-BandListNR-EN-DC InterRAT-BandListNR OPTIONAL,

interRAT-BandListNR-SA InterRAT-BandListNR OPTIONAL

}

BandListEUTRA ::= SEQUENCE (SIZE (1..maxBands)) OF BandInfoEUTRA

BandCombinationListEUTRA-r10 ::= SEQUENCE (SIZE (1..maxBandComb-r10)) OF BandInfoEUTRA

BandInfoEUTRA ::= SEQUENCE {

interFreqBandList InterFreqBandList,

interRAT-BandList InterRAT-BandList OPTIONAL

}

InterFreqBandList ::= SEQUENCE (SIZE (1..maxBands)) OF InterFreqBandInfo

InterFreqBandInfo ::= SEQUENCE {

interFreqNeedForGaps BOOLEAN

}

InterRAT-BandList ::= SEQUENCE (SIZE (1..maxBands)) OF InterRAT-BandInfo

InterRAT-BandListNR ::= SEQUENCE (SIZE (1..maxBandsNR-r15)) OF InterRAT-BandInfoNR

InterRAT-BandInfo ::= SEQUENCE {

interRAT-NeedForGaps BOOLEAN

}

InterRAT-BandInfoNR ::= SEQUENCE {

interRAT-NeedForGapsNR BOOLEAN

}

IRAT-ParametersNR-r15 ::= SEQUENCE {

en-DC-r15 ENUMERATED {supported} OPTIONAL,

eventB2-r15 ENUMERATED {supported} OPTIONAL,

supportedBandListEN-DC-r15 SupportedBandListNR-r15 OPTIONAL

}

IRAT-ParametersNR-v1540 ::= SEQUENCE {

eutra-5GC-HO-ToNR-FDD-FR1-r15 ENUMERATED {supported} OPTIONAL,

eutra-5GC-HO-ToNR-TDD-FR1-r15 ENUMERATED {supported} OPTIONAL,

eutra-5GC-HO-ToNR-FDD-FR2-r15 ENUMERATED {supported} OPTIONAL,

eutra-5GC-HO-ToNR-TDD-FR2-r15 ENUMERATED {supported} OPTIONAL,

eutra-EPC-HO-ToNR-FDD-FR1-r15 ENUMERATED {supported} OPTIONAL,

eutra-EPC-HO-ToNR-TDD-FR1-r15 ENUMERATED {supported} OPTIONAL,

eutra-EPC-HO-ToNR-FDD-FR2-r15 ENUMERATED {supported} OPTIONAL,

eutra-EPC-HO-ToNR-TDD-FR2-r15 ENUMERATED {supported} OPTIONAL,

ims-VoiceOverNR-FR1-r15 ENUMERATED {supported} OPTIONAL,

ims-VoiceOverNR-FR2-r15 ENUMERATED {supported} OPTIONAL,

sa-NR-r15 ENUMERATED {supported} OPTIONAL,

supportedBandListNR-SA-r15 SupportedBandListNR-r15 OPTIONAL

}

IRAT-ParametersNR-v1560 ::= SEQUENCE {

ng-EN-DC-r15 ENUMERATED {supported} OPTIONAL

}

IRAT-ParametersNR-v1570 ::= SEQUENCE {

ss-SINR-Meas-NR-FR1-r15 ENUMERATED {supported} OPTIONAL,

ss-SINR-Meas-NR-FR2-r15 ENUMERATED {supported} OPTIONAL

}

IRAT-ParametersNR-v1610 ::= SEQUENCE {

nr-HO-ToEN-DC-r16 ENUMERATED {supported} OPTIONAL,

ce-EUTRA-5GC-HO-ToNR-FDD-FR1-r16 ENUMERATED {supported} OPTIONAL,

ce-EUTRA-5GC-HO-ToNR-TDD-FR1-r16 ENUMERATED {supported} OPTIONAL,

ce-EUTRA-5GC-HO-ToNR-FDD-FR2-r16 ENUMERATED {supported} OPTIONAL,

ce-EUTRA-5GC-HO-ToNR-TDD-FR2-r16 ENUMERATED {supported} OPTIONAL

}

IRAT-ParametersNR-v1660 ::= SEQUENCE {

extendedBand-n77-r16 ENUMERATED {supported} OPTIONAL

}

EUTRA-5GC-Parameters-r15 ::= SEQUENCE {

eutra-5GC-r15 ENUMERATED {supported} OPTIONAL,

eutra-EPC-HO-EUTRA-5GC-r15 ENUMERATED {supported} OPTIONAL,

ho-EUTRA-5GC-FDD-TDD-r15 ENUMERATED {supported} OPTIONAL,

ho-InterfreqEUTRA-5GC-r15 ENUMERATED {supported} OPTIONAL,

ims-VoiceOverMCG-BearerEUTRA-5GC-r15 ENUMERATED {supported} OPTIONAL,

inactiveState-r15 ENUMERATED {supported} OPTIONAL,

reflectiveQoS-r15 ENUMERATED {supported} OPTIONAL

}

EUTRA-5GC-Parameters-v1610 ::= SEQUENCE {

ce-InactiveState-r16 ENUMERATED {supported} OPTIONAL,

ce-EUTRA-5GC-r16 ENUMERATED {supported} OPTIONAL

}

PDCP-ParametersNR-r15 ::= SEQUENCE {

rohc-Profiles-r15 ROHC-ProfileSupportList-r15,

rohc-ContextMaxSessions-r15 ENUMERATED {

cs2, cs4, cs8, cs12, cs16, cs24, cs32,

cs48, cs64, cs128, cs256, cs512, cs1024,

cs16384, spare2, spare1} DEFAULT cs16,

rohc-ProfilesUL-Only-r15 SEQUENCE {

profile0x0006-r15 BOOLEAN

},

rohc-ContextContinue-r15 ENUMERATED {supported} OPTIONAL,

outOfOrderDelivery-r15 ENUMERATED {supported} OPTIONAL,

sn-SizeLo-r15 ENUMERATED {supported} OPTIONAL,

ims-VoiceOverNR-PDCP-MCG-Bearer-r15 ENUMERATED {supported} OPTIONAL,

ims-VoiceOverNR-PDCP-SCG-Bearer-r15 ENUMERATED {supported} OPTIONAL

}

PDCP-ParametersNR-v1560 ::= SEQUENCE {

ims-VoNR-PDCP-SCG-NGENDC-r15 ENUMERATED {supported} OPTIONAL

}

ROHC-ProfileSupportList-r15 ::= SEQUENCE {

profile0x0001-r15 BOOLEAN,

profile0x0002-r15 BOOLEAN,

profile0x0003-r15 BOOLEAN,

profile0x0004-r15 BOOLEAN,

profile0x0006-r15 BOOLEAN,

profile0x0101-r15 BOOLEAN,

profile0x0102-r15 BOOLEAN,

profile0x0103-r15 BOOLEAN,

profile0x0104-r15 BOOLEAN

}

SupportedBandListNR-r15 ::= SEQUENCE (SIZE (1..maxBandsNR-r15)) OF SupportedBandNR-r15

SupportedBandNR-r15 ::= SEQUENCE {

bandNR-r15 FreqBandIndicatorNR-r15

}

IRAT-ParametersUTRA-FDD ::= SEQUENCE {

supportedBandListUTRA-FDD SupportedBandListUTRA-FDD

}

IRAT-ParametersUTRA-v920 ::= SEQUENCE {

e-RedirectionUTRA-r9 ENUMERATED {supported}

}

IRAT-ParametersUTRA-v9c0 ::= SEQUENCE {

voiceOverPS-HS-UTRA-FDD-r9 ENUMERATED {supported} OPTIONAL,

voiceOverPS-HS-UTRA-TDD128-r9 ENUMERATED {supported} OPTIONAL,

srvcc-FromUTRA-FDD-ToUTRA-FDD-r9 ENUMERATED {supported} OPTIONAL,

srvcc-FromUTRA-FDD-ToGERAN-r9 ENUMERATED {supported} OPTIONAL,

srvcc-FromUTRA-TDD128-ToUTRA-TDD128-r9 ENUMERATED {supported} OPTIONAL,

srvcc-FromUTRA-TDD128-ToGERAN-r9 ENUMERATED {supported} OPTIONAL

}

IRAT-ParametersUTRA-v9h0 ::= SEQUENCE {

mfbi-UTRA-r9 ENUMERATED {supported}

}

SupportedBandListUTRA-FDD ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandUTRA-FDD

SupportedBandUTRA-FDD ::= ENUMERATED {

bandI, bandII, bandIII, bandIV, bandV, bandVI,

bandVII, bandVIII, bandIX, bandX, bandXI,

bandXII, bandXIII, bandXIV, bandXV, bandXVI, ...,

bandXVII-8a0, bandXVIII-8a0, bandXIX-8a0, bandXX-8a0,

bandXXI-8a0, bandXXII-8a0, bandXXIII-8a0, bandXXIV-8a0,

bandXXV-8a0, bandXXVI-8a0, bandXXVII-8a0, bandXXVIII-8a0,

bandXXIX-8a0, bandXXX-8a0, bandXXXI-8a0, bandXXXII-8a0}

IRAT-ParametersUTRA-TDD128 ::= SEQUENCE {

supportedBandListUTRA-TDD128 SupportedBandListUTRA-TDD128

}

SupportedBandListUTRA-TDD128 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandUTRA-TDD128

SupportedBandUTRA-TDD128 ::= ENUMERATED {

a, b, c, d, e, f, g, h, i, j, k, l, m, n,

o, p, ...}

IRAT-ParametersUTRA-TDD384 ::= SEQUENCE {

supportedBandListUTRA-TDD384 SupportedBandListUTRA-TDD384

}

SupportedBandListUTRA-TDD384 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandUTRA-TDD384

SupportedBandUTRA-TDD384 ::= ENUMERATED {

a, b, c, d, e, f, g, h, i, j, k, l, m, n,

o, p, ...}

IRAT-ParametersUTRA-TDD768 ::= SEQUENCE {

supportedBandListUTRA-TDD768 SupportedBandListUTRA-TDD768

}

SupportedBandListUTRA-TDD768 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandUTRA-TDD768

SupportedBandUTRA-TDD768 ::= ENUMERATED {

a, b, c, d, e, f, g, h, i, j, k, l, m, n,

o, p, ...}

IRAT-ParametersUTRA-TDD-v1020 ::= SEQUENCE {

e-RedirectionUTRA-TDD-r10 ENUMERATED {supported}

}

IRAT-ParametersGERAN ::= SEQUENCE {

supportedBandListGERAN SupportedBandListGERAN,

interRAT-PS-HO-ToGERAN BOOLEAN

}

IRAT-ParametersGERAN-v920 ::= SEQUENCE {

dtm-r9 ENUMERATED {supported} OPTIONAL,

e-RedirectionGERAN-r9 ENUMERATED {supported} OPTIONAL

}

SupportedBandListGERAN ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandGERAN

SupportedBandGERAN ::= ENUMERATED {

gsm450, gsm480, gsm710, gsm750, gsm810, gsm850,

gsm900P, gsm900E, gsm900R, gsm1800, gsm1900,

spare5, spare4, spare3, spare2, spare1, ...}

IRAT-ParametersCDMA2000-HRPD ::= SEQUENCE {

supportedBandListHRPD SupportedBandListHRPD,

tx-ConfigHRPD ENUMERATED {single, dual},

rx-ConfigHRPD ENUMERATED {single, dual}

}

SupportedBandListHRPD ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandclassCDMA2000

IRAT-ParametersCDMA2000-1XRTT ::= SEQUENCE {

supportedBandList1XRTT SupportedBandList1XRTT,

tx-Config1XRTT ENUMERATED {single, dual},

rx-Config1XRTT ENUMERATED {single, dual}

}

IRAT-ParametersCDMA2000-1XRTT-v920 ::= SEQUENCE {

e-CSFB-1XRTT-r9 ENUMERATED {supported},

e-CSFB-ConcPS-Mob1XRTT-r9 ENUMERATED {supported} OPTIONAL

}

IRAT-ParametersCDMA2000-1XRTT-v1020 ::= SEQUENCE {

e-CSFB-dual-1XRTT-r10 ENUMERATED {supported}

}

IRAT-ParametersCDMA2000-v1130 ::= SEQUENCE {

cdma2000-NW-Sharing-r11 ENUMERATED {supported} OPTIONAL

}

SupportedBandList1XRTT ::= SEQUENCE (SIZE (1..maxCDMA-BandClass)) OF BandclassCDMA2000

IRAT-ParametersWLAN-r13 ::= SEQUENCE {

supportedBandListWLAN-r13 SEQUENCE (SIZE (1..maxWLAN-Bands-r13)) OF WLAN-BandIndicator-r13 OPTIONAL

}

CSG-ProximityIndicationParameters-r9 ::= SEQUENCE {

intraFreqProximityIndication-r9 ENUMERATED {supported} OPTIONAL,

interFreqProximityIndication-r9 ENUMERATED {supported} OPTIONAL,

utran-ProximityIndication-r9 ENUMERATED {supported} OPTIONAL

}

NeighCellSI-AcquisitionParameters-r9 ::= SEQUENCE {

intraFreqSI-AcquisitionForHO-r9 ENUMERATED {supported} OPTIONAL,

interFreqSI-AcquisitionForHO-r9 ENUMERATED {supported} OPTIONAL,

utran-SI-AcquisitionForHO-r9 ENUMERATED {supported} OPTIONAL

}

NeighCellSI-AcquisitionParameters-v1530 ::= SEQUENCE {

reportCGI-NR-EN-DC-r15 ENUMERATED {supported} OPTIONAL,

reportCGI-NR-NoEN-DC-r15 ENUMERATED {supported} OPTIONAL

}

NeighCellSI-AcquisitionParameters-v1550 ::= SEQUENCE {

eutra-CGI-Reporting-ENDC-r15 ENUMERATED {supported} OPTIONAL,

utra-GERAN-CGI-Reporting-ENDC-r15 ENUMERATED {supported} OPTIONAL

}

NeighCellSI-AcquisitionParameters-v15a0 ::= SEQUENCE {

eutra-CGI-Reporting-NEDC-r15 ENUMERATED {supported} OPTIONAL

}

NeighCellSI-AcquisitionParameters-v1610 ::= SEQUENCE {

eutra-SI-AcquisitionForHO-ENDC-r16 ENUMERATED {supported} OPTIONAL,

nr-AutonomousGaps-ENDC-FR1-r16 ENUMERATED {supported} OPTIONAL,

nr-AutonomousGaps-ENDC-FR2-r16 ENUMERATED {supported} OPTIONAL,

nr-AutonomousGaps-FR1-r16 ENUMERATED {supported} OPTIONAL,

nr-AutonomousGaps-FR2-r16 ENUMERATED {supported} OPTIONAL

}

SON-Parameters-r9 ::= SEQUENCE {

rach-Report-r9 ENUMERATED {supported} OPTIONAL

}

PUR-Parameters-r16 ::= SEQUENCE {

pur-CP-5GC-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pur-CP-5GC-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

pur-UP-5GC-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pur-UP-5GC-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

pur-CP-EPC-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pur-CP-EPC-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

pur-UP-EPC-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pur-UP-EPC-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

pur-CP-L1Ack-r16 ENUMERATED {supported} OPTIONAL,

pur-FrequencyHopping-r16 ENUMERATED {supported} OPTIONAL,

pur-PUSCH-NB-MaxTBS-r16 ENUMERATED {supported} OPTIONAL,

pur-RSRP-Validation-r16 ENUMERATED {supported} OPTIONAL,

pur-SubPRB-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pur-SubPRB-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL

}

UE-BasedNetwPerfMeasParameters-r10 ::= SEQUENCE {

loggedMeasurementsIdle-r10 ENUMERATED {supported} OPTIONAL,

standaloneGNSS-Location-r10 ENUMERATED {supported} OPTIONAL

}

UE-BasedNetwPerfMeasParameters-v1250 ::= SEQUENCE {

loggedMBSFNMeasurements-r12 ENUMERATED {supported}

}

UE-BasedNetwPerfMeasParameters-v1430 ::= SEQUENCE {

locationReport-r14 ENUMERATED {supported} OPTIONAL

}

UE-BasedNetwPerfMeasParameters-v1530 ::= SEQUENCE {

loggedMeasBT-r15 ENUMERATED {supported} OPTIONAL,

loggedMeasWLAN-r15 ENUMERATED {supported} OPTIONAL,

immMeasBT-r15 ENUMERATED {supported} OPTIONAL,

immMeasWLAN-r15 ENUMERATED {supported} OPTIONAL

}

UE-BasedNetwPerfMeasParameters-v1610 ::= SEQUENCE {

ul-PDCP-AvgDelay-r16 ENUMERATED {supported} OPTIONAL

}

UE-BasedNetwPerfMeasParameters-v17xy ::= SEQUENCE {

loggedMeasUncomBarPre-r17 ENUMERATED {supported} OPTIONAL,

immMeasUncomBarPre-r17 ENUMERATED {supported} OPTIONAL

}

OTDOA-PositioningCapabilities-r10 ::= SEQUENCE {

otdoa-UE-Assisted-r10 ENUMERATED {supported},

interFreqRSTD-Measurement-r10 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-r11 ::= SEQUENCE {

inDeviceCoexInd-r11 ENUMERATED {supported} OPTIONAL,

powerPrefInd-r11 ENUMERATED {supported} OPTIONAL,

ue-Rx-TxTimeDiffMeasurements-r11 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v11d0 ::= SEQUENCE {

inDeviceCoexInd-UL-CA-r11 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1360 ::= SEQUENCE {

inDeviceCoexInd-HardwareSharingInd-r13 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1430 ::= SEQUENCE {

bwPrefInd-r14 ENUMERATED {supported} OPTIONAL,

rlm-ReportSupport-r14 ENUMERATED {supported} OPTIONAL

}

OtherParameters-v1450 ::= SEQUENCE {

overheatingInd-r14 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1460 ::= SEQUENCE {

nonCSG-SI-Reporting-r14 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1530 ::= SEQUENCE {

assistInfoBitForLC-r15 ENUMERATED {supported} OPTIONAL,

timeReferenceProvision-r15 ENUMERATED {supported} OPTIONAL,

flightPathPlan-r15 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1540 ::= SEQUENCE {

inDeviceCoexInd-ENDC-r15 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1610 ::= SEQUENCE {

resumeWithStoredMCG-SCells-r16 ENUMERATED {supported} OPTIONAL,

resumeWithMCG-SCellConfig-r16 ENUMERATED {supported} OPTIONAL,

resumeWithStoredSCG-r16 ENUMERATED {supported} OPTIONAL,

resumeWithSCG-Config-r16 ENUMERATED {supported} OPTIONAL,

mcgRLF-RecoveryViaSCG-r16 ENUMERATED {supported} OPTIONAL,

overheatingIndForSCG-r16 ENUMERATED {supported} OPTIONAL

}

Other-Parameters-v1650 ::= SEQUENCE {

mpsPriorityIndication-r16 ENUMERATED {supported} OPTIONAL

}

MBMS-Parameters-r11 ::= SEQUENCE {

mbms-SCell-r11 ENUMERATED {supported} OPTIONAL,

mbms-NonServingCell-r11 ENUMERATED {supported} OPTIONAL

}

MBMS-Parameters-v1250 ::= SEQUENCE {

mbms-AsyncDC-r12 ENUMERATED {supported} OPTIONAL

}

MBMS-Parameters-v1430 ::= SEQUENCE {

fembmsDedicatedCell-r14 ENUMERATED {supported} OPTIONAL,

fembmsMixedCell-r14 ENUMERATED {supported} OPTIONAL,

subcarrierSpacingMBMS-khz7dot5-r14 ENUMERATED {supported} OPTIONAL,

subcarrierSpacingMBMS-khz1dot25-r14 ENUMERATED {supported} OPTIONAL

}

MBMS-Parameters-v1470 ::= SEQUENCE {

mbms-MaxBW-r14 CHOICE {

implicitValue NULL,

explicitValue INTEGER(2..20)

},

mbms-ScalingFactor1dot25-r14 ENUMERATED {n3, n6, n9, n12} OPTIONAL,

mbms-ScalingFactor7dot5-r14 ENUMERATED {n1, n2, n3, n4} OPTIONAL

}

MBMS-Parameters-v1610 ::= SEQUENCE {

mbms-ScalingFactor2dot5-r16 ENUMERATED {n2, n4, n6, n8} OPTIONAL,

mbms-ScalingFactor0dot37-r16 ENUMERATED {n12, n16, n20, n24} OPTIONAL,

mbms-SupportedBandInfoList-r16 SEQUENCE (SIZE (1..maxBands)) OF MBMS-SupportedBandInfo-r16

}

MBMS-SupportedBandInfo-r16 ::= SEQUENCE {

subcarrierSpacingMBMS-khz2dot5-r16 ENUMERATED {supported} OPTIONAL,

subcarrierSpacingMBMS-khz0dot37-r16 SEQUENCE {

timeSeparationSlot2-r16 ENUMERATED {supported} OPTIONAL,

timeSeparationSlot4-r16 ENUMERATED {supported} OPTIONAL

} OPTIONAL

}

FeMBMS-Unicast-Parameters-r14 ::= SEQUENCE {

unicast-fembmsMixedSCell-r14 ENUMERATED {supported} OPTIONAL,

emptyUnicastRegion-r14 ENUMERATED {supported} OPTIONAL

}

SCPTM-Parameters-r13 ::= SEQUENCE {

scptm-ParallelReception-r13 ENUMERATED {supported} OPTIONAL,

scptm-SCell-r13 ENUMERATED {supported} OPTIONAL,

scptm-NonServingCell-r13 ENUMERATED {supported} OPTIONAL,

scptm-AsyncDC-r13 ENUMERATED {supported} OPTIONAL

}

CE-Parameters-r13 ::= SEQUENCE {

ce-ModeA-r13 ENUMERATED {supported} OPTIONAL,

ce-ModeB-r13 ENUMERATED {supported} OPTIONAL

}

CE-Parameters-v1320 ::= SEQUENCE {

intraFreqA3-CE-ModeA-r13 ENUMERATED {supported} OPTIONAL,

intraFreqA3-CE-ModeB-r13 ENUMERATED {supported} OPTIONAL,

intraFreqHO-CE-ModeA-r13 ENUMERATED {supported} OPTIONAL,

intraFreqHO-CE-ModeB-r13 ENUMERATED {supported} OPTIONAL

}

CE-Parameters-v1350 ::= SEQUENCE {

unicastFrequencyHopping-r13 ENUMERATED {supported} OPTIONAL

}

CE-Parameters-v1370 ::= SEQUENCE {

tm9-CE-ModeA-r13 ENUMERATED {supported} OPTIONAL,

tm9-CE-ModeB-r13 ENUMERATED {supported} OPTIONAL

}

CE-Parameters-v1380 ::= SEQUENCE {

tm6-CE-ModeA-r13 ENUMERATED {supported} OPTIONAL

}

CE-Parameters-v1430 ::= SEQUENCE {

ce-SwitchWithoutHO-r14 ENUMERATED {supported} OPTIONAL

}

CE-MultiTB-Parameters-r16 ::= SEQUENCE {

pdsch-MultiTB-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pdsch-MultiTB-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

pusch-MultiTB-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

pusch-MultiTB-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

ce-MultiTB-64QAM-r16 ENUMERATED {supported} OPTIONAL,

ce-MultiTB-EarlyTermination-r16 ENUMERATED {supported} OPTIONAL,

ce-MultiTB-FrequencyHopping-r16 ENUMERATED {supported} OPTIONAL,

ce-MultiTB-HARQ-AckBundling-r16 ENUMERATED {supported} OPTIONAL,

ce-MultiTB-Interleaving-r16 ENUMERATED {supported} OPTIONAL,

ce-MultiTB-SubPRB-r16 ENUMERATED {supported} OPTIONAL

}

CE-ResourceResvParameters-r16 ::= SEQUENCE {

subframeResourceResvDL-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

subframeResourceResvDL-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

subframeResourceResvUL-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

subframeResourceResvUL-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

slotSymbolResourceResvDL-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

slotSymbolResourceResvDL-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

slotSymbolResourceResvUL-CE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

slotSymbolResourceResvUL-CE-ModeB-r16 ENUMERATED {supported} OPTIONAL,

subcarrierPuncturingCE-ModeA-r16 ENUMERATED {supported} OPTIONAL,

subcarrierPuncturingCE-ModeB-r16 ENUMERATED {supported} OPTIONAL

}

LAA-Parameters-r13 ::= SEQUENCE {

crossCarrierSchedulingLAA-DL-r13 ENUMERATED {supported} OPTIONAL,

csi-RS-DRS-RRM-MeasurementsLAA-r13 ENUMERATED {supported} OPTIONAL,

downlinkLAA-r13 ENUMERATED {supported} OPTIONAL,

endingDwPTS-r13 ENUMERATED {supported} OPTIONAL,

secondSlotStartingPosition-r13 ENUMERATED {supported} OPTIONAL,

tm9-LAA-r13 ENUMERATED {supported} OPTIONAL,

tm10-LAA-r13 ENUMERATED {supported} OPTIONAL

}

LAA-Parameters-v1430 ::= SEQUENCE {

crossCarrierSchedulingLAA-UL-r14 ENUMERATED {supported} OPTIONAL,

uplinkLAA-r14 ENUMERATED {supported} OPTIONAL,

twoStepSchedulingTimingInfo-r14 ENUMERATED {nPlus1, nPlus2, nPlus3} OPTIONAL,

uss-BlindDecodingAdjustment-r14 ENUMERATED {supported} OPTIONAL,

uss-BlindDecodingReduction-r14 ENUMERATED {supported} OPTIONAL,

outOfSequenceGrantHandling-r14 ENUMERATED {supported} OPTIONAL

}

LAA-Parameters-v1530 ::= SEQUENCE {

aul-r15 ENUMERATED {supported} OPTIONAL,

laa-PUSCH-Mode1-r15 ENUMERATED {supported} OPTIONAL,

laa-PUSCH-Mode2-r15 ENUMERATED {supported} OPTIONAL,

laa-PUSCH-Mode3-r15 ENUMERATED {supported} OPTIONAL

}

WLAN-IW-Parameters-r12 ::= SEQUENCE {

wlan-IW-RAN-Rules-r12 ENUMERATED {supported} OPTIONAL,

wlan-IW-ANDSF-Policies-r12 ENUMERATED {supported} OPTIONAL

}

LWA-Parameters-r13 ::= SEQUENCE {

lwa-r13 ENUMERATED {supported} OPTIONAL,

lwa-SplitBearer-r13 ENUMERATED {supported} OPTIONAL,

wlan-MAC-Address-r13 OCTET STRING (SIZE (6)) OPTIONAL,

lwa-BufferSize-r13 ENUMERATED {supported} OPTIONAL

}

LWA-Parameters-v1430 ::= SEQUENCE {

lwa-HO-WithoutWT-Change-r14 ENUMERATED {supported} OPTIONAL,

lwa-UL-r14 ENUMERATED {supported} OPTIONAL,

wlan-PeriodicMeas-r14 ENUMERATED {supported} OPTIONAL,

wlan-ReportAnyWLAN-r14 ENUMERATED {supported} OPTIONAL,

wlan-SupportedDataRate-r14 INTEGER (1..2048) OPTIONAL

}

LWA-Parameters-v1440 ::= SEQUENCE {

lwa-RLC-UM-r14 ENUMERATED {supported} OPTIONAL

}

WLAN-IW-Parameters-v1310 ::= SEQUENCE {

rclwi-r13 ENUMERATED {supported} OPTIONAL

}

LWIP-Parameters-r13 ::= SEQUENCE {

lwip-r13 ENUMERATED {supported} OPTIONAL

}

LWIP-Parameters-v1430 ::= SEQUENCE {

lwip-Aggregation-DL-r14 ENUMERATED {supported} OPTIONAL,

lwip-Aggregation-UL-r14 ENUMERATED {supported} OPTIONAL

}

NAICS-Capability-List-r12 ::= SEQUENCE (SIZE (1..maxNAICS-Entries-r12)) OF NAICS-Capability-Entry-r12

NAICS-Capability-Entry-r12 ::= SEQUENCE {

numberOfNAICS-CapableCC-r12 INTEGER(1..5),

numberOfAggregatedPRB-r12 ENUMERATED {

n50, n75, n100, n125, n150, n175,

n200, n225, n250, n275, n300, n350,

n400, n450, n500, spare},

...

}

SL-Parameters-r12 ::= SEQUENCE {

commSimultaneousTx-r12 ENUMERATED {supported} OPTIONAL,

commSupportedBands-r12 FreqBandIndicatorListEUTRA-r12 OPTIONAL,

discSupportedBands-r12 SupportedBandInfoList-r12 OPTIONAL,

discScheduledResourceAlloc-r12 ENUMERATED {supported} OPTIONAL,

disc-UE-SelectedResourceAlloc-r12 ENUMERATED {supported} OPTIONAL,

disc-SLSS-r12 ENUMERATED {supported} OPTIONAL,

discSupportedProc-r12 ENUMERATED {n50, n400} OPTIONAL

}

SL-Parameters-v1310 ::= SEQUENCE {

discSysInfoReporting-r13 ENUMERATED {supported} OPTIONAL,

commMultipleTx-r13 ENUMERATED {supported} OPTIONAL,

discInterFreqTx-r13 ENUMERATED {supported} OPTIONAL,

discPeriodicSLSS-r13 ENUMERATED {supported} OPTIONAL

}

SL-Parameters-v1430 ::= SEQUENCE {

zoneBasedPoolSelection-r14 ENUMERATED {supported} OPTIONAL,

ue-AutonomousWithFullSensing-r14 ENUMERATED {supported} OPTIONAL,

ue-AutonomousWithPartialSensing-r14 ENUMERATED {supported} OPTIONAL,

sl-CongestionControl-r14 ENUMERATED {supported} OPTIONAL,

v2x-TxWithShortResvInterval-r14 ENUMERATED {supported} OPTIONAL,

v2x-numberTxRxTiming-r14 INTEGER(1..16) OPTIONAL,

v2x-nonAdjacentPSCCH-PSSCH-r14 ENUMERATED {supported} OPTIONAL,

slss-TxRx-r14 ENUMERATED {supported} OPTIONAL,

v2x-SupportedBandCombinationList-r14 V2X-SupportedBandCombination-r14 OPTIONAL

}

SL-Parameters-v1530 ::= SEQUENCE {

slss-SupportedTxFreq-r15 ENUMERATED {single, multiple} OPTIONAL,

sl-64QAM-Tx-r15 ENUMERATED {supported} OPTIONAL,

sl-TxDiversity-r15 ENUMERATED {supported} OPTIONAL,

ue-CategorySL-r15 UE-CategorySL-r15 OPTIONAL,

v2x-SupportedBandCombinationList-v1530 V2X-SupportedBandCombination-v1530 OPTIONAL

}

SL-Parameters-v1540 ::= SEQUENCE {

sl-64QAM-Rx-r15 ENUMERATED {supported} OPTIONAL,

sl-RateMatchingTBSScaling-r15 ENUMERATED {supported} OPTIONAL,

sl-LowT2min-r15 ENUMERATED {supported} OPTIONAL,

v2x-SensingReportingMode3-r15 ENUMERATED {supported} OPTIONAL

}

SL-Parameters-v1610 ::= SEQUENCE {

sl-ParameterNR-r16 OCTET STRING OPTIONAL,

dummy V2X-SupportedBandCombinationEUTRA-NR-r16 OPTIONAL

}

SL-Parameters-v1630 ::= SEQUENCE {

v2x-SupportedBandCombinationListEUTRA-NR-r16 V2X-SupportedBandCombinationEUTRA-NR-v1630 OPTIONAL

}

UE-CategorySL-r15 ::= SEQUENCE {

ue-CategorySL-C-TX-r15 INTEGER(1..5),

ue-CategorySL-C-RX-r15 INTEGER(1..4)

}

V2X-SupportedBandCombination-r14 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF V2X-BandCombinationParameters-r14

V2X-SupportedBandCombination-v1530 ::= SEQUENCE (SIZE (1..maxBandComb-r13)) OF V2X-BandCombinationParameters-v1530

V2X-BandCombinationParameters-r14 ::= SEQUENCE (SIZE (1.. maxSimultaneousBands-r10)) OF V2X-BandParameters-r14

V2X-BandCombinationParameters-v1530 ::= SEQUENCE (SIZE (1.. maxSimultaneousBands-r10)) OF V2X-BandParameters-v1530

V2X-SupportedBandCombinationEUTRA-NR-r16 ::= SEQUENCE (SIZE (1..maxBandCombSidelinkNR-r16)) OF V2X-BandParametersEUTRA-NR-r16

V2X-SupportedBandCombinationEUTRA-NR-v1630 ::= SEQUENCE (SIZE (1..maxBandCombSidelinkNR-r16)) OF V2X-BandCombinationParametersEUTRA-NR-v1630

V2X-BandCombinationParametersEUTRA-NR-v1630 ::= SEQUENCE {

bandListSidelinkEUTRA-NR-r16 SEQUENCE (SIZE (1.. maxSimultaneousBands-r10)) OF V2X-BandParametersEUTRA-NR-r16,

bandListSidelinkEUTRA-NR-v1630 SEQUENCE (SIZE (1.. maxSimultaneousBands-r10)) OF V2X-BandParametersEUTRA-NR-v1630

}

V2X-BandParametersEUTRA-NR-r16 ::= CHOICE {

eutra SEQUENCE {

v2x-BandParameters1-r16 V2X-BandParameters-r14 OPTIONAL,

v2x-BandParameters2-r16 V2X-BandParameters-v1530 OPTIONAL

},

nr SEQUENCE {

v2x-BandParametersNR-r16 OCTET STRING OPTIONAL

}

}

V2X-BandParametersEUTRA-NR-v1630 ::= CHOICE {

eutra NULL,

nr SEQUENCE {

tx-Sidelink-r16 ENUMERATED {supported} OPTIONAL,

rx-Sidelink-r16 ENUMERATED {supported} OPTIONAL

}

}

SupportedBandInfoList-r12 ::= SEQUENCE (SIZE (1..maxBands)) OF SupportedBandInfo-r12

SupportedBandInfo-r12 ::= SEQUENCE {

support-r12 ENUMERATED {supported} OPTIONAL

}

FreqBandIndicatorListEUTRA-r12 ::= SEQUENCE (SIZE (1..maxBands)) OF FreqBandIndicator-r11

MMTEL-Parameters-r14 ::= SEQUENCE {

delayBudgetReporting-r14 ENUMERATED {supported} OPTIONAL,

pusch-Enhancements-r14 ENUMERATED {supported} OPTIONAL,

recommendedBitRate-r14 ENUMERATED {supported} OPTIONAL,

recommendedBitRateQuery-r14 ENUMERATED {supported} OPTIONAL

}

MMTEL-Parameters-v1610 ::= SEQUENCE {

recommendedBitRateMultiplier-r16 ENUMERATED {supported} OPTIONAL

}

SRS-CapabilityPerBandPair-r14 ::= SEQUENCE {

retuningInfo SEQUENCE {

rf-RetuningTimeDL-r14 ENUMERATED {n0, n0dot5, n1, n1dot5, n2, n2dot5, n3,

n3dot5, n4, n4dot5, n5, n5dot5, n6, n6dot5,

n7, spare1} OPTIONAL,

rf-RetuningTimeUL-r14 ENUMERATED {n0, n0dot5, n1, n1dot5, n2, n2dot5, n3,

n3dot5, n4, n4dot5, n5, n5dot5, n6, n6dot5,

n7, spare1} OPTIONAL

}

}

SRS-CapabilityPerBandPair-v14b0 ::= SEQUENCE {

srs-FlexibleTiming-r14 ENUMERATED {supported} OPTIONAL,

srs-HARQ-ReferenceConfig-r14 ENUMERATED {supported} OPTIONAL

}

SRS-CapabilityPerBandPair-v1610::= SEQUENCE {

addSRS-CarrierSwitching-r16 ENUMERATED {supported} OPTIONAL

}

HighSpeedEnhParameters-r14 ::= SEQUENCE {

measurementEnhancements-r14 ENUMERATED {supported} OPTIONAL,

demodulationEnhancements-r14 ENUMERATED {supported} OPTIONAL,

prach-Enhancements-r14 ENUMERATED {supported} OPTIONAL

}

HighSpeedEnhParameters-v1610 ::= SEQUENCE {

measurementEnhancementsSCell-r16 ENUMERATED {supported} OPTIONAL,

measurementEnhancements2-r16 ENUMERATED {supported} OPTIONAL,

demodulationEnhancements2-r16 ENUMERATED {supported} OPTIONAL,

interRAT-enhancementNR-r16 ENUMERATED {supported} OPTIONAL

}

-- ASN1STOP

| *UE-EUTRA-Capability* field descriptions | | *FDD/ TDD diff* | |
| --- | --- | --- | --- |
| ***accessStratumRelease***  Set to rel16 in this version of the specification. NOTE 7. | | - | |
| ***additionalRx-Tx-PerformanceReq***  Indicates whether the UE supports the additional Rx and Tx performance requirement for a given band combination as specified in TS 36.101 [42]. | | - | |
| ***addSRS***  Presence of this field indicates the UE supports the additional SRS symbol(s) within the normal UL subframes in TDD as described in TS 36.213 [23]. | | - | |
| ***addSRS-1T2R***  Indicates whether the UE supports selecting one antenna among two antennas to transmit additional SRS symbol(s) for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***addSRS-1T4R***  Indicates whether the UE supports selecting one antenna among four antennas to transmit additional SRS symbol(s) for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***addSRS-2T4R-2Pairs***  Indicates whether the UE supports selecting one antenna pair between two antenna pairs to transmit additional SRS symbol(s) simultaneously for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***addSRS-2T4R-3Pairs***  Indicates whether the UE supports selecting one antenna pair among three antenna pairs to transmit additional SRS symbol(s) simultaneously for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***addSRS-AntennaSwitching (in addSRS)***  Value *useBasic* indicates the antenna switching capabilities for additional SRS symbol(s) for a band of band combination for which the capability is not signalled in *bandParameterList-v1610* is the same as indicated by *bandParameterList-v1380* and/or *bandParameterList-v1530* for the concerned band of band combination. | | - | |
| ***addSRS-AntennaSwitching (in bandParameterList-v1610)***  If signalled, the field indicates the antenna switching capabilities for additional SRS symbol(s) for the concerned band of band combination. | | - | |
| ***addSRS-CarrierSwitching (in addSRS)***  Indicates whether carrier switching is supported for additional SRS symbol(s) for all band pairs of band combinations for which UE supports SRS carrier switching. This field is included only if *srs-CapabilityPerBandPairList-r14* is included. If this field is included, *addSRS-CarrierSwitching* (in *bandParameterList-v1610*) is not included. | | - | |
| ***addSRS-CarrierSwitching (in bandParameterList-v1610)***  Indicates whether carrier switching is supported for additional SRS symbol(s) for the concerned band pair of band combination. This field is included only if *srs-CapabilityPerBandPairList-r14* is included.If this field is included, *addSRS-CarrierSwitching* (in *addSRS*) is not included. | | - | |
| ***addSRS-FrequencyHopping (in addSRS)***  Indicates whether frequency hopping is supported for additional SRS symbol(s) for all bands of band combinations for which the capability is not signalled in *bandParameterList-v1610*. | | - | |
| ***addSRS-FrequencyHopping (in bandParameterList-v1610)***  If signalled, the field indicates whether frequency hopping is supported for additional SRS symbol(s) for the concerned band of band combination. | | - | |
| ***alternativeTBS-Indices***  Indicates whether the UE supports alternative TBS indices *I*TBS 26A and 33A as specified in TS 36.213 [23]. | | - | |
| ***alternativeTBS-Index***  Indicates whether the UE supports alternative TBS index ITBS 33B as specified in TS 36.213 [23]. | | No | |
| ***alternativeTimeToTrigger***  Indicates whether the UE supports alternativeTimeToTrigger. | | No | |
| ***altFreqPriority***  Indicates whether the UE supports alternative cell reselection priority. | | No | |
| ***altMCS-Table***  Indicates whether the UE supports the 6-bit MCS table as specified in TS 36.212 [22] and TS 36.213 [23]. | | Yes | |
| ***aperiodicCSI-Reporting***  Indicates whether the UE supports aperiodic CSI reporting with 3 bits of the CSI request field size as specified in TS 36.213 [23], clause 7.2.1 and/or aperiodic CSI reporting mode 1-0 and mode 1-1 as specified in TS 36.213 [23], clause 7.2.1. The first bit is set to "1" if the UE supports the aperiodic CSI reporting with 3 bits of the CSI request field size. The second bit is set to "1" if the UE supports the aperiodic CSI reporting mode 1-0 and mode 1-1. | | No | |
| ***aperiodicCsi-ReportingSTTI***  Indicates whether the UE supports aperiodic CSI reporting for short TTI as specified in TS 36.213 [23], clause 7.2.1. | | Yes | |
| ***appliedCapabilityFilterCommon***  Contains the filter, applied by the UE, common for all MR-DC related capability containers that are requested and as defined by *UE-CapabilityRequestFilterCommon* IE in TS 38.331 [82]. | | - | |
| ***assistInfoBitForLC***  Indicates whether the UE supports assistance information bit for local cache. | | - | |
| ***aul***  Indicates whether the UE supports AUL as specified n TS 36.321 [6]. | | - | |
| ***bandCombinationListEUTRA***  One entry corresponding to each supported band combination listed in the same order as in *supportedBandCombination.* | | - | |
| ***BandCombinationParameters-v1090, BandCombinationParameters-v10i0, BandCombinationParameters-v1270***  If included, the UE shall include the same number of entries, and listed in the same order, as in *BandCombinationParameters-r10*. | | - | |
| ***BandCombinationParameters-v1130***  The field is applicable to each supported CA bandwidth class combination (i.e. CA configuration in TS 36.101 [42], clause 5.6A.1) indicated in the corresponding band combination. If included, the UE shall include the same number of entries, and listed in the same order, as in *BandCombinationParameters-r10*. | | - | |
| ***bandEUTRA***  E‑UTRA band as defined in TS 36.101 [42]. In case the UE includes *bandEUTRA-v9e0* or *bandEUTRA-v1090*, the UE shall set the corresponding entry of *bandEUTRA* (i.e. without suffix) or *bandEUTRA-r10* respectively to *maxFBI*. | | - | |
| ***bandInfoNR-v1610***  One entry corresponding to each supported E-UTRA band listed in the same order as in *supportedBandListEUTRA*. If absent, network assumes gap is required when measurement is performed on any NR bands while UE is served by cell(s) belongs to a E-UTRA band listed in *supportedBandListEUTRA* except for the FR2 inter-RAT measurement which depends on the support of *independentGapConfig*. | | - | |
| ***bandListEUTRA***  One entry corresponding to each supported E‑UTRA band listed in the same order as in *supportedBandListEUTRA*. | | - | |
| ***bandParameterList-v1380***  If included, the UE shall include the same number of entries listed in the same order as the band entries in the corresponding band combination. | | - | |
| ***bandParametersUL, bandParametersDL***  Indicates the supported parameters for the band. Each of *CA-MIMO-ParametersUL* and *CA-MIMO-ParametersDL* can be included only once for one band in a single band combination entry. | | - | |
| ***beamformed (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates for a particular transmission mode, the UE capabilities concerning beamformed EBF/ FD-MIMO operation (class B) applicable for the concerned band combination. | | - | |
| ***beamformed (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode, the UE capabilities concerning beamformed EBF/ FD-MIMO operation (class B) applicable for band combinations for which the concerned capabilities are not signalled. | | Yes | |
| ***benefitsFromInterruption***  Indicates whether the UE power consumption would benefit from being allowed to cause interruptions to serving cells when performing measurements of deactivated SCell carriers for *measCycleSCell* of less than 640ms, as specified in TS 36.133 [16]. | | No | |
| ***bwPrefInd***  Indicates whether the UE supports maximum PDSCH/PUSCH bandwidth preference indication. | | - | |
| ***ca-BandwidthClass***  The CA bandwidth class supported by the UE as defined in TS 36.101 [42], Table 5.6A-1.  The UE explicitly includes all the supported CA bandwidth class combinations in the band combination signalling. Support for one CA bandwidth class does not implicitly indicate support for another CA bandwidth class. | | - | |
| ***ca-IdleModeMeasurements***  Indicates whether UE supports reporting measurements performed during RRC\_IDLE. | | | - |
| ***ca-IdleModeValidityArea***  Indicates whether UE supports validity area for IDLE measurements during RRC\_IDLE. | | | - |
| ***cch-IM-RefRecTypeA-OneRX-Port***  This field defines whether the DL Category 1bis or the DL Category M2 UE supports Type A downlink control channel interference mitigation (CCH-IM) receiver "LMMSE-IRC + CRS-IC" for PDCCH/PCFICH/PHICH/EPDCCH receive processing (Enhanced downlink control channel performance requirements Type A in TS 36.101 [6]). | | No | |
| ***cch-InterfMitigation-RefRecTypeA, cch-InterfMitigation-RefRecTypeB, cch-InterfMitigation-MaxNumCCs***  The field *cch-InterfMitigation-RefRecTypeA* defines whether the UE supports Type A downlink control channel interference mitigation (CCH-IM) receiver "LMMSE-IRC + CRS-IC" for PDCCH/PCFICH/PHICH/EPDCCH receive processing (Enhanced downlink control channel performance requirements Type A in the TS 36.101 [6]). The field *cch-InterfMitigation-RefRecTypeB* defines whether the UE supports Type B downlink CCH-IM receiver "E-LMMSE-IRC + CRS-IC" for PDCCH/PCFICH/PHICH receive processing in synchronous networks (Enhanced downlink control channel performance requirements Type B in the TS 36.101 [6]). The UE supporting the capability defined by *cch-InterfMitigation-RefRecTypeB-r13* shall also support the capability defined by *cch-InterfMitigation-RefRecTypeA-r13*.  If the UE sets one or more of the fields *cch-InterfMitigation-RefRecTypeA* and *cch-InterfMitigation-RefRecTypeB* to "supported", the UE shall include the parameter *cch-InterfMitigation-MaxNumCCs* to indicate that the UE supports CCH-IM on at least one arbitrary downlink CC for up to *cch-InterfMitigation-MaxNumCCs* downlink CC CA configuration. The UE shall not include the parameter *cch-InterfMitigation-MaxNumCCs* if neither *cch-InterfMitigation-RefRecTypeA* nor *cch-InterfMitigation-RefRecTypeB* is present. The UE may not perform CCH-IM on more than 1 DL CCs. For example, the UE sets "*cch-InterfMitigation-MaxNumCCs* = 3"to indicate that UE supports CCH-IM on at least one DL CC for supported non-CA, 2DL CA and 3DL CA configurations. For CA scenarios, the CCH-IM is guaranteed to be supported on at least one arbitrary component carrier. | | - | |
| ***cdma2000-NW-Sharing***  Indicates whether the UE supports network sharing for CDMA2000. | | - | |
| ***ce-ClosedLoopTxAntennaSelection***  Indicates whether the UE supports UL closed-loop Tx antenna selection in CE mode A, as specified in TS 36.212 [22]. | | Yes | |
| ***ce-CQI-AlternativeTable***  Indicates whether the UE supports alternative CQI table in CE mode A. See TS 36.213 [22]. | | Yes | |
| ***ce-CRS-IntfMitig***  Indicates whether UE supports CRS interference mitigation, i.e., value *supported* indicates UE does not rely on the CRS outside certain PRBs and subframes as defined in TS 36.133 [16], clauses 3.6.1.2 and 3.6.1.3, and TS 36.213 [23] when operating in coverage enhancement mode. | | Yes | |
| ***ce-CSI-RS-Feedback***  Indicates whether the UE supports CSI-RS based feedback when the UE is operating in CE mode A, as specified in TS 36.213 [23]. | | Yes | |
| ***ce-CSI-RS-FeedbackCodebookRestriction***  Indicates whether the UE supports CSI-RS based feedback with codebook subset restriction when the UE in CE is operating in CE mode A, as specified in TS 36.213 [23]. | | Yes | |
| ***ce-DL-ChannelQualityReporting***  Indicates whether UE operating in CE mode supports aperiodic DL channel quality reporting in RRC\_CONNECTED. | | Yes | |
| ***ce-EUTRA-5GC***  Indicates whether the UE operating in CE mode A or B supports E-UTRA/5GC. | | Yes | |
| ***ce-EUTRA-5GC-HO-ToNR-FDD-FR1***  Indicates whether the UE operating in CE mode A or B supports handover from E-UTRA/5GC to NR FDD FR1. | | Yes | |
| ***ce-EUTRA-5GC-HO-ToNR-TDD-FR1***  Indicates whether the UE operating in CE mode A or B supports handover from E-UTRA/5GC to NR TDD FR1. | | Yes | |
| ***ce-EUTRA-5GC-HO-ToNR-FDD-FR2***  Indicates whether the UE operating in CE mode A or B supports handover from E-UTRA/5GC to NR FDD FR2. | | Yes | |
| ***ce-EUTRA-5GC-HO-ToNR-TDD-FR2***  Indicates whether the UE operating in CE mode A or B supports handover from E-UTRA/5GC to NR TDD FR2. | | Yes | |
| ***ce-HARQ-AckBundling***  Indicates whether the UE supports HARQ-ACK bundling in half duplex FDD in CE mode A, as specified in TS 36.212 [22] and TS 36.213 [23]. | | - | |
| ***ce-InactiveState***  Indicates whether UE operating in CE mode supports RRC\_INACTIVE when connected to 5GC. A UE including this field also supports short eDRX cycles in RRC\_INACTIVE when connected to 5GC. | | No | |
| ***ce-MeasRSS-Dedicated, ce-MeasRSS-DedicatedSameRBs***  Indicates whether the UE operating in CE mode A/B supports receiving neighbour cell RSS information in dedicated signalling and performing serving cell and neighbour cell measurements based on RSS in RRC\_CONNECTED as specified in TS 36.306 [5] and TS 36.133 [16]. | | Yes | |
| ***ce-ModeA, ce-ModeB***  Indicates whether the UE supports operation in CE mode A and/or B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | - | |
| ***crs-ChEstMPDCCH-CE-ModeA, crs-ChEstMPDCCH-CE-ModeB***  Indicates whether UE operating in CE mode A/B supports using CRS for improving MPDCCH channel estimation. | | Yes | |
| ***crs-ChEstMPDCCH-CSI***  Indicates whether UE operating in CE mode A supports CSI-based mapping for improving MPDCCH channel estimation. | | Yes | |
| ***crs-ChEstMPDCCH-ReciprocityTDD***  Indicates whether UE operating in CE mode A supports using CRS for improving MPDCCH channel estimation with reciprocity-based candidates in TDD. | | No | |
| ***ceMeasurements***  Indicates whether the UE supports intra-frequency RSRQ measurements and inter-frequency RSRP and RSRQ measurements in RRC\_CONNECTED, as specified in TS 36.133 [16] and TS 36.304 [4]. | | - | |
| ***ce-MultiTB-64QAM***  Indicates whether the UE supports downlink 64QAM for multiple TB scheduling in connected mode for PDSCH when operating in CE mode A, as specified in TS 36.211 [21] and TS 36.213 [23]. This field can be included only if *ce-PUSCH-SubPRB-Allocation* is included. | | Yes | |
| ***ce-MultiTB-EarlyTermination***  Indicates whether the UE supports early termination of PUSCH transmission for multiple TB scheduling in connected mode, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***ce-MultiTB-FrequencyHopping***  Indicates whether the UE supports frequency hopping for multiple TB scheduling for PDSCH/PUSCH in connected mode, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***ce-MultiTB-HARQ-AckBundling***  Indicates whether the UE supports downlink HARQ-ACK bundling for multiple TB scheduling in connected mode when operating in CE mode A, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***ce-MultiTB-Interleaving***  Indicates whether the UE supports TB interleaving for multiple TB scheduling in connected mode for PDSCH/PUSCH when operating in CE mode A or B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***ce-MultiTB-SubPRB***  Indicates whether the UE supports sub-PRB allocation for multiple TB scheduling for PUSCH in connected mode, as specified in TS 36.211 [21] and TS 36.213 [23]. This field can be included only if *ce-PUSCH-SubPRB-Allocation* is included. | | Yes | |
| ***ce-PDSCH-64QAM***  Indicates whether the UE supports 64QAM for non-repeated unicast PDSCH in CE mode A. | | | Yes |
| ***ce-PDSCH-FlexibleStartPRB-CE-ModeA*, *ce-PDSCH-FlexibleStartPRB-CE-ModeB*,**  ***ce-PUSCH-FlexibleStartPRB-CE-ModeA*, *ce-PUSCH-FlexibleStartPRB-CE-ModeB***  This field indicates whether UE supports flexible starting PRB for PDSCH/PUSCH when operating in coverage enhancement mode A/B, as specified in TS 36.211 [21] and TS 36.213 [22]. | | Yes | |
| ***ce-PDSCH-PUSCH-Enhancement***  Indicates whether the UE supports new numbers of repetitions for PUSCH and modulation restrictions for PDSCH/PUSCH in CE mode A as specified in TS 36.212 [22] and TS 36.213 [23]. | | No | |
| ***ce-PDSCH-PUSCH-MaxBandwidth***  Indicates the maximum supported PDSCH/PUSCH channel bandwidth in CE mode A and B, as specified in TS 36.212 [22] and TS 36.213 [23]. Value bw5 corresponds to 5 MHz and value bw20 corresponds to 20 MHz. If the field is absent the maximum PDSCH/PUSCH channel bandwidth in CE mode A and B is 1.4 MHz. If the setting of this parameter is 20 MHz, the max supported PUSCH channel bandwidth in CE mode A is 5 MHz. The maximum PUSCH channel bandwidth in CE mode B is 1.4 MHz regardless of the setting of this parameter. Parameter: transmission bandwidth configuration, see TS 36.101 [42], table 5.6-1. | | Yes | |
| ***ce-PDSCH-TenProcesses***  Indicates whether the UE supports 10 DL HARQ processes in FDD in CE mode A. | | Yes | |
| ***ce-PUCCH-Enhancement***  Indicates whether the UE supports repetition levels 64 and 128 for PUCCH in CE Mode B, as specified in TS 36.211 [21] and in TS 36.213 [23]. | | No | |
| ***ce-PUSCH-NB-MaxTBS***  Indicates whether the UE supports 2984 bits max UL TBS in 1.4 MHz in CE mode A operation, as specified in TS 36.212 [22] and TS 36.213 [23]. | | Yes | |
| ***ce-PUSCH-SubPRB-Allocation***  Indicates whether the UE supports sub-PRB resource allocation for PUSCH in CE mode A or B, as specified in TS 36.211 [21], TS 36.212 [22] and TS 36.213 [23]. | | Yes | |
| ***ce-RetuningSymbols***  Indicates the number of retuning symbols in CE mode A and B as specified in TS 36.211 [21]. Value n0 corresponds to 0 retuning symbols and value n1 corresponds to 1 retuning symbol. If the field is absent the number of retuning symbols in CE mode A and B is 2. | | No | |
| ***ce-SchedulingEnhancement***  Indicates whether the UE supports dynamic HARQ-ACK delay for HD-FDD in CE mode A as specified in TS 36.212 [22] and TS 36.213 [23]. | | No | |
| ***ce-SRS-Enhancement***  Indicates whether the UE supports SRS coverage enhancement in TDD with support of SRS combs 2 and 4 as specified in TS 36.213 [23]. This field can be included only if *ce-SRS-EnhancementWithoutComb4* is not included. | | Yes | |
| ***ce-SRS-EnhancementWithoutComb4***  Indicates whether the UE supports SRS coverage enhancement in TDD with support of SRS comb 2 but without support of SRS comb 4 as specified in TS 36.213 [23]. This field can be included only if *ce-SRS-Enhancement* is not included. | | - | |
| ***ce-SwitchWithoutHO***  Indicates whether the UE supports switching between normal mode and enhanced coverage mode without handover. | | - | |
| ***ce-UL-HARQ-ACK-Feedback***  This field indicates whether UE supports uplink HARQ ACK feedback when operating in coverage enhancement, as specified in TS36.213 [22]. | | Yes | |
| ***channelMeasRestriction***  Indicates for a particular transmission mode whether the UE supports channel measurement restriction. | | Yes | |
| ***cho***  Indicates whether the UE supports conditional handover including execution condition, candidate cell configuration and maximum 8 candidate cells. | | Yes | |
| ***cho-Failure***  Indicates whether the UE supports conditional handover during re-establishment procedure when the selected cell is configured as candidate cell for condition handover. | | Yes | |
| ***cho-FDD-TDD***  Indicates whether the UE supports conditional handover between FDD and TDD cells. | | No | |
| ***cho-TwoTriggerEvents***  Indicates whether the UE supports 2 trigger events for same execution condition. It is mandatory supported if the UE suppors *cho*. | | Yes | |
| ***codebook-HARQ-ACK***  Indicates whether the UE supports determining HARQ ACK codebook size based on the DAI-ased solution and/or the number of configured CCs. The first bit is set to "1" if the UE supports the DAI-based codebook size determination. The second bit is set to "1" if the UE supports the codebook determination based on the number of configured CCs. | | No | |
| ***commMultipleTx***  Indicates whether the UE supports multiple transmissions of sidelink communication to different destinations in one SC period. If *commMultipleTx-r13* is set to supported then the UE support 8 transmitting sidelink processes. | | - | |
| ***commSimultaneousTx***  Indicates whether the UE supports simultaneous transmission of EUTRA and sidelink communication (on different carriers) in all bands for which the UE indicated sidelink support in a band combination (using *commSupportedBandsPerBC*). | | - | |
| ***commSupportedBands***  Indicates the bands on which the UE supports sidelink communication, by an independent list of bands i.e. separate from the list of supported E-UTRA band, as indicated in *supportedBandListEUTRA*. | | - | |
| ***commSupportedBandsPerBC***  Indicates, for a particular band combination, the bands on which the UE supports simultaneous reception of EUTRA and sidelink communication. If the UE indicates support simultaneous transmission (using *commSimultaneousTx*), it also indicates, for a particular band combination, the bands on which the UE supports simultaneous transmission of EUTRA and sidelink communication. The first bit refers to the first band included in *commSupportedBands*, with value 1 indicating sidelink is supported. | | - | |
| ***configN (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates for a particular transmission mode whether the UE supports non-precoded EBF/ FD-MIMO (class A) related configuration N for the concerned band combination. | | - | |
| ***configN (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode whether the UE supports non-precoded EBF/ FD-MIMO (class A) related configuration N for band combinations for which the concerned capabilities are not signalled. | | Yes | |
| ***continueEHC-Context***  Indicates that the UE supports EHC context continuation operation where the UE keeps the established EHC context(s) upon PDCP re-establishment, as specified in TS 36.323 [8]. | | No | |
| ***crossCarrierScheduling*** | | Yes | |
| ***crossCarrierScheduling-B5C***  Indicates whether the UE supports cross carrier scheduling beyond 5 DL CCs. | | No | |
| ***crossCarrierSchedulingLAA-DL***  Indicates whether the UE supports cross-carrier scheduling from a licensed carrier for LAA cell(s) for downlink. This field can be included only if *downlinkLAA* is included. | | - | |
| ***crossCarrierSchedulingLAA-UL***  Indicates whether the UE supports cross-carrier scheduling from a licensed carrier for LAA cell(s) for uplink. This field can be included only if *uplinkLAA* is included. | | - | |
| ***crs-DiscoverySignalsMeas***  Indicates whether the UE supports CRS based discovery signals measurement, and PDSCH/EPDCCH RE mapping with zero power CSI-RS configured for discovery signals. | | Yes | |
| ***crs-IM-TM1-toTM9-OneRX-Port***  Indicates whether the DL Cateogry 1bis UE ot the DL Category M2 UE supports CRS interference mitigation (IM) while operating in the following transmission modes (TM): TM 1, TM 2, …, TM 8 and TM 9. | | | No |
| ***crs-InterfHandl***  Indicates whether the UE supports CRS interference handling. | | Yes | |
| ***crs-InterfMitigationTM10***  The field defines whether the UE supports CRS interference mitigation in transmission mode 10. The UE supporting the *crs-InterfMitigationTM10* capability shall also support the *crs-InterfHandl* capability. | | No | |
| ***crs-InterfMitigationTM1toTM9***  Indicates whether the UE supports CRS interference mitigation (IM) while operating in the following transmission modes (TM): TM 1, TM 2, …, TM 8 and TM 9. The UE shall not include the field if it does not support CRS IM in TMs 1-9. If the field is present, the UE supports CRS-IM on at least one arbitrary downlink CC for up to *crs-InterfMitigationTM1toTM9-r13* downlink CC CA configuration. The UE signals *crs-InterfMitigationTM1toTM9-r13* value to indicate the maximum *crs-InterfMitigationTM1toTM9-r13* downlink CC CA configuration where UE may apply CRS IM. For example, the UE sets "*crs-InterfMitigationTM1toTM9-r13* = 3" to indicate that the UE supports CRS-IM on at least one DL CC for supported non-CA, 2DL CA and 3DL CA configurations. The UE supporting the *crs-InterfMitigationTM1toTM9-r13* capability shall also support the *crs-InterfHandl-r11* capability. | | - | |
| ***crs-IntfMitig***  Indicate whether the UE supports CRS interference mitigation as specified in TS 36.133 [16], clause 3.6.1.1. | | | Yes |
| ***crs-LessDwPTS***  Indicates whether the UE supports TDD special subframe configuration 10 without CRS transmission on the 5th symbol of DwPTS, i.e. *ssp10-CRS-LessDwPTS*, as specified in TS 36.211 [17]*.* | | - | |
| ***csi-ReportingAdvanced, csi-ReportingAdvancedMaxPorts (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates that for a particular transmission mode, the maximum number of CSI-RS ports supported by the UE for advanced CSI reporting is different in the concerned band of band combination than the value indicated by the field *csi-ReportingAdvanced* or *csi-ReportingAdvancedMaxPorts* in *MIMO-UE-ParametersPerTM*. The UE shall not include both *csi-ReportingAdvanced* and *csi-ReportingAdvancedMaxPorts* for a particular transmission mode in the concerned band of band combination. | | - | |
| ***csi-ReportingAdvanced (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode the maximum number of CSI-RS ports supported by the UE for advanced CSI reporting. The field *csi-ReportingAdvanced* indicates 32 CSI-RS ports. The UE shall not include both *csi-ReportingAdvanced* and *csi-ReportingAdvancedMaxPorts* for a particular transmission mode. | Yes | | |
| ***csi-ReportingAdvancedMaxPorts (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode the maximum number of CSI-RS ports supported by the UE for advanced CSI reporting. The field *csi-ReportingAdvancedMaxPorts* indicates 8, 12, 16, 20, 24 or 28 CSI-RS ports. The UE shall not include both *csi-ReportingAdvanced* and *csi-ReportingAdvancedMaxPorts* for a particular transmission mode. | - | | |
| ***csi-ReportingNP (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, value *different* indicates that for a particular transmission mode, the CSI reporting on non-precoded CSI-RS with 20, 24, 28 or 32 antenna ports for the concerned band of band combination is different than the value indicated by field *csi-ReportingNP* in *MIMO-UE-ParametersPerTM*. | - | | |
| ***csi-ReportingNP (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode whether the UE supports CSI reporting on non-precoded CSI-RS with 20, 24, 28, or 32 antenna ports for band combinations for which the concerned capabilities are not signalled in *MIMO-CA-ParametersPerBoBCPerTM*, and the FD-MIMO processing capability condition as described in NOTE 8 is satisfied. | Yes | | |
| ***csi-RS-DiscoverySignalsMeas***  Indicates whether the UE supports CSI-RS based discovery signals measurement. If this field is included, the UE shall also include *crs-DiscoverySignalsMeas*. | | Yes | |
| ***csi-RS-DRS-RRM-MeasurementsLAA***  Indicates whether the UE supports performing RRM measurements on LAA cell(s) based on CSI-RS-based DRS. This field can be included only if *downlinkLAA* is included. | | - | |
| ***csi-RS-EnhancementsTDD***  Indicates for a particular transmission mode whether the UE supports CSI-RS enhancements applicable for TDD. | | Yes | |
| ***csi-SubframeSet***  Indicates whether the UE supports REL-12 DL CSI subframe set configuration, REL-12 DL CSI subframe set dependent CSI measurement/feedback, configuration of up to 2 CSI-IM resources for a CSI process with no more than 4 CSI-IM resources for all CSI processes of one frequency if the UE supports tm10, configuration of two ZP-CSI-RS for tm1 to tm9, PDSCH RE mapping with two ZP-CSI-RS configurations, and EPDCCH RE mapping with two ZP-CSI-RS configurations if the UE supports EPDCCH. This field is only applicable for UEs supporting TDD. | | Yes | |
| ***dataInactMon***  Indicates whether the UE supports the data inactivity monitoring as specified in TS 36.321 [6]. | | - | |
| ***dc-Support***  Including this field indicates that the UE supports synchronous DC and power control mode 1. Including this field for a band combination entry comprising of single band entry indicates that the UE supports intra-band contiguous DC. Including this field for a band combination entry comprising of two or more band entries, indicates that the UE supports DC for these bands and that the serving cells corresponding to a band entry shall belong to one cell group (i.e. MCG or SCG). Including field *asynchronous* indicates that the UE supports asynchronous DC and power control mode 2. Including this field for a TDD/FDD band combination indicates that the UE supports TDD/FDD DC for this band combination. | | - | |
| ***delayBudgetReporting***  Indicates whether the UE supports delay budget reporting. | | No | |
| ***demodulationEnhancements***  This field defines whether the UE supports advanced receiver in SFN scenario (350 km/h) as specified in TS 36.101 [42]. | | - | |
| ***demodulationEnhancements2***  This field defines whether the UE supports further enhanced receiver in HST-SFN scenario (up to 500 km/h velocity) as specified in TS 36.101 [42]. | | - | |
| ***densityReductionNP, densityReductionBF***  Indicates whether the UE supports CSI-RS density reduction with values 1, 1/2 and 1/3 for non-precoded CSI-RS and beamformed CSI-RS respectively. | | Yes | |
| ***deviceType***  UE may set the value to "*noBenFromBatConsumpOpt*" when it does not foresee to particularly benefit from NW-based battery consumption optimisation. Absence of this value means that the device does benefit from NW-based battery consumption optimisation. | | - | |
| ***diffFallbackCombReport***  Indicates that the UE supports reporting of UE radio access capabilities for the CA band combinations asked by the eNB as well as, if any, reporting of different UE radio access capabilities for their fallback band combination as specified in TS 36.306 [5]. The UE does not report fallback combinations if their UE radio access capabilities are the same as the ones for the CA band combination asked by the eNB. | | - | |
| ***differentFallbackSupported***  Indicates that the UE supports different capabilities for at least one fallback case of this band combination. | | - | |
| ***directMCG-SCellActivationResume***  Indicates whether the UE supports having an E-UTRA MCG SCell configured in activated SCell state. | | - | |
| ***directSCellActivation***  Indicates whether the UE supports having an E-UTRA SCell configured in activated SCell state in the *RRCConnectionReconfiguration* message. This field is applicable to both LTE standalone and LTE-DC. | | | - |
| ***directSCellHibernation***  Indicates whether the UE supports having an SCell configured in dormant SCell state. | | | - |
| ***directSCG-SCellActivationNEDC***  Indicates whether the UE supports having an E-UTRA SCG SCell configured in activated SCell state in the *RRCConnectionReconfiguration* message contained in the NR *RRCReconfiguration* message, as defined in TS 36.321 [6] and TS 38.331 [82].  If the UE indicates support of *directSCG-SCellActivationNEDC-r16*, the UE shall also indicate support of *ne-dc* as specified in TS 38.331 [82]. | | | - |
| ***directSCG-SCellActivationResume***  Indicates whether the UE supports having an E-UTRA SCG SCell configured in activated SCell state. | | | - |
| ***discInterFreqTx***  Indicates whether the UE support sidelink discovery announcements either a) on the primary frequency only or b) on other frequencies also, regardless of the UE configuration (e.g. CA, DC). The UE may set discInterFreqTx to supported when having a separate transmitter or if it can request sidelink discovery transmission gaps. | | - | |
| ***discoverySignalsInDeactSCell***  Indicates whether the UE supports the behaviour on DL signals and physical channels when SCell is deactivated and discovery signals measurement is configured as specified in TS 36.211 [21], clause 6.11A. This field is included only if UE supports carrier aggregation and includes *crs-DiscoverySignalsMeas*. | | Yes | |
| ***discPeriodicSLSS***  Indicates whether the UE supports periodic (i.e. not just one time before sidelink discovery announcement) Sidelink Synchronization Signal (SLSS) transmission and reception for sidelink discovery. | | - | |
| ***discScheduledResourceAlloc***  Indicates whether the UE supports transmission of discovery announcements based on network scheduled resource allocation. | | - | |
| ***disc-UE-SelectedResourceAlloc***  Indicates whether the UE supports transmission of discovery announcements based on UE autonomous resource selection. | | - | |
| ***disc***-***SLSS***  Indicates whether the UE supports Sidelink Synchronization Signal (SLSS) transmission and reception for sidelink discovery. | | - | |
| ***discSupportedBands***  Indicates the bands on which the UE supports sidelink discovery. One entry corresponding to each supported E-UTRA band, listed in the same order as in *supportedBandListEUTRA*. | | - | |
| ***discSupportedProc***  Indicates the number of processes supported by the UE for sidelink discovery. | | - | |
| ***discSysInfoReporting***  Indicates whether the UE supports reporting of system information for inter-frequency/PLMN sidelink discovery. | | - | |
| ***dl-256QAM***  Indicates whether the UE supports 256QAM in DL on the band. | | - | |
| ***dl-1024QAM***  Indicates whether the UE supports 1024QAM in DL on the band or on the band within the band combination. When *dl-1024QAM-ScalingFactor* and *dl-1024QAM-TotalWeightedLayers* are included, the UE supports 1024QAM in a set of CCs in a band combination if the CCs belong to bands indicated to support 1024QAM in that band combination and the 1024QAM processing capability condition as specified in equation 4.3.5.31-1 in TS 36.306 [5] is satisfied. | | - | |
| ***dl-1024QAM-ScalingFactor***  Indicates scaling factor for processing a CC configured with 1024QAM with respect to a CC not configured with 1024QAM as described in 4.3.5.31 in TS 36.306 [5]. Value *v1* indicates 1, value *v1dot2* indicates 1.2 and value *v1dot25* indicates 1.25. | | - | |
| ***dl-1024QAM-TotalWeightedLayers***  Indicates total number of weighted layers the UE can process for 1024QAM as described in 4.3.5.31 in TS 36.306 [5]. Actual value = (10 + indicated value x 2), i.e., value 0 indicates 10 layers, value 1 indicates 12 layers and so on. | | - | |
| ***dl-1024QAM-Slot***  Indicates whether the UE supports 1024QAM in DL on the band for slot TTI operation. | | - | |
| ***dl-1024QAM-SubslotTA-1***  Indicates whether the UE supports 1024QAM in DL on the band for subslot TTI operation with TA set 1. | | - | |
| ***dl-1024QAM-SubslotTA-2***  Indicates whether the UE supports 1024QAM in DL on the band for subslot TTI operation with TA set 2, dmrsBasedSPDCCH-nonMBSFN | | - | |
| ***dl-DedicatedMessageSegmentation***  Indicates whether the UE supports reception of segmented DL RRC messages. | | - | |
| ***dmrs-BasedSPDCCH-MBSFN***  Indicates whether the UE supports sDCI monitoring in DMRS based SPDCCH for MBSFN subframe. If UE supports this, it also provides the corresponding DMRS based SPDCCH capability in *min-Proc-TimelineSubslot.* | | Yes | |
| ***dmrs-BasedSPDCCH-nonMBSFN***  Indicates whether the UE supports sDCI monitoring in DMRS based SPDCCH for non-MBSFN subframe. If UE supports this, it also provides the corresponding DMRS based SPDCCH capability in *min-Proc-TimelineSubslot.* | | Yes | |
| ***dmrs-Enhancements (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates for a particular transmission mode, that for the concerned band combination the DMRS enhancements are different than the value indicated by field *dmrs-Enhancements* in *MIMO-UE-ParametersPerTM*. | | - | |
| ***dmrs-Enhancements (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode whether the UE supports DMRS enhancements for the indicated transmission mode. | | Yes | |
| ***dmrs-LessUpPTS***  Indicates whether the UE supports not to transmit DMRS for PUSCH in UpPTS. | | No | |
| ***dmrs-OverheadReduction***  Indicates whether the UE supports OCC4 for rank 3 and 4 transmission as specified in clause 5.3.3.1.5C of TS 36.212 [22]. | | Yes | |
| ***dmrs-PositionPattern***  Indicates whether the UE supports uplink DMRS position pattern 'D D D' in subslot #5 with application of the 1/6 as the TBS scaling factor. | | Yes | |
| ***dmrs-RepetitionSubslotPDSCH***  Indicates whether the UE supports back-to-back 3/4-layer DMRS reception in two consecutive subslots across subframe boundary for subslot-PDSCH. | | Yes | |
| ***dmrs-SharingSubslotPDSCH***  Indicates whether the UE supports DMRS sharing in two consecutive subslots across subframe boundary for subslot-PDSCH. | | Yes | |
| ***dormantSCellState***  Indicates whether UE supports Dormant SCell state (i.e. SCell state with CQI and RRM measurement reporting but no PDCCH monitoring). | | | - |
| ***downlinkLAA***  Presence of the field indicates that the UE supports downlink LAA operation including identification of downlink transmissions on LAA cell(s) for full downlink subframes, decoding of common downlink control signalling on LAA cell(s), CSI feedback for LAA cell(s), RRM measurements on LAA cell(s) based on CRS-based DRS. | | - | |
| ***drb-TypeSCG***  Indicates whether the UE supports SCG bearer. | | - | |
| ***drb-TypeSplit***  Indicates whether the UE supports split bearer except for PDCP data transfer in UL. | | - | |
| ***dtm***  Indicates whether the UE supports DTM in GERAN. | | - | |
| ***dummy***  This field is not used in the specification. It shall not be sent by the UE. | | - | |
| ***earlyData-UP***  Indicates whether the UE supports UP-EDT when connected to EPC. | | | - |
| ***earlyData-UP-5GC***  Indicates whether the UE supports UP-EDT when connected to 5GC. | | | - |
| ***earlySecurityReactivation***  Indicates whether the UE supports early security reactivation when resuming a suspended RRC connection. | | | - |
| ***e-CSFB-1XRTT***  Indicates whether the UE supports enhanced CS fallback to CDMA2000 1xRTT or not. | | Yes | |
| ***e-CSFB-ConcPS-Mob1XRTT***  Indicates whether the UE supports concurrent enhanced CS fallback to CDMA2000 1xRTT and PS handover/ redirection to CDMA2000 HRPD. | | Yes | |
| ***e-CSFB-dual-1XRTT***  Indicates whether the UE supports enhanced CS fallback to CDMA2000 1xRTT for dual Rx/Tx configuration. This bit can only be set to supported if *tx-Config1XRTT* and *rx-Config1XRTT* are both set to dual. | | Yes | |
| ***e-HARQ-Pattern-FDD***  Indicates whether the UE supports enhanced HARQ pattern for TTI bundling operation for FDD. | | Yes | |
| ***ehc***  Indicates that the UE supports Ethernet header compression and decompression using EHC protocol, as specified in TS 36.323 [8] and in Annex A of TS 38.323 [83]. The UE indicating this capability and indicating support for at least one ROHC profile, shall support simultaneous configuration of EHC and ROHC on different DRBs. | | No | |
| ***eLCID-Support***  Indicates whether the UE supports LCID "10000" and MAC PDU subheader containing the eLCID field as described in TS 36.321 [6]. | | - | |
| ***emptyUnicastRegion***  Indicates whether the UE supports unicast reception in subframes with empty unicast control region as described in TS 36.213 [23] clause 12. This field can be included only if *unicast-fembmsMixedSCell* and *crossCarrierScheduling* are included. | | No | |
| ***en-DC***  Indicates whether the UE supports EN-DC. | | - | |
| ***endingDwPTS***  Indicates whether the UE supports reception ending with a subframe occupied for a DwPTS-duration as described in TS 36.211 [21] and TS 36.213 [23]. This field can be included only if *downlinkLAA* is included. | | - | |
| ***Enhanced-4TxCodebook***  Indicates whether the UE supports enhanced 4Tx codebook*.* | | No | |
| ***enhancedDualLayerTDD***  Indicates whether the UE supports enhanced dual layer (PDSCH transmission mode 8) for TDD or not. | | - | |
| ***ePDCCH***  Indicates whether the UE can receive DCI on UE specific search space on Enhanced PDCCH. | | Yes | |
| ***epdcch-SPT-differentCells***  Indicates whether the UE supports EPDCCH and short processing time on different serving cells. | | Yes | |
| ***epdcch-STTI-differentCells***  Indicates whether the UE supports EPDCCH and sTTI on different serving cells. | | Yes | |
| ***e-RedirectionUTRA*** | | Yes | |
| ***e-RedirectionUTRA-TDD***  Indicates whether the UE supports enhanced redirection to UTRA TDD to multiple carrier frequencies both with and without using related SIB provided by *RRCConnectionRelease* or not. | | Yes | |
| ***etws-CMAS-RxInConnCE-ModeA, etws-CMAS-RxInConn***  Indicates whether the UE operating in CE mode A/B supports reception of ETWS/CMAS indication in RRC\_CONNECTED mode as specified in TS 36.212 [22]. | | - | |
| ***eutra-5GC***  Indicates whether the UE supports E-UTRA/5GC. | | Yes | |
| ***eutra-5GC-HO-ToNR-FDD-FR1***  Indicates whether the UE supports handover from E-UTRA/5GC to NR FDD FR1. | | Yes | |
| ***eutra-5GC-HO-ToNR-TDD-FR1***  Indicates whether the UE supports handover from E-UTRA/5GC to NR TDD FR1. | | Yes | |
| ***eutra-5GC-HO-ToNR-FDD-FR2***  Indicates whether the UE supports handover from E-UTRA/5GC to NR FDD FR2. | | Yes | |
| ***eutra-5GC-HO-ToNR-TDD-FR2***  Indicates whether the UE supports handover from E-UTRA/5GC to NR TDD FR2. | | Yes | |
| ***eutra-CGI-Reporting-ENDC***  Indicates whether the UE supports Intra-RAT report CGI procedure when it is configured with (NG) EN-DC wherein either MN and SN have different DRX cycles, or on-duration configured by MN does not contain on-duration configured by SN if their DRX cycles are same. | | | Yes |
| ***eutra-CGI-Reporting-NEDC***  Indicates whether the UE supports acquisition of relevant information from a neighbouring E-UTRA cell by reading the SI of the neighbouring cell and reporting the acquired information to the network when the NE-DC is configured. | | | Yes |
| ***eutra-EPC-HO-ToNR-FDD-FR1***  Indicates whether the UE supports handover from E-UTRA/EPC to NR FDD FR1. | | Yes | |
| ***eutra-EPC-HO-ToNR-TDD-FR1***  Indicates whether the UE supports handover from E-UTRA/EPC to NR TDD FR1. | | Yes | |
| ***eutra-EPC-HO-ToNR-FDD-FR2***  Indicates whether the UE supports handover from E-UTRA/EPC to NR FDD FR2. | | Yes | |
| ***eutra-EPC-HO-ToNR-TDD-FR2***  Indicates whether the UE supports handover from E-UTRA/EPC to NR TDD FR2. | | Yes | |
| ***eutra-EPC-HO-EUTRA-5GC***  Indicates whether the UE supports handover between E-UTRA/EPC and E-UTRA/5GC. | | Yes | |
| ***eutra-IdleInactiveMeasurements***  Indicates whether UE supports reporting measurements performed during RRC\_IDLE or RRC\_INACTIVE. | | | No |
| ***eutra-SI-AcquisitionForHO-ENDC***  Indicates whether the UE supports, upon configuration of *si-RequestForHO* by the network, acquisition of relevant information from a neighbouring E-UTRA cell by reading the SI of the neighbouring cell using autonomous gaps and reporting the acquired information to the network. | | Yes | |
| ***eventB2***  Indicates whether the UE supports event B2. A UE supporting NR SA operation shall set this bit to *supported*. | | - | |
| ***extendedBand-n77***  This field is only applicable for UEs that indicate support for band n77. If present, the UE supports the restriction to 3450 - 3550 MHz and 3700 - 3980 MHz ranges of band n77 in the USA as specified in Note 12 of Table 5.2-1 in TS 38.101-1 [85]. If absent, the UE supports only restriction to the 3700 - 3980 MHz range of band n77 in the USA. A UE that indicates this field shall support NS value 55 as specified in TS 38.101-1 [85]. | | - | |
| ***extendedFreqPriorities***  Indicates whether the UE supports extended E-UTRA frequency priorities indicated by *cellReselectionSubPriority* field. A UE supporting NR SA operation shall set this bit to *supported*. | | - | |
| ***extendedLCID-Duplication***  Indicates whether the UE supports use of extended LCIDs 32-38 for PDCP duplication. | | - | |
| ***extendedLongDRX***  Indicates whether the UE supports extended long DRX cycle values of 5.12s and 10.24s in RRC\_CONNECTED. | | - | |
| ***extendedMAC-LengthField***  Indicates whether the UE supports the MAC header with L field of size 16 bits as specified in TS 36.321 [6], clause 6.2.1. | | - | |
| ***extendedMaxMeasId***  Indicates whether the UE supports extended number of measurement identies as defined by *maxMeasId-r12*. | | No | |
| ***extendedMaxObjectId***  Indicates whether the UE supports extended number of measurement object identies as defined by *maxObjectId-r13*. | | No | |
| ***extendedNumberOfDRBs***  Indicates whether the UE supports up to 15 DRBs. The UE shall support any combination of RLC AM and RLC UM entities for the configured DRBs. | | | - |
| ***extendedPollByte***  Indicates whether the UE supports extended pollByte values as defined by *pollByte-r14*. | | - | |
| ***extended-RLC-LI-Field***  Indicates whether the UE supports 15 bit RLC length indicator. | | - | |
| ***extendedRLC-SN-SO-Field***  Indicates whether the UE supports 16 bits of RLC sequence number and segmentation offset. | | - | |
| ***extendedRSRQ-LowerRange***  Indicates whether the UE supports the extended RSRQ lower value range from -34dB to -19.5dB in measurement configuration and reporting as specified in TS 36.133 [16]. | | No | |
| ***fdd-HARQ-TimingTDD***  Indicates whether UE supports FDD HARQ timing for TDD SCell when configured with TDD PCell. | | Yes | |
| ***featureGroupIndicators, featureGroupIndRel9Add, featureGroupIndRel10***  The definitions of the bits in the bit string are described in Annex B.1 (for *featureGroupIndicators* and *featureGroupIndRel9Add*) and in Annex C.1 (for *featureGroupIndRel10*). | | Yes | |
| ***featureSetsDL-PerCC***  In MR-DC, indicates a set of features that the UE supports on one component carrier in a bandwidth class for a band in a given band combination. The UE shall hence include at least as many *FeatureSetDL-PerCC-Id* in this list as the number of carriers it supports according to the *ca-bandwidthClassDL*, except if indicating additional functionality by reducing the number of *FeatureSetDownlinkPerCC-Id* in the feature set. The order of the elements in this list is not relevant, i.e., the network may configure any of the carriers in accordance with any of the *FeatureSetDL-PerCC-Id* in this list. | | - | |
| ***FeatureSetDL-PerCC-Id***  In MR-DC, indicates the index position of the *FeatureSetDL-PerCC-r15* in the *featureSetsDL-PerCC-r15* list. Value 0 corresponds to the first element in the list, value 1 corresponds to the second element in the list, and so on. Value 32 is not used. | | - | |
| ***featureSetsUL-PerCC***  In MR-DC, indicates a set of features that the UE supports on one component carrier in a bandwidth class for a band in a given band combination. The UE shall hence include at least as many *FeatureSetUL-PerCC-Id* in this list as the number of carriers it supports according to the *ca-bandwidthClassUL*, except if indicating additional functionality by reducing the number of *FeatureSetDownlinkPerCC-Id* in the feature set. The order of the elements in this list is not relevant, i.e., the network may configure any of the carriers in accordance with any of the *FeatureSetUL-PerCC-Id* in this list. | | - | |
| ***FeatureSetUL-PerCC-Id***  In MR-DC, indicates the index position of the *FeatureSetUL-PerCC-r15* in the *featureSetsUL-PerCC-r15* list. Value 0 corresponds to the first element in the list, value 1 corresponds to the second element in the list, and so on. Value 32 is not used. | | - | |
| ***fembmsMixedCell***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception with 15 kHz subcarrier spacings via MBSFN from FeMBMS/Unicast mixed cells on a frequency indicated in an *MBMSInterestIndication* message. | |  | |
| ***fembmsDedicatedCell***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception with 15 kHz subcarrier spacings via MBSFN from MBMS-dedicated cells on a frequency indicated in an *MBMSInterestIndication* message. | |  | |
| ***flexibleUM-AM-Combinations***  Indicates whether the UE supports any combination of RLC UM and RLC AM bearers as long as the total number of bearers is at most 8, regardless of what FGI20 indicates. | | | - |
| ***flightPathPlan***  Indicates whether UE supports reporting of flight path plan information. | | | - |
| ***fourLayerTM3-TM4***  Indicates whether the UE supports 4-layer spatial multiplexing for TM3 and TM4. | | - | |
| ***fourLayerTM3-TM4 (in FeatureSetDL-PerCC)***  Indicates whether the UE supports 4-layer spatial multiplexing for TM3 and TM4 for MR-DC within the indicated feature set. If this field is absent, UE supports two layer MIMO for TM3/TM4. | | - | |
| ***fourLayerTM3-TM4-perCC***  Indicates whether the UE supports 4-layer spatial multiplexing for TM3 and TM4 for the component carrier. | | - | |
| ***frameStructureType-SPT***  This field indicates the supported FS-type(s) for short processing time. The UE capability is reported per band combination. The reported FS-type(s) apply to the reported *maxNumberCCs-SPT-r15* for the given band combination. | | - | |
| ***freqBandPriorityAdjustment***  Indicates whether the UE supports the prioritization of frequency bands in *multiBandInfoList* over the band in *freqBandIndicator* as defined by *freqBandIndicatorPriority-r12*. | | - | |
| ***freqBandRetrieval***  Indicates whether the UE supports reception of *requestedFrequencyBands.* | | - | |
| ***halfDuplex***  If *halfDuplex* is set to true, only half duplex operation is supported for the band, otherwise full duplex operation is supported. | | - | |
| ***heightMeas***  Indicates whether UE supports the measurement events H1/H2. | | - | |
| ***ho-EUTRA-5GC-FDD-TDD***  Indicates whether the UE supports handover between E-UTRA/5GC FDD and E-UTRA/5GC TDD. | | No | |
| ***ho-InterfreqEUTRA-5GC***  Indicates whether the UE supports inter frequency handover within E-UTRA/5GC. | | Yes | |
| ***hybridCSI***  Indicates whether the UE supports hybrid CSI transmission as described in TS 36.213 [23]. | | Yes | |
| ***idleInactiveValidityAreaList***  Indicates whether the UE supports list of validity areas for measurements during RRC\_IDLE and RRC\_INACTIVE. | | No | |
| ***immMeasBT***  Indicates whether the UE supports Bluetooth measurements in RRC connected mode. | | - | |
| ***immMeasUnComBarPre***  Indicates whether the UE supports uncompensated barometric pressure measurements in RRC connected mode. | | - | |
| ***immMeasWLAN***  Indicates whether the UE supports WLAN measurements in RRC connected mode. | | - | |
| ***ims-VoiceOverMCG-BearerEUTRA-5GC***  Indicates whether the UE supports IMS voice over NR PDCP for MCG bearer for E-UTRA/5GC. | | No | |
| ***ims-VoiceOverNR-FR1***  Indicates whether the UE supports IMS voice over NR FR1. | | No | |
| ***ims-VoiceOverNR-FR2***  Indicates whether the UE supports IMS voice over NR FR2. | | No | |
| ***ims-VoiceOverNR-PDCP-MCG-Bearer***  Indicates whether the UE supports IMS voice over NR PDCP with only MCG RLC bearer. | | Yes | |
| ***ims-VoiceOverNR-PDCP-SCG-Bearer***  Indicates whether the UE supports IMS voice over NR PDCP with only SCG RLC bearer when configured with EN-DC. | | Yes | |
| ***ims-VoNR-PDCP-SCG-NGENDC***  Indicates whether the UE supports IMS voice over NR PDCP with only SCG RLC bearer when configured with NGEN-DC. | | Yes | |
| ***inactiveState***  Indicates whether the UE supports RRC\_INACTIVE. | | No | |
| ***incMonEUTRA***  Indicates whether the UE supports increased number of E-UTRA carrier monitoring in RRC\_IDLE and RRC\_CONNECTED, as specified in TS 36.133 [16]. | | No | |
| ***incMonUTRA***  Indicates whether the UE supports increased number of UTRA carrier monitoring in RRC\_IDLE and RRC\_CONNECTED, as specified in TS 36.133 [16]. | | No | |
| ***inDeviceCoexInd***  Indicates whether the UE supports in-device coexistence indication as well as autonomous denial functionality. | | Yes | |
| ***inDeviceCoexInd-ENDC***  Indicates whether the UE supports in-device coexistence indication for (NG)EN-DC operation. This field can be included only if *inDeviceCoexInd* is included. The UE supports *inDeviceCoexInd-ENDC* in the same duplexing modes as it supports *inDeviceCoexInd*. | | - | |
| ***inDeviceCoexInd-HardwareSharingInd***  Indicates whether the UE supports indicating hardware sharing problems when sending the *InDeviceCoexIndication*, as well as omitting the TDM assistance information. A UE that supports hardware sharing indication shall also indicate support of LAA operation. | | - | |
| ***inDeviceCoexInd-UL-CA***  Indicates whether the UE supports UL CA related in-device coexistence indication. This field can be included only if *inDeviceCoexInd* is included. The UE supports *inDeviceCoexInd-UL-CA* in the same duplexing modes as it supports *inDeviceCoexInd*. | | - | |
| ***interBandTDD-CA-WithDifferentConfig***  Indicates whether the UE supports inter-band TDD carrier aggregation with different UL/DL configuration combinations. The first bit indicates UE supports the configuration combination of SCell DL subframes are a subset of PCell and PSCell by SIB1 configuration and the configuration combination of SCell DL subframes are a superset of PCell and PSCell by SIB1 configuration; the second bit indicates UE supports the configuration combination of SCell DL subframes are neither superset nor subset of PCell and PSCell by SIB1 configuration. This field is included only if UE supports inter-band TDD carrier aggregation. | | - | |
| ***interBandPowerSharingAsyncDAPS***  Indicates whether the UE supports power sharing for asynchronous inter-band DAPS handovers. | | - | |
| ***interBandPowerSharingSyncDAPS***  Indicates whether the UE supports power sharing for synchronous inter-band DAPS handovers. | | - | |
| ***interferenceMeasRestriction***  Indicates whether the UE supports interference measurement restriction. | | Yes | |
| ***interFreqAsyncDAPS***  Indicates whether the UE supports asynchronous DAPS handover in source PCell and inter-frequency target PCell. | | - | |
| ***interFreqBandList***  One entry corresponding to each supported E‑UTRA band listed in the same order as in *supportedBandListEUTRA*. | | - | |
| ***interFreqDAPS***  Indicates whether the UE supports DAPS handover in source PCell and inter-frequency target PCell, i.e. support of simultaneous DL reception of PDCCH and PDSCH from source and target cell. For a BC, the capability applies to every carrier pair for source and target. A UE indicating this capability shall also support synchronous DAPS handover, and single UL transmission for inter-frequency DAPS handover. | | - | |
| ***interFreqMultiUL-TransmissionDAPS***  Indicates that the UE supports simultaneous UL transmission in source PCell and inter-frequency target PCell. | | - | |
| ***interFreqNeedForGaps***  Indicates need for measurement gaps when operating on the E‑UTRA band given by the entry in *bandListEUTRA* or on the E-UTRA band combination given by the entry in *bandCombinationListEUTRA* and measuring on the E‑UTRA band given by the entry in *interFreqBandList*. | | - | |
| ***interFreqProximityIndication***  Indicates whether the UE supports proximity indication for inter-frequency E-UTRAN CSG member cells*.* | | - | |
| ***interFreqRSTD-Measurement***  Indicates whether the UE supports inter-frequency RSTD measurements for OTDOA positioning, as specified in TS 36.355 [54]. | | Yes | |
| ***interFreqSI-AcquisitionForHO***  Indicates whether the UE supports, upon configuration of si-RequestForHO by the network, acquisition and reporting of relevant information using autonomous gaps by reading the SI from a neighbouring inter-frequency cell. | | Yes | |
| ***interRAT-BandList***  One entry corresponding to each supported band of another RAT listed in the same order as in the *interRAT-Parameters*. The NR bands reported in *SupportedBandListNR* are excluded from this list. | | - | |
| ***interRAT-BandListNR-EN-DC***  One entry corresponding to each supported NR band listed in the same order as in the *supportedBandListEN-DC-r15*. If both *interRAT-BandListNR-EN-DC* and *interRAT-BandListNR-SA* are included, the UE shall set the same *interRAT-NeedForGapsNR* value for the same NR band. | | - | |
| ***interRAT-BandListNR-SA***  One entry corresponding to each supported NR band listed in the same order as in the *supportedBandListNR-SA*. If both *interRAT-BandListNR-EN-DC* and *interRAT-BandListNR-SA* are included, the UE shall set the same *interRAT-NeedForGapsNR* value for the same NR band. | | - | |
| ***interRAT-enhancementNR***  Indicates whether the UE supports enhanced inter-RAT NR measurement requirements to support high speed up to 500 km/h as specified in TS 36.133 [16], when EN-DC is not configured and when EN-DC is configured. | | - | |
| ***interRAT-NeedForGaps***  Indicates need for DL measurement gaps when operating on the E‑UTRA band given by the entry in *bandListEUTRA or on the E-UTRA band combination given by the entry in bandCombinationListEUTRA* and measuring on the inter-RAT band given by the entry in the *interRAT-BandList*. | | - | |
| ***interRAT-NeedForGapsNR***  Indicates need for measurement gaps when operating on the E‑UTRA band given by the entry in *supportedBandListEUTRA or on the E-UTRA band combination given by the entry in supportedBandCombination-r10 or supportedBandCombinationAdd-r11* or *supportedBandCombinationReduced-r13* and measuring on the NR band given by the entry in the *InterRAT-BandListNR*. | | - | |
| ***interRAT-ParametersWLAN***  Indicates whether the UE supports WLAN measurements configured by *MeasObjectWLAN* with corresponding quantity and report configuration in the supported WLAN bands. | | - | |
| ***interRAT-PS-HO-ToGERAN***  Indicates whether the UE supports inter-RAT PS handover to GERAN or not. | | Yes | |
| ***intraBandContiguousCC-InfoList***  Indicates, per serving carrier of which the corresponding bandwidth class includes multiple serving carriers (i.e. bandwidth class B, C, D and so on), the maximum number of supported layers for spatial multiplexing in DL and the maximum number of CSI processes supported. The number of entries is equal to the number of component carriers in the corresponding bandwidth class. The UE shall support the setting indicated in each entry of the list regardless of the order of entries in the list.The UE shall include the field only if it supports 4-layer spatial multiplexing in transmission mode3/4 for a subset of component carriers in the corresponding bandwidth class, or if the maximum number of supported layers for at least one component carrier is higher than *supportedMIMO-CapabilityDL-r10* in the corresponding bandwidth class, or if the number of CSI processes for at least one component carrier is higher than *supportedCSI-Proc-r11* in the corresponding band.  This field may also be included for bandwidth class A but in such a case without including any sub-fields in *IntraBandContiguousCC-Info-r12* (see NOTE 6). | | - | |
| ***intraFreqA3-CE-ModeA***  Indicates whether the UE when operating in CE Mode A supports *eventA3* for intra-frequency neighbouring cells. | | - | |
| ***intraFreqA3-CE-ModeB***  Indicates whether the UE when operating in CE Mode B supports *eventA3* for intra-frequency neighbouring cells. | | - | |
| ***intraFreq-CE-NeedForGaps***  Indicates need for measurement gaps when operating in CE on the E‑UTRA band given by the entry in *supportedBandListEUTRA.* | |  | |
| ***intraFreqAsyncDAPS***  Indicates whether the UE supports asynchronous DAPS handover in source PCell and intra-frequency target PCell. | | - | |
| ***intraFreqDAPS***  Indicates whether UE supports DAPS handover in source PCell and intra-frequency target PCell, i.e. support of simultaneous DL reception of PDCCH and PDSCH from source and target cell. A UE indicating this capability shall also support synchronous DAPS handover, and single UL transmission for intra-frequency DAPS handover. | | - | |
| ***intraFreqHO-CE-ModeA***  Indicates whether the UE when operating in CE Mode A supports intra-frequency handover. | | - | |
| ***intraFreqHO-CE-ModeB***  Indicates whether the UE when operating in CE Mode B supports intra-frequency handover. | | - | |
| ***intraFreqProximityIndication***  Indicates whether the UE supports proximity indication for intra-frequency E-UTRAN CSG member cells. | | - | |
| ***intraFreqSI-AcquisitionForHO***  Indicates whether the UE supports, upon configuration of si-RequestForHO by the network, acquisition and reporting of relevant information using autonomous gaps by reading the SI from a neighbouring intra-frequency cell. | | Yes | |
| ***intraFreqTwoTAGs-DAPS***  Indicates whether the UE supports different timing advance groups in source PCell and intra-frequency target PCell. It is mandatory for *intraFreqDAPS* capable UE. | | - | |
| ***jointEHC-ROHC-Config***  Indicates whether the UE supports simultaneous configuration of EHC and ROHC protocols for the same DRB. | | No | |
| ***k-Max (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates for a particular transmission mode the maximum number of NZP CSI RS resource configurations supported within a CSI process applicable for the concerned band combination. | | No | |
| ***k-Max (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode the maximum number of NZP CSI RS resource configurations supported within a CSI process applicable for band combinations for which the concerned capabilities are not signalled. | | Yes | |
| ***laa-PUSCH-Mode1***  Indicates whether the UE supports LAA PUSCH mode 1as defined in TS 36.213 [23]. | | - | |
| ***laa-PUSCH-Mode2***  Indicates whether the UE supports LAA PUSCH mode 2as defined in TS 36.213 [23]*.* | | - | |
| ***laa-PUSCH-Mode3***  Indicates whether the UE supports LAA PUSCH mode 3as defined in TS 36.213 [23]*.* | | - | |
| ***locationReport***  Indicates whether the UE supports reporting of its geographical location information to eNB. | | - | |
| ***loggedMBSFNMeasurements***  Indicates whether the UE supports logged measurements for MBSFN. A UE indicating support for logged measurements for MBSFN shall also indicate support for logged measurements in Idle mode. | | - | |
| ***loggedMeasBT***  Indicates whether the UE supports Bluetooth measurements in RRC idle mode. | | - | |
| ***loggedMeasurementsIdle***  Indicates whether the UE supports logged measurements in Idle mode. | | - | |
| ***loggedMeasUnComBarPre***  Indicates whether the UE supports uncompensated barometric pressure measurements in RRC\_IDLE mode. | | - | |
| ***loggedMeasWLAN***  Indicates whether the UE supports WLAN measurements in RRC idle mode. | | - | |
| ***logicalChannelSR-ProhibitTimer***  Indicates whether the UE supports the *logicalChannelSR-ProhibitTimer* as defined in TS 36.321 [6]. | | - | |
| ***longDRX-Command***  Indicates whether the UE supports Long DRX Command MAC Control Element. | | - | |
| ***lwa***  Indicates whether the UE supports LTE-WLAN Aggregation (LWA). The UE which supports LWA shall also indicate support of *interRAT-ParametersWLAN-r13*. | | - | |
| ***lwa-BufferSize***  Indicates whether the UE supports the layer 2 buffer sizes for "with support for split bearers" as defined in Table 4.1-3 and 4.1A-3 of TS 36.306 [5] for LWA. | | - | |
| ***lwa-HO-WithoutWT-Change***  Indicates whether the UE supports handover where LWA configuration is retained without WT change and using LWA end-marker for PDCP key change indication for LWA operation. | | - | |
| ***lwa-RLC-UM***  Indicates whether the UE supports RLC UM for LWA bearer. | | - | |
| ***lwa-SplitBearer***  Indicates whether the UE supports the split LWA bearer (as defined in TS 36.300 [9]). | | - | |
| ***lwa-UL***  Indicates whether the UE supports UL transmission over WLAN for LWA bearer. | | - | |
| ***lwip***  Indicates whether the UE supports LTE/WLAN Radio Level Integration with IPsec Tunnel (LWIP). The UE which supports LWIP shall also indicate support of *interRAT-ParametersWLAN-r13*. | | - | |
| ***lwip-Aggregation-DL, lwip-Aggregation-UL***  Indicates whether the UE supports aggregation of LTE and WLAN over DL/UL LWIP. The UE that indicates support of LWIP aggregation over DL or UL shall also indicate support of *lwip*. | | - | |
| ***makeBeforeBreak***  Indicates whether the UE supports intra-frequency Make-Before-Break handover, and whether the UE which indicates *dc-Parameters* supports intra-frequency Make-Before-Break SeNB change, as defined in TS 36.300 [9]. | | - | |
| ***measGapPatterns-NRonly***  Indicates whether the UE supports gap patterns 2, 3 and 11 in LTE standalone when the frequencies to be measured within this measurement gap are all NR frequencies. | | No | |
| ***measGapPatterns-NRonly-ENDC***  Indicates whether the UE supports gap patterns 2, 3 and 11 in (NG)EN-DC when the frequencies to be measured within this measurement gap are all NR frequencies. | | No | |
| ***maximumCCsRetrieval***  Indicates whether UE supports reception of *requestedMaxCCsDL* and *requestedMaxCCsUL*. | | - | |
| ***maxLayersMIMO-Indication***  Indicates whether the UE supports the network configuration of *maxLayersMIMO*. If the UE supports *fourLayerTM3-TM4* or *intraBandContiguousCC-InfoList* or *FeatureSetDL-PerCC* for MR-DC, UE supports the configuration of *maxLayersMIMO* for these cases regardless of indicating *maxLayersMIMO-Indication*. | | - | |
| ***maxLayersSlotOrSubslotPUSCH***  Indicates the maxiumum number of layers for slot-PUSCH or subslot-PUSCH transmission. | | Yes | |
| ***maxNumberCCs-SPT***  Indicates the maximum number of supported CCs for short processing time. The UE capability is reported per band combination. The reported number of carriers applies to all the FS-type(s) *frameStructureType-SPT-r15* supported in a given band combination. Absence of the field indicates that 0 number of CCs are supported for short processing time. | | - | |
| ***maxNumberDL-CCs, maxNumberUL-CCs***  Indicates for each TTI combination "sTTI-SupportedCombinations", the maximum number of supported DL CCs/UL CCs for short TTI. Absence of the field indicates that 0 number of CCs are supported for short TTI. | | - | |
| ***maxNumberDecoding***  Indicates the maximum number of blind decodes in UE-specific search space per UE in one subframe for CA with more than 5 CCs as defined in TS 36.213 [23] which is supported by the UE. The number of blind decodes supported by the UE is the field value \* 32. Only values 5 to 32 can be used in this version of the specification. | | No | |
| ***maxNumberEHC-Contexts***  Defines the maximum number of Ethernet header compression contexts supported by the UE across all DRBs and across UE's EHC compressor and EHC decompressor. The indicated number defines the number of contexts in addition to CID = "all zeros" as specified in Annex A of TS 38.323 [83]. | | No | |
| ***maxNumberROHC-ContextSessions***  Set to the maximum number of concurrently active ROHC contexts supported by the UE, excluding context sessions that leave all headers uncompressed. cs2 corresponds with 2 (context sessions), cs4 corresponds with 4 and so on. The network ignores this field if the UE supports none of the ROHC profiles in *supportedROHC-Profiles*. If the UE indicates both *maxNumberROHC-ContextSessions* and *maxNumberROHC-ContextSessions-r14*, same value shall be indicated. | | - | |
| ***maxNumberUpdatedCSI-Proc, maxNumberUpdatedCSI-Proc-SPT***  Indicates the maximum number of CSI processes to be updated across CCs. | | No | |
| ***maxNumberUpdatedCSI-Proc-STTI-Comb77, maxNumberUpdatedCSI-Proc-STTI-Comb27, maxNumberUpdatedCSI-Proc-STTI-Comb22-Set1, maxNumberUpdatedCSI-Proc-STTI-Comb22-Set2***  Indicates the maximum number of CSI processes to be updated across CCs. Comb77 is applicable for {slot, slot}, Comb27 for {subslot, slot}, Comb22-Set1 for  {subslot, subslot} processing timeline set 1 and the Comb22-Set2 for {subslot, subslot} processing timeline set 2. | |  | |
| ***mbms-AsyncDC***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception via MRB on a frequency indicated in an *MBMSInterestIndication* message, where (according to *supportedBandCombination*) the carriers that are or can be configured as serving cells in the MCG and the SCG are not synchronized. If this field is included, the UE shall also include *mbms-SCell* and *mbms-NonServingCell*. The field indicates that the UE supports the feature for xDD if *mbms-SCell* and *mbms-NonServingCell* are supported for xDD. | | - | |
| ***mbms-MaxBW***  Indicates maximum supported bandwidth (T) for MBMS reception, see TS 36.213 [23]. clause 11.1. If the value is set to *implicitValue*, the corresponding value of T is calculated as specified in TS 36.213 [23], clause 11.1. If the value is set to *explicitValue*, the actual value of T = *explicitValue* \* 40 MHz. | | - | |
| ***mbms-NonServingCell***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception via MRB on a frequency indicated in an *MBMSInterestIndication* message, where (according to *supportedBandCombination* and to network synchronization properties) a serving cell may be additionally configured. If this field is included, the UE shall also include the *mbms-SCell* field. | | Yes | |
| ***mbms-ScalingFactor1dot25, mbms-ScalingFactor7dot5***  Indicates parameter A(1.25 / A(7.5, i.e., scaling factor for processing one unit of bandwidth corresponding to subcarrier spacing of 1.25 kHz / 7.5 kHz, with respect to one unit of bandwidth corresponding to subcarrier spacing of 15 kHz. See TS 36.213 [23], clause 11.1. This field is included only if *subcarrierSpacingMBMS-khz1dot25 / subcarrierSpacingMBMS-khz7dot5* is included. This field shall be included if *mbms-MaxBW* and *subcarrierSpacingMBMS-khz1dot25 / subcarrierSpacingMBMS-khz7dot5* are included. | | - | |
| ***mbms-ScalingFactor0dot37, mbms-ScalingFactor2dot5***  Indicates parameter A(0.37 / A(2..5, i.e., scaling factor for processing one unit of bandwidth corresponding to subcarrier spacing of 0.37 kHz / 2.5 kHz, with respect to one unit of bandwidth corresponding to subcarrier spacing of 15 kHz. See TS 36.213 [23], clause 11.1. This field is included only if *fembmsMixedCell* or *fembmsDedicatedCell* is included. This field shall be included if *subcarrierSpacingMBMS-khz0dot37 / subcarrierSpacingMBMS-khz2dot5* is included for at least one E-UTRA band in *mbms-SupportedBandInfoList*. | | - | |
| ***mbms-SCell***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception via MRB on a frequency indicated in an *MBMSInterestIndication* message, when an SCell is configured on that frequency (regardless of whether the SCell is activated or deactivated). | | Yes | |
| ***mbms-SupportedBandInfoList***  One entry corresponding to each supported E-UTRA band listed in the same order as in *supportedBandListEUTRA*. This list is included only if *fembmsMixedCell* or *fembmsDedicatedCell* is included. | | - | |
| ***mcgRLF-RecoveryViaSCG***  Indicates whether the UE supports recovery from MCG RLF via split SRB1 (if supported) and via SRB3 (if supported). | | - | |
| ***measGapPatterns-NRonly***  Indicates whether the UE supports gap patterns 2, 3 and 11 in LTE standalone when the frequencies to be measured within this measurement gap are all NR frequencies. | | No | |
| ***measGapPatterns-NRonly-ENDC***  Indicates whether the UE supports gap patterns 2, 3 and 11 in (NG)EN-DC when the frequencies to be measured within this measurement gap are all NR frequencies. | | No | |
| ***measurementEnhancements***  This field defines whether UE supports measurement enhancements in high speed scenario (350 km/h) as specified in TS 36.133 [16]. | | - | |
| ***measurementEnhancements2***  This field defines whether UE supports measurement enhancements in high speed scenario (up to 500 km/h velocity) as specified in TS 36.133 [16]. | | - | |
| ***measurementEnhancementsSCell***  This field defines whether UE supports SCell measurement enhancements in high speed scenario (350 km/h) as specified in TS 36.133 [16]. | | - | |
| ***measGapPatterns***  Indicates whether the UE that supports NR supports gap patterns 4 to 11 in LTE standalone as specified in TS 36.133 [16], and for independent measurement gap configuration on FR1 and per-UE gap in (NG)EN-DC as specified in TS 38.133 [84]. The first/ leftmost bit covers pattern 4, and so on. Value 1 indicates that the UE supports the concerned gap pattern. | | - | |
| ***mfbi-UTRA***  It indicates if the UE supports the signalling requirements of multiple radio frequency bands in a UTRA FDD cell, as defined in TS 25.307 [65]. | | - | |
| ***MIMO-BeamformedCapabilityList***  A list of pairs of {k-Max, n-MaxList} values with the nth entry indicating the values that the UE supports for each CSI process in case n CSI processes would be configured. | | No | |
| ***MIMO-CapabilityDL***  The number of supported layers for spatial multiplexing in DL. The field may be absent for category 0 and category 1 UE in which case the number of supported layers is 1. | | - | |
| ***MIMO-CapabilityUL***  The number of supported layers for spatial multiplexing in UL. Absence of the field means that the number of supported layers is 1. | | - | |
| ***MIMO-CA-ParametersPerBoBC***  A set of MIMO parameters provided per band of a band combination. In case a subfield is absent, the concerned capabilities are the same as indicated at the per UE level (i.e. by MIMO-UE-ParametersPerTM). | | - | |
| ***mimo-CBSR-AdvancedCSI***  Indicates whether UE supports CBSR for advanced CSI reporting with and without amplitude restriction as defined in TS 36.213 [23], clause 7.2. | | | Yes |
| ***min-Proc-TimelineSubslot***  Minimum processing timeline for subslot operation. The minimum processing timeline can belong to one of two sets of associated processing and maximum TA operation. The sets supported can be different for 1os CRS-based SPDCCH, 2os CRS-based SPDCCH and DMRS-based SPDCCH. The sequence applies to:  1. 1os CRS based SPDCCH  2. 2os CRS based SPDCCH  3. DMRS based SPDCCH | | - | |
| ***modifiedMPR-Behavior***  Field encoded as a bit map, where at least one bit N is set to "1" if UE supports modified MPR/A-MPR behaviour N, see TS 36.101 [42]. All remaining bits of the field are set to "0". The leading / leftmost bit (bit 0) corresponds to modified MPR/A-MPR behaviour 0, the next bit corresponds to modified MPR/A-MPR behaviour 1 and so on.  Absence of this field means that UE does not support any modified MPR/A-MPR behaviour. | | - | |
| ***mpdcch-InLteControlRegionCE-ModeA,*** ***mpdcch-InLteControlRegionCE-ModeB***  Indicates whether UE operating in CE mode A/B supports MPDCCH reception in LTE control channel region as specified in TS 36.211 [21]. | | Yes | |
| ***mpsPriorityIndication***  Indicates whether the UE supports *mpsPriorityIndication* on release with redirect. | | - | |
| ***multiACK-CSI-reporting***  Indicates whether the UE supports multi-cell HARQ ACK and periodic CSI reporting and SR on PUCCH format 3. | | Yes | |
| ***multiBandInfoReport***  Indicates whether the UE supports the acquisition and reporting of multi band information for *reportCGI*. | | - | |
| ***multiClusterPUSCH-WithinCC*** | | Yes | |
| ***multiNS-Pmax***  Indicates whether the UE supports the mechanisms defined for cells broadcasting *NS-PmaxList*. | | - | |
| ***multipleCellsMeasExtension***  Indicates whether the UE supports numberOfTriggeringCells in the report configuration. | | | - |
| ***multipleTimingAdvance***  Indicates whether the UE supports multiple timing advances for each band combination listed in *supportedBandCombination*. If the band combination comprised of more than one band entry (i.e., inter-band or intra-band non-contiguous band combination), the field indicates that the same or different timing advances on different band entries are supported. If the band combination comprised of one band entry (i.e., intra-band contiguous band combination), the field indicates that the same or different timing advances across component carriers of the band entry are supported. It is mandatory for UEs to support 2 TAGs for inter frequency DAPS handover. | | - | |
| ***multipleUplinkSPS***  Indicates whether the UE supports multiple uplink SPS and reporting SPS assistance information. A UE indicating *multipleUplinkSPS* shall also support V2X communication via Uu, as defined in TS 36.300 [9]. | | - | |
| ***must-CapabilityPerBand***  Indicates that UE supports MUST, as specified in 36.212 [22], clause 5.3.3.1, on the band in the band combination. | | - | |
| ***must-TM234-UpTo2Tx-r14***  Indicates that the UE supports MUST operation for TM2/3/4 using up to 2Tx. | | - | |
| ***must-TM89-UpToOneInterferingLayer-r14***  Indicates that the UE supports MUST operation for TM8/9 with assistance information for up to 1 interfering layer. | | - | |
| ***must-TM89-UpToThreeInterferingLayers-r14***  Indicates that the UE supports MUST operation for TM8/9 with assistance information for up to 3 interfering layers. | | - | |
| ***must-TM10-UpToOneInterferingLayer-r14***  Indicates that the UE supports MUST operation for TM10 with assistance information for up to 1 interfering layer. | | - | |
| ***must-TM10-UpToThreeInterferingLayers-r14***  Indicates that the UE supports MUST operation for TM10 with assistance information for up to 3 interfering layers. | | - | |
| ***naics-Capability-List***  Indicates that UE supports NAICS, i.e. receiving assistance information from serving cell and using it to cancel or suppress interference of neighbouring cell(s) for at least one band combination. If not present, UE does not support NAICS for any band combination. The field *numberOfNAICS-CapableCC* indicates the number of component carriers where the NAICS processing is supported and the field *numberOfAggregatedPRB* indicates the maximum aggregated bandwidth across these of component carriers (expressed as a number of PRBs) with the restriction that NAICS is only supported over the full carrier bandwidth. The UE shall indicate the combination of {*numberOfNAICS-CapableCC, numberOfNAICS-CapableCC*} for every supported *numberOfNAICS-CapableCC*, e.g. if a UE supports {x CC, y PRBs} and {x-n CC, y-m PRBs} where n>=1 and m>=0, the UE shall indicate both.  - For *numberOfNAICS-CapableCC* = 1, UE signals one value for *numberOfAggregatedPRB* from the range {50, 75, 100};  - For *numberOfNAICS-CapableCC* = 2, UE signals one value for *numberOfAggregatedPRB* from the range {50, 75, 100, 125, 150, 175, 200};  - For *numberOfNAICS-CapableCC* = 3, UE signals one value for *numberOfAggregatedPRB* from the range {50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300};  - For *numberOfNAICS-CapableCC* = 4, UE signals one value for *numberOfAggregatedPRB* from the range {50, 100, 150, 200, 250, 300, 350, 400};  - For *numberOfNAICS-CapableCC* = 5, UE signals one value for *numberOfAggregatedPRB* from the range {50, 100, 150, 200, 250, 300, 350, 400, 450, 500}. | | No | |
| ***ncsg***  Indicates whether the UE supports measurement NCSG Pattern Id 0, 1, 2 and 3, as specified in TS 36.133 [16]. If this field is included and the UE supports asynchronous DC, the UE shall support NCSG Pattern Id 0, 1, 2 and 3. If this field is included but the UE does not support asynchronous DC, only NCSG Pattern Id 0 and 1 shall be supported | | No | |
| ***ng-EN-DC***  Indicates whether the UE supports NGEN-DC. | | - | |
| ***n-MaxList (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode the maximum number of NZP CSI RS ports supported within a CSI process applicable for band combinations for which the concerned capabilities are not signalled. For *k-Max* values exceeding 1, the UE shall include the field and signal *k-Max* minus 1 bits. The first bit indicates *n-Max2*, with value 0 indicating 8 and value 1 indicating 16. The second bit indicates *n-Max3*, with value 0 indicating 8 and value 1 indicating 16. The third bit indicates *n-Max4*, with value 0 indicating 8 and value 1 indicating 32. The fourth bit indicates *n-Max5*, with value 0 indicating 16 and value 1 indicating 32. The fifth bit indicates *n-Max6*, with value 0 indicating 16 and value 1 indicating 32. The sixt bit indicates *n-Max7*, with value 0 indicating 16 and value 1 indicating 32. The seventh bit indicates *n-Max8*, with value 0 indicating 16 and value 1 indicating 64. | | Yes | |
| ***n-MaxList (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates for a particular transmission mode the maximum number of NZP CSI RS ports supported within a CSI process applicable for band the concerned combination. Further details are as indicated for *n-MaxList* in *MIMO-UE-ParametersPerTM*. | | No | |
| ***NonContiguousUL-RA-WithinCC-List***  One entry corresponding to each supported E-UTRA band listed in the same order as in *supportedBandListEUTRA*. | | No | |
| ***nonPrecoded (in MIMO-UE-ParametersPerTM)***  Indicates for a particular transmission mode the UE capabilities concerning non-precoded EBF/ FD-MIMO operation (class A) for band combinations for which the concerned capabilities are not signalled in *MIMO-CA-ParametersPerBoBCPerTM*, and the FD-MIMO processing capability condition as described in NOTE 8 is satisfied. | | Yes | |
| ***nonPrecoded (in MIMO-CA-ParametersPerBoBCPerTM)***  If signalled, the field indicates for a particular transmission mode, the UE capabilities concerning non-precoded EBF/ FD-MIMO operation (class A) applicable for the concerned band combination. | | - | |
| ***nonUniformGap***  Indicates whether the UE supports measurement non uniform Pattern Id 1, 2, 3 and 4 in LTE standalone as specified in TS 36.133 [16]. | | No | |
| ***noResourceRestrictionForTTIBundling***  Indicate whether the UE supports TTI bundling operation without resource allocation restriction. | | No | |
| ***nonCSG-SI-Reporting***  Indicates whether UE will report PLMN list from non-CSG cells. | | - | |
| ***nr-AutonomousGaps-ENDC-FR1***  Indicates whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR1 using autonomous gaps and reporting the acquired information to the network when it is configured with (NG)EN-DC. | | Yes | |
| ***nr-AutonomousGaps-ENDC-FR2***  Indicates whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR2 using autonomous gaps and reporting the acquired information to the network when it is configured with (NG)EN-DC. | | Yes | |
| ***nr-AutonomousGaps-FR1***  Indicates whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR1 using autonomous gaps and reporting the acquired information to the network when it is not configured with (NG)EN-DC. | | Yes | |
| ***nr-AutonomousGaps-FR2***  Indicates whether the UE supports, upon configuration of *useAutonomousGapsNR* by the network, acquisition of relevant information from a neighbouring NR cell by reading the SI of the neighbouring cell on FR2 using autonomous gaps and reporting the acquired information to the network when it is not configured with (NG)EN-DC. | | Yes | |
| ***nr-HO-ToEN-DC***  Indicates whether the UE supports inter-RAT handover from NR to EN-DC while NR-DC or NE-DC is not configured. This field is mandatory present if EN-DC is supported. | | - | |
| ***nr-IdleInactiveBeamMeasFR1***  Indicates whether the UE supports performing eNB-configured SSB-based beam level RRM measurements for configured NR FR1 carrier(s) in RRC\_IDLE and in RRC\_INACTIVE as specified in TS 36.306 [5], clause 4.3.6.46. | | No | |
| ***nr-IdleInactiveBeamMeasFR2***  Indicates whether the UE supports performing eNB-configured SSB-based beam level RRM measurements for configured NR FR2 carrier(s) in RRC\_IDLE and in RRC\_INACTIVE as specified in TS 36.306 [5], clause 4.3.6.47. | | No | |
| ***nr-IdleInactiveMeasFR1***  Indicates whether UE supports reporting measurements performed on NR FR1 carrier(s) during RRC\_IDLE and RRC\_INACTIVE. | | No | |
| ***nr-IdleInactiveMeasFR2***  Indicates whether UE supports reporting measurements performed on NR FR2 carrier(s) during RRC\_IDLE and RRC\_INACTIVE. | | No | |
| ***numberOfBlindDecodesUSS***  Indicates the maximum number of blind decodes in UE specific search space in one subframe for CCs configured with sTTI operation supported by the UE. The number of blind decodes supported by the UE is the field value X\*68. Field value ranges from 4 to 32. | | Yes | |
| ***nzp-CSI-RS-AperiodicInfo***  Indicates whether the UE supports aperiodic NZP CSI-RS transmission for the indicated transmission mode. | | Yes | |
| ***nzp-CSI-RS-PeriodicInfo***  Indicates whether the UE supports periodic NZP CSI-RS transmission for the indicated transmission mode. | | Yes | |
| ***otdoa-UE-Assisted***  Indicates whether the UE supports UE-assisted OTDOA positioning, as specified in TS 36.355 [54]. | | Yes | |
| ***outOfOrderDelivery***  Same as "*outOfOrderDelivery*" defined in TS 38.306 [87]. | | No | |
| ***outOfSequenceGrantHandling***  Indicates whether the UE supports PUSCH transmissions with out of sequence UL grants as defined in TS 36.213 [23]. This field can be included only if uplinkLAA is included. | | - | |
| ***overheatingInd***  Indicates whether the UE supports overheating assistance information. | | No | |
| ***overheatingIndForSCG***  Indicates whether the UE supports the inclusion of NR SCG reduced configuration in the overheating assistance information. The UE which indicates support of *overheatingIndForSCG* shall also indicate support of *overheatingInd*. | | - | |
| ***pdcch-CandidateReductions***  Indicates whether the UE supports PDCCH candidate reduction on UE specific search space as specified in TS 36.213 [23], clause 9.1.1. | | No | |
| ***pdcp-Duplication***  Indicates whether the UE supports PDCP duplication. | | - | |
| ***pdcp-SN-Extension***  Indicates whether the UE supports 15 bit length of PDCP sequence number. | | - | |
| ***pdcp-SN-Extension-18bits***  Indicates whether the UE supports 18 bit length of PDCP sequence number. | | - | |
| ***pdcp-TransferSplitUL***  Indicates whether the UE supports PDCP data transfer split in UL for the *drb-TypeSplit* as specified in TS 36.323 [8]. | | - | |
| ***pdcp-VersionChangeWithoutHO***  Indicates whether, the UE supports changing the PDCP version of DRBs, from LTE PDCP to NR PDCP and vice versa, with and without handover. A UE supporting PDCP version change shall signal field *pdcp-Parameters-v1610*. When the field *pdcp-VersionChangeWithoutHO* is not included and *pdcp-Parameters-v1610* is included, it implies the UE supports PDCP version change only with handover. | | - | |
| ***pdsch-CollisionHandling***  Indicates whether the UE supports PDSCH collision handling as specified in TS 36.213 [23]. | | No | |
| ***pdsch-InLteControlRegionCE-ModeA, pdsch-InLteControlRegionCE-ModeB***  Indicates whether UE operating in CE mode A/B supports PDSCH reception in LTE control channel region as specified in TS 36.211 [21]. | | Yes | |
| ***pdsch-MultiTB-CE-ModeA, pdsch-MultiTB-CE-ModeB***  Indicates whether the UE supports multiple TB scheduling in connected mode for PDSCH when operating in CE mode A/B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***pdsch-RepSubframe***  Indicates whether the UE supports subframe PDSCH repetition. | | Yes | |
| ***pdsch-RepSlot***  Indicates whether the UE supports slot PDSCH repetition. | | Yes | |
| ***pdsch-RepSubslot***  Indicates whether the UE supports subslot PDSCH repetition. This field is only applicable for UEs supporting FDD. | | - | |
| ***pdsch-SlotSubslotPDSCH-Decoding***  Indicates whether the UE supports decoding of PDSCH and slot-PDSCH/subslot-PDSCH assigned with C-RNTI/SPS C-RNTI in the same subframe for a given carrier. | | Yes | |
| ***perServingCellMeasurementGap***  Indicates whether the UE supports per serving cell measurement gap indication, as specified in TS 36.133 [16]. | | - | |
| ***phy-TDD-ReConfig-FDD-PCell***  Indicates whether the UE supports TDD UL/DL reconfiguration for TDD serving cell(s) via monitoring PDCCH with eIMTA-RNTI on a FDD PCell, and HARQ feedback according to UL and DL HARQ reference configurations. This bit can only be set to supported only if the UE supports FDD PCell and *phy-TDD-ReConfig-TDD-PCell* is set to supported. | | No | |
| ***phy-TDD-ReConfig-TDD-PCell***  Indicates whether the UE supports TDD UL/DL reconfiguration for TDD serving cell(s) via monitoring PDCCH with eIMTA-RNTI on a TDD PCell, and HARQ feedback according to UL and DL HARQ reference configurations, and PUCCH format 3. | | Yes | |
| ***pmi-Disabling*** | | Yes | |
| ***powerClass-14dBm***  Indicates whether the UE supports power class 14 dBm when operating in CE mode A or B for all the bands that are supported by the UE, as specified in TS 36.101 [42]. | | | - |
| ***powerPrefInd***  Indicates whether the UE supports power preference indication. | | No | |
| ***powerUCI-SlotPUSCH, powerUCI-SubslotPUSCH***  Indicates whether the UE supports BPRE derivation based on the actual derived O\_CQI. The parameter *uplinkPower-CSIPayload* configures the UE to derive BPRE based on either the actual value of O\_CQI or the largest value of O\_CQI across all RI values. If the UE does not support the capability, the UE will derive BPRE based on the largest value of O\_CQI across all RI values. | | Yes | |
| ***prach-Enhancements***  This field defines whether the UE supports random access preambles generated from restricted set type B in high speed scenoario as specified in TS 36.211 [21]. | | - | |
| ***processingTimelineSet***  Indicates, for each SPDCCH configuration, support for a set of TA values. Each set consists of two different processing timelines and associated maximum TA. Set 1 indicates support for n+4 and n+6 and set 2 indicates support for n+6 and n+8, see TS 36.211 [21], clause 8.1, The minimum processing timeline to use, out of the two options for a given set is configured by parameter *proc-Timeline*. Support of Set 1 implicitly means support of Set 2. | | - | |
| ***pucch-Format4***  Indicates whether the UE supports PUCCH format 4. | | Yes | |
| ***pucch-Format5***  Indicates whether the UE supports PUCCH format 5. | | Yes | |
| ***pucch-SCell***  Indicates whether the UE supports PUCCH on SCell. | | No | |
| ***pur-CP-EPC-CE-ModeA, pur-CP-EPC-CE-ModeB, pur-CP-5GC-CE-ModeA, pur-CP-5GC-CE-ModeB***  Indicates whether UE operating in CE mode A/B supports CP transmission using PUR when connected to EPC/ 5GC. | | Yes | |
| ***pur-CP-L1Ack***  Indicates whether UE supports L1 acknowledgement in response to CP transmission using PUR when connected to EPC/ 5GC. | | Yes | |
| ***pur-FrequencyHopping***  Indicates whether UE supports frequency hopping for transmission using PUR. | | Yes | |
| ***pur-PUSCH-NB-MaxTBS***  Indicates whether the UE supports 2984 bits max UL TBS in 1.4 MHz for transmission using PUR when operating in CE mode A, as specified in TS 36.212 [22] and TS 36.213 [23]. | | Yes | |
| ***pur-RSRP-Validation***  Indicates whether UE supports serving cell RSRP for TA validation for transmission using PUR when connected to EPC/ 5GC. | | Yes | |
| ***pur-SubPRB-CE-ModeA, pur-SubPRB-CE-ModeB***  Indicates whether UE supports subPRB resource allocation for PUSCH for transmission using PUR when operating in CE mode A/B. | | Yes | |
| ***pur-UP-EPC-CE-ModeA, pur-UP-EPC-CE-ModeB, pur-UP-5GC-CE-ModeA, pur-UP-5GC-CE-ModeB***  Indicates whether UE operating in CE mode A/B supports UP transmission using PUR when connected to EPC/ 5GC. | | Yes | |
| ***pusch-Enhancements***  Indicates whether the UE supports the PUSCH enhancement mode as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***pusch-FeedbackMode***  Indicates whether the UE supports PUSCH feedback mode 3-2. | | No | |
| ***pusch-MultiTB-CE-ModeA, pusch-MultiTB-CE-ModeB***  Indicates whether the UE supports multiple TB scheduling in connected mode for PUSCH when operating in CE mode A/B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***pusch-SPS-MaxConfigSlot***  Indicates the max number of SPS configurations across all cells for slot PUSCH. | | Yes | |
| ***pusch-SPS-MultiConfigSlot***  Indicates the number of multiple SPS configurations of slot PUSCH for each serving cell. | | Yes | |
| ***pusch-SPS-MaxConfigSubframe***  Indicates the max number of SPS configurations across all cells for subframe PUSCH. | | Yes | |
| ***pusch-SPS-MultiConfigSubframe***  Indicates the number of multiple SPS configurations of subframe PUSCH for each serving cell. | | Yes | |
| ***pusch-SPS-MaxConfigSubslot***  Indicates the max number of SPS configurations across all cells for subslot PUSCH. | | - | |
| ***pusch-SPS-MultiConfigSubslot***  Indicates the number of multiple SPS configurations of subslot PUSCH for each serving cell. This field is only applicable for UEs supporting FDD. | | - | |
| ***pusch-SPS-SlotRepPCell***  Indicates whether the UE supports SPS repetition for slot PUSCH for PCell. | | Yes | |
| ***pusch-SPS-SlotRepPSCell***  Indicates whether the UE supports SPS repetition for slot PUSCH for PSCell. | | Yes | |
| ***pusch-SPS-SlotRepSCell***  Indicates whether the UE supports SPS repetition for slot PUSCH for serving cells other than SpCell. | | Yes | |
| ***pusch-SPS-SubframeRepPCell***  Indicates whether the UE supports SPS repetition for subframe PUSCH for PCell. | | Yes | |
| ***pusch-SPS-SubframeRepPSCell***  Indicates whether the UE supports SPS repetition for subframe PUSCH for PSCell. | | Yes | |
| ***pusch-SPS-SubframeRepSCell***  Indicates whether the UE supports SPS repetition for subframe PUSCH for serving cells other than SpCell. | | Yes | |
| ***pusch-SPS-SubslotRepPCell***  Indicates whether the UE supports SPS repetition for subslot PUSCH for PCell. This field is only applicable for UEs supporting FDD. | | - | |
| ***pusch-SPS-SubslotRepPSCell***  Indicates whether the UE supports SPS repetition for subslot PUSCH for PSCell. This field is only applicable for UEs supporting FDD. | | - | |
| ***pusch-SPS-SubslotRepSCell***  Indicates whether the UE supports SPS repetition for subslot PUSCH for serving cells other than SpCell. This field is only applicable for UEs supporting FDD. | | - | |
| ***pusch-SRS-PowerControl-SubframeSet***  Indicates whether the UE supports subframe set dependent UL power control for PUSCH and SRS. This field is only applicable for UEs supporting TDD. | | Yes | |
| ***qcl-CRI-BasedCSI-Reporting***  Indicates whether the UE supports CRI based CSI feedback for the FeCoMP feature as specified in TS 36.213 [23], clause 7.1.10. | | - | |
| ***qcl-TypeC-Operation***  The UE uses this field to indicate the support of all of the following three features: QCL Type-C operation for FeCoMP, the capability to support separate PDSCH RE mapping for different PDSCH CWs in non-coherent joint transmission and the capability to support handling new DMRS port to MIMO layer mapping for the CWs, as specified in TS 36.213 [23], clause 7.1.10. | | - | |
| ***qoe-MeasReport***  Indicates whether the UE supports QoE Measurement Collection for streaming services. | | - | |
| ***qoe-MTSI-MeasReport***  Indicates whether the UE supports QoE Measurement Collection for MTSI services. | |  | |
| ***rach-Less***  Indicates whether the UE supports RACH-less handover, and whether the UE which indicates *dc-Parameters* supports RACH-less SeNB change, as defined in TS 36.300 [9]. | | - | |
| ***rach-Report***  Indicates whether the UE supports delivery of *rach-Report.* | | - | |
| ***rai-Support***  Defines whether the UE supports release assistance indication (RAI) as specified in TS 36.321 [6] for BL UEs. | | No | |
| ***rai-SupportEnh***  Indicates whether the UE supports 2-bit RAI when connected to EPC as specified in TS 36.321 [6]. | | - | |
| ***rclwi***  Indicates whether the UE supports RCLWI, i.e. reception of *rclwi-Configuration*. The UE which supports RLCWI shall also indicate support of *interRAT-ParametersWLAN-r13*. The UE which supports RCLWI and *wlan-IW-RAN-Rules* shall also support applying WLAN identifiers received in *rclwi-Configuration* for the access network selection and traffic steering rules when in RRC\_IDLE. | | - | |
| ***recommendedBitRate***  Indicates whether the UE supports the bit rate recommendation message from the eNB to the UE as specified in TS 36.321 [6], clause 6.1.3.13*.* | | No | |
| ***recommendedBitRateMultiplier***  Indicates whether the UE supports the bit rate multiplier for recommended bit rate MAC CE as specified in TS 36.321 [6], clause 6.1.3.13. If this field is included, the UE shall also include the *recommendedBitRate* field. | | - | |
| ***recommendedBitRateQuery***  Indicates whether the UE supports the bit rate recommendation query message from the UE to the eNB as specified in TS 36.321 [6], clause 6.1.3.13. If this field is included, the UE shall also include the *recommendedBitRate* field. | | No | |
| ***reducedCP-Latency***  Indicates whether the UE supports reduced CP latency. | | Yes | |
| ***reducedIntNonContComb***  Indicates whether the UE supports receiving *requestReducedIntNonContComb* that requests the UE to exclude supported intra-band non-contiguous CA band combinations other than included in capability signalling as specified in TS 36.306 [5], clause 4.3.5.21. | | - | |
| ***reducedIntNonContCombRequested***  Indicates that the UE excluded supported intra-band non-contiguous CA band combinations other than included in capability signalling as specified in TS 36.306 [5,] clause 4.3.5.21. | | - | |
| ***reflectiveQoS***  Indicates whether the UE supports AS reflective QoS. | | No | |
| ***relWeightTwoLayers/ relWeightFourLayers/ relWeightEightLayers***  Indicates relative weight of processing FD-MIMO with 2/ 4/ 8 layers with respect to non-FD-MIMO with the same number of layers, see NOTE 8. Value v1 corresponds to relative weight of 1, value v1dot25 corresponds to relative weight of 1.25 and so on. This field can be included only if the UE supports the corresponding number of layers (i.e., 2/ 4/ 8 layers). | | - | |
| ***reportCGI-NR-EN-DC***  Indicates whether the UE supports Inter-RAT report CGI procedure towards NR cell when it is configured with (NG)EN-DC. | | | Yes |
| ***reportCGI-NR-NoEN-DC***  Indicates whether the UE supports Inter-RAT report CGI procedure towards NR cell when it is not configured with (NG)EN-DC. | | | Yes |
| ***resumeWithMCG-SCellConfig***  Indicates whether the UE supports (re-)configuration of E-UTRA MCG SCells. | | | - |
| ***resumeWithSCG-Config***  Indicates whether the UE supports (re-)configuration of an NR SCG. | | | - |
| ***resumeWithStoredMCG-SCells***  Indicates whether the UE supports not deleting the stored E-UTRA MCG SCell configuration when initiating the resume procedure. | | | - |
| ***resumeWithStoredSCG***  Indicates whether the UE supports not deleting the stored NR SCG configuration when initiating the resume procedure. | | | - |
| ***srs-CapabilityPerBandPairList***  Indicates, for a particular pair of bands, the SRS carrier switching parameters when switching between the band pair to transmit SRS on a PUSCH-less SCell as specified in TS 36.212 [22] and TS 36.213 [23]. If included, the UE shall include a number of entries as indicated in the following, and listed in the same order, as in *bandParameterList* for the concerned band combination:  - For the first band, the UE shall include the same number of entries as in *bandParameterList* i.e. first entry corresponds to first band in *bandParameterList* and so on,  - For the second band, the UE shall include one entry less i.e. first entry corresponds to the second band in *bandParameterList* and so on  - And so on. | | - | |
| ***requestedBands***  Indicates the frequency bands requested by E-UTRAN. | | - | |
| ***requestedCCsDL, requestedCCsUL***  Indicates the maximum number of CCs requested by E-UTRAN. | | - | |
| ***requestedDiffFallbackCombList***  Indicates the CA band combinations for which report of different UE capabilities is requested by E-UTRAN. | | - | |
| ***rf-RetuningTimeDL***  Indicates the interruption time on DL reception within a band pair during the RF retuning for switching between the band pair to transmit SRS on a PUSCH-less SCell. n0 represents 0 OFDM symbols, n0dot5 represents 0.5 OFDM symbols, n1 represents 1 OFDM symbol and so on. This field is mandatory present if switching between the band pair is supported. | | - | |
| ***rf-RetuningTimeUL***  Indicates the interruption time on UL transmission within a band pair during the RF retuning for switching between the band pair to transmit SRS on a PUSCH-less SCell. n0 represents 0 OFDM symbols, n0dot5 represents 0.5 OFDM symbols, n1 represents 1 OFDM symbol and so on. This field is mandatory present if switching between the band pair is supported. | | - | |
| ***rlc-AM-Ooo-Delivery***  Indicates whether the UE supports out-of-order delivery from RLC to PDCP for RLC AM*.* | | - | |
| ***rlc-UM-Ooo-Delivery***  Indicates whether the UE supports out-of-order delivery from RLC to PDCP for RLC UM*.* | | - | |
| ***rlm-ReportSupport***  Indicates whether the UE supports RLM event and information reporting. | | - | |
| ***rohc-ContextContinue***  Same as "*continueROHC-Context*" defined in TS 38.306 [87]. | | No | |
| ***rohc-ContextMaxSessions***  Same as "*maxNumberROHC-ContextSessions*" defined in TS 38.306 [87]. | | No | |
| ***rohc-Profiles***  Same as "*supportedROHC-Profiles*" defined in TS 38.306 [87]. | | No | |
| ***rohc-ProfilesUL-Only***  Same as "*uplinkOnlyROHC-Profiles*" defined in TS 38.306 [87]. | | No | |
| ***rsrqMeasWideband***  Indicates whether the UE can perform RSRQ measurements with wider bandwidth. | | Yes | |
| ***rsrq-OnAllSymbols***  Indicates whether the UE can perform RSRQ measurement on all OFDM symbols and also support the extended RSRQ upper value range from -3dB to 2.5dB in measurement configuration and reporting as specified in TS 36.133 [16]. | | No | |
| ***rs-SINR-Meas***  Indicates whether the UE can perform RS-SINR measurements in RRC\_CONNECTED as specified in TS 36.214 [48]. | | - | |
| ***rssi-AndChannelOccupancyReporting***  Indicates whether the UE supports performing measurements and reporting of RSSI and channel occupancy. This field can be included only if *downlinkLAA* is included. | | - | |
| ***sa-NR***  Indicates whether the UE supports standalone NR as specified in TS 38.331 [82]. | | No | |
| ***scalingFactorTxSidelink, scalingFactorRxSidelink***  Indicates, for a particular band combination of EUTRA, the scaling facor, as defined in TS 38.306 [87], for the PC5 band combination(s) *v2x-SupportedBandCombinationListEUTRA-NR* on which the UE supports simultaneous transmission/reception of EUTRA and NR sidelink communication respectively, or simultaneous transmission or reception of EUTRA and joint V2X sidelink communication and NR sidelink communication respectively (as indicated by *v2x-SupportedTxBandCombListPerBC-v1630 /* *v2x-SupportedRxBandCombListPerBC-v1630*). The leading / leftmost value corresponds to the first band combination included in *v2x-SupportedBandCombinationListEUTRA-NR* which is indicated with value 1 by *v2x-SupportedTxBandCombListPerBC-v1630 /* *v2x-SupportedRxBandCombListPerBC-v1630*, the next value corresponds to the second band combination included in *v2x-SupportedBandCombinationListEUTRA-NR* which is indicated with value 1 by *v2x-SupportedTxBandCombListPerBC-v1630 /* *v2x-SupportedRxBandCombListPerBC-v1630* and so on. For each value of *ScalingFactorSidelink-r16*, value f0p4 indicates the scaling factor 0.4, f0p75 indicates 0.75, and so on. | | - | |
| ***scptm-AsyncDC***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception via SC-MRB on a frequency indicated in an *MBMSInterestIndication* message, where (according to *supportedBandCombination*) the carriers that are or can be configured as serving cells in the MCG and the SCG are not synchronized. If this field is included, the UE shall also include *scptm-SCell* and *scptm-NonServingCell*. | | Yes | |
| ***scptm-NonServingCell***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception via SC-MRB on a frequency indicated in an *MBMSInterestIndication* message, where (according to *supportedBandCombination* and to network synchronization properties) a serving cell may be additionally configured. If this field is included, the UE shall also include the *scptm-SCell* field. | | Yes | |
| ***scptm-Parameters***  Presence of the field indicates that the UE supports SC-PTM reception as specified in TS 36.306 [5]. | | Yes | |
| ***scptm-SCell***  Indicates whether the UE in RRC\_CONNECTED supports MBMS reception via SC-MRB on a frequency indicated in an *MBMSInterestIndication* message, when an SCell is configured on that frequency (regardless of whether the SCell is activated or deactivated). | | Yes | |
| ***scptm-ParallelReception***  Indicates whether the UE in RRC\_CONNECTED supports parallel reception in the same subframe of DL-SCH transport blocks transmitted using C-RNTI/Semi-Persistent Scheduling C-RNTI and using SC-RNTI/G-RNTI as specified in TS 36.306 [5]. | | Yes | |
| ***secondSlotStartingPosition***  Indicates whether the UE supports reception of subframes with second slot starting position as described in TS 36.211 [21] and TS 36.213 [23]. This field can be included only if *downlinkLAA* is included. | | - | |
| ***semiOL***  Indicates whether the UE supports semi-open-loop transmission for the indicated transmission mode. | | Yes | |
| ***semiStaticCFI***  Indicates whether the UE supports the semi-static configuration of CFI for subframe/slot/sub-slot operation. | | Yes | |
| ***semiStaticCFI-Pattern***  Indicates whether the UE supports the semi-static configuration of CFI pattern for subframe/slot/sub-slot operation. This field is only applicable for UEs supporting TDD. | | - | |
| ***shortCQI-ForSCellActivation***  Indicates whether the UE supports additional CQI reporting periodicity after SCell activation. | | Yes | |
| ***shortMeasurementGap*** Indicates whether the UE supports shorter measurement gap length (i.e. *gp2* and *gp3*) in LTE standalone as specified in TS 36.133 [16], and for independent measurement gap configuration on FR1 and per-UE gap in (NG)EN-DC as specified in TS38.133 [84]. | | No | |
| ***shortSPS-IntervalFDD***  Indicates whether the UE supports uplink SPS intervals shorter than 10 subframes in FDD mode. | | - | |
| ***shortSPS-IntervalTDD***  Indicates whether the UE supports uplink SPS intervals shorter than 10 subframes in TDD mode. | | - | |
| ***simultaneousPUCCH-PUSCH***  Indicates whether the UE supports simultaneous transmission of PUSCH/PUCCH and SlotOrSubslotPUSCH/SPUCCH (if supported). | | Yes | |
| ***simultaneousRx-Tx***  Indicates whether the UE supports simultaneous reception and transmission on different bands for each band combination listed in *supportedBandCombination*. This field is only applicable for inter-band TDD band combinations. A UE indicating support of *simultaneousRx-Tx* and *dc-Support-r12* shall support different UL/DL configurations between PCell and PSCell. | | - | |
| ***simultaneousTx-DifferentTx-Duration***  Indicates whether the UE supports simultaneous transmission of different transmission durations over different carriers. The different transmission durations can be of subframe, slot or subslot duration. | | - | |
| ***skipFallbackCombinations***  Indicates whether UE supports receiving *requestSkipFallbackComb* that requests UE to exclude fallback band combinations from capability signalling. | | - | |
| ***skipFallbackCombRequested***  Indicates whether *requestSkipFallbackComb* is requested by E-UTRAN. | | - | |
| ***skipMonitoringDCI-Format0-1A***  Indicates whether UE supports blind decoding reduction on UE specific search space by not monitoring DCI Format 0 and 1A as specified in TS 36.213 [23], clause 9.1.1. | | No | |
| ***skipSubframeProcessing***  This fields defines whether the UE supports aborting reception of PDSCH if the UE receives slot-PDSCH/subslot-PDSCH during an ongoing PDSCH reception and instead starts receiving the slot-PDSCH/subslot-PDSCH, as well as whether the UE supports aborting a PUSCH transmission if the UE gets a grant for a slot-PUSCH/ subslot-PUSCH transmission that overlaps with a grant received for a PUSCH transmission. The capability indicates the number of subframes that the UE may drop prior to the subframe in which it prioritizes the processing of slot/subslot PDSCH/PUSCH as described in TS 36.213 [23], clauses 7.1 and 8.0. Separate capability for UL and DL and per sTTI length in each direction*: skipProcessingDL-Slot, skipProcessingDL-Subslot, skipProcessingUL-Slot* and *skipProcessingUL-Subslot.* | | - | |
| ***skipUplinkDynamic***  Indicates whether the UE supports skipping of UL transmission for an uplink grant indicated on PDCCH if no data is available for transmission as described in TS 36.321 [6]. | | - | |
| ***skipUplinkSPS***  Indicates whether the UE supports skipping of UL transmission for a configured uplink grant if no data is available for transmission as described in TS 36.321 [6]. | | - | |
| ***sl-64QAM-Rx***  Indicates whether the UE supports 64QAM for the reception of V2X sidelink communication. | | | - |
| ***sl-64QAM-Tx***  Indicates whether the UE supports 64QAM for the transmission of V2X sidelink communication. | | | - |
| ***sl-CongestionControl***  Indicates whether the UE supports Channel Busy Ratio measurement and reporting of Channel Busy Ratio measurement results to eNB for V2X sidelink communication. | | - | |
| ***sl-LowT2min***  Indicates whether the UE supports 10ms as minimum value of T2 for resource selection procedure of V2X sidelink communication. | | - | |
| ***sl-ParameterNR***  Includes the *SidelinkParametersNR* IE as specified in TS 38.331 [82]. The field includes the sidelink capability for NR-PC5, where *multipleSR-ConfigurationsSidelink* and *logicalChannelSR-DelayTimerSidelink* is not applicable. | | - | |
| ***sl-RateMatchingTBSScaling***  Indicates whether the UE supports rate matching and TBS scalling for V2X sidelink communication. | | - | |
| ***slotPDSCH-TxDiv-TM8***  Indicates whether the UE supports TX diversity transmission using ports 7 and 8 for TM8 for slot PDSCH. | | - | |
| ***slotPDSCH-TxDiv-TM9and10***  Indicates whether the UE supports TX diversity transmission using ports 7 and 8 for TM9/10 for slot PDSCH. | | Yes | |
| ***slotSymbolResourceResvDL-CE-ModeA, slotSymbolResourceResvDL-CE-ModeB, slotSymbolResourceResvUL-CE-ModeA, slotSymbolResourceResvUL-CE-ModeB***  Indicates whether the UE supports slot/symbol-level time-domain resource reservation in downlink/uplink when operating in CE mode A/B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***slss-SupportedTxFreq***  Indicates whether the UE supports the SLSS transmission on single carrier or on multiple carriers in the case of sidelink carrier aggregation. | | | - |
| ***slss-TxRx***  Indicates whether the UE supports SLSS/PSBCH transmission and reception in UE autonomous resource selection mode and eNB scheduled mode in a band for V2X sidelink communication. | | - | |
| ***sl-TxDiversity***  Indicates whether the UE supports transmit diversity for V2X sidelink communication. See TS 36.101 [42]. | | | - |
| ***sn-SizeLo***  Same as "*shortSN*" defined in TS 38.306 [87]. | | No | |
| ***spatialBundling-HARQ-ACK***  Indicates whether UE supports HARQ-ACK spatial bundling on PUCCH or PUSCH as specified in TS 36.213 [23], clauses 7.3.1 and 7.3.2. | | No | |
| ***spdcch-differentRS-types***  Indicates whether the UE supports monitoring of sPDCCH on RB sets with different RS types within a TTI. | | Yes | |
| ***spdcch-Reuse***  Indicates whether the UE supports L1 based SPDCCH reuse. | | Yes | |
| ***sps-CyclicShift***  Indicates whether the UE supports RRC configuration of cyclic shift for DMRS for UL SPS using 1ms TTI. | | Yes | |
| ***sps-ServingCell***  Indicates whether the UE supports multiple UL/DL SPS configurations simultaneously active on different serving cells as specified in TS 36.321 [6]. | | - | |
| ***sps-STTI***  Indicates whether the UE supports SPS in DL and/or UL for slot or subslot based PDSCH and PUSCH, respectively. | | Yes | |
| ***srs-DCI7-TriggeringFS2***  Indicates whether the UE supports SRS triggerring via DCI format 7 for FS2. | | - | |
| ***srs-Enhancements***  Indicates whether the UE supports SRS enhancements. | | Yes | |
| ***srs-EnhancementsTDD***  Indicates whether the UE supports TDD specific SRS enhancements. | | Yes | |
| ***srs-FlexibleTiming***  Indicates whether the UE supports configuration of *soundingRS-FlexibleTiming-r14* for the corresponding band pair. For a TDD-TDD band pair, UE shall include at least one of *srs-FlexibleTiming* and/or *srs-HARQ-ReferenceConfig* when *rf-RetuningTimeDL* or *rf-RetuningTimeUL* corresponding to the band pair is larger than 1 OFDM symbol. | | - | |
| ***srs-HARQ-ReferenceConfig***  Indicates whether the UE supports configuration of *harq-ReferenceConfig-r14* for the corresponding band pair. For a TDD-TDD band pair, UE shall include at least one of *srs-FlexibleTiming* and/or *srs-HARQ-ReferenceConfig* when *rf-RetuningTimeDL* or *rf-RetuningTimeUL* corresponding to the band pair is larger than 1 OFDM symbol. | | - | |
| ***srs-MaxSimultaneousCCs***  Indicates the maximum number of simultaneously configurable target CCs for SRS switching (i.e., CCs for which srs-SwitchFromServCellIndex is configured) supported by the UE. | | - | |
| ***srs-UpPTS-6sym***  Indicates whether the UE supports up to 6-symbol SRS in UpPTS. | | - | |
| ***srvcc-FromUTRA-FDD-ToGERAN***  Indicates whether UE supports SRVCC handover from UTRA FDD PS HS to GERAN CS. | | - | |
| ***srvcc-FromUTRA-FDD-ToUTRA-FDD***  Indicates whether UE supports SRVCC handover from UTRA FDD PS HS to UTRA FDD CS. | | - | |
| ***srvcc-FromUTRA-TDD128-ToGERAN***  Indicates whether UE supports SRVCC handover from UTRA TDD 1.28Mcps PS HS to GERAN CS. | | - | |
| ***srvcc-FromUTRA-TDD128-ToUTRA-TDD128***  Indicates whether UE supports SRVCC handover from UTRA TDD 1.28Mcps PS HS to UTRA TDD 1.28Mcps CS. | | - | |
| ***ss-CCH-InterfHandl***  Indicates whether the UE supports synchronisation signal and common channel interference handling. | | Yes | |
| ***ss-SINR-Meas-NR-FR1, ss-SINR-Meas-NR-FR2***  Indicates whether the UE can perform NR SS-SINR measurement for a frequency range (i.e. FR1 or FR2) as specified in TS 38.215 [89]. | | - | |
| ***ssp10-TDD-Only***  Indicates the UE supports special subframe configuration 10 when operating only in TDD carriers (i.e., not in TDD/FDD CA or TDD/FS3 CA). A UE including this field shall not include *tdd-SpecialSubframe-r14*. | | - | |
| ***standaloneGNSS-Location***  Indicates whether the UE is equipped with a standalone GNSS receiver that may be used to provide detailed location information in RRC measurement report and logged measurements. | | - | |
| ***sTTI-SPT-Supported***  Indicates whether the UE supports the features STTI and/or SPT. If the UE supports STTI and/or SPT features, the UE shall report the field *sTTI-SPT-Supported* set to *supported* in capability signalling, irrespective of whether *requestSTTI-SPT-Capability* field is present or not. | | - | |
| ***sTTI-FD-MIMO-Coexistence***  Indicates whether the UE supports CSI feedback for more than 8 NZP CSI-RS ports on subframe based PUSCH in any serving cell and supporting STTI in any serving cell. | | - | |
| ***sTTI-SupportedCombinations***  Indicates the different combinations of short TTI lengths, see field description for *dl-STTI-Length* and *ul-STTI-Length*, that the UE supports in a single PUCCH group or in two PUCCH groups. A short TTI length combination is reported for DL first followed by UL. In case of two PUCCH groups the support for the primary PUCCH group is indicated first. | | - | |
| ***subcarrierPuncturingCE-ModeA, subcarrierPuncturingCE-ModeB***  Indicates whether the UE supports subcarrier puncturing in downlink when operating in CE mode A/B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***subcarrierSpacingMBMS-khz7dot5, subcarrierSpacingMBMS-khz1dot25***  Indicates the supported subcarrier spacings for MBSFN subframes in addition to 15 kHz subcarrier spacing. *subcarrierSpacingMBMS-khz1dot25* and *subcarrierSpacingMBMS-khz7dot5* indicates that the UE supports 1.25 and 7.5 kHz respectively for MBSFN subframes as described in TS 36.211 [21], clause 6.12. This field is included only if *fembmsMixedCell* or *fembmsDedicatedCell* is included. | | - | |
| ***subcarrierSpacingMBMS-khz2dot5, subcarrierSpacingMBMS-khz0dot37***  Presence of this field indicates the supported subcarrier spacings of 2.5kHz / 0.37kHz for MBSFN subframes in addition to 15 kHz subcarrier spacing when operating on the E-UTRA band given by the entry in *mbms-SupportedBandInfoList* as described in TS 36.211 [21], clause 6.12. | | - | |
| ***subframeResourceResvDL-CE-ModeA, subframeResourceResvDL-CE-ModeB, subframeResourceResvUL-CE-ModeA, subframeResourceResvUL-CE-ModeB***  Indicates whether the UE supports Subframe-level time-domain resource reservation in downlink/uplink when operating in CE mode A/B, as specified in TS 36.211 [21] and TS 36.213 [23]. | | Yes | |
| ***subslotPDSCH-TxDiv-TM9and10***  Indicates whether the UE supports TX diversity transmission using ports 7 and 8 for TM9/10 for subslot PDSCH. | | Yes | |
| ***supportedBandCombination***  Includes the supported CA band combinations, if any, and may include all the supported non-CA bands. | | - | |
| ***supportedBandCombinationAdd-r11***  Includes additional supported CA band combinations in case maximum number of CA band combinations of *supportedBandCombination* is exceeded. | | - | |
| ***SupportedBandCombinationAdd-v11d0,*** ***SupportedBandCombinationAdd-v1250,*** ***SupportedBandCombinationAdd-v1270, SupportedBandCombinationAdd-v1320, SupportedBandCombinationAdd-v1380, SupportedBandCombinationAdd-v1390, SupportedBandCombinationAdd-v1430, SupportedBandCombinationAdd-v1450, SupportedBandCombinationAdd-v1470, SupportedBandCombinationAdd-v14b0, SupportedBandCombinationAdd-v1530, SupportedBandCombinationAdd-v1630***  If included, the UE shall include the same number of entries, and listed in the same order, as in *SupportedBandCombinationAdd-r11*. | | - | |
| ***SupportedBandCombinationAdd-v1610***  If included, the UE shall include the same number of entries, and listed in the same order, as in *SupportedBandCombinationAdd-r11*. If absent, network assumes gap is required when measurement is performed on any NR bands while UE is served by cell(s) belongs to an E-UTRA CA band combinations listed in *SupportedBandCombinationAdd-r11* except for the FR2 inter-RAT measurement which depends on the support of *independentGapConfig.* | | - | |
| ***SupportedBandCombinationExt, SupportedBandCombination-v1090, SupportedBandCombination-v10i0, SupportedBandCombination-v1130, SupportedBandCombination-v1250, SupportedBandCombination-v1270, SupportedBandCombination-v1320, SupportedBandCombination-v1380, SupportedBandCombination-v1390, SupportedBandCombination-v1430, SupportedBandCombination-v1450, SupportedBandCombination-v1470, SupportedBandCombination-v14b0, SupportedBandCombination-v1530, SupportedBandCombination-v1630***  If included, the UE shall include the same number of entries, and listed in the same order, as in *supportedBandCombination-r10*. | | - | |
| ***SupportedBandCombination-v1610***  If included, the UE shall include the same number of entries, and listed in the same order, as in *supportedBandCombination-r10*. If absent, network assumes gap is required when measurement is performed on any NR bands while UE is served by cell(s) belongs to an E-UTRA CA band combinations listed in *supportedBandCombination-r10* except for the FR2 inter-RAT measurement which depends on the support of *independentGapConfig.* | | - | |
| ***supportedBandCombinationReduced***  Includes the supported CA band combinations, and may include the fallback CA combinations specified in TS 36.101 [42], clause 4.3A. This field also indicates whether the UE supports reception of *requestReducedFormat*. | | - | |
| ***SupportedBandCombinationReduced-v1320, SupportedBandCombinationReduced-v1380, SupportedBandCombinationReduced-v1390, SupportedBandCombinationReduced-v1430, SupportedBandCombinationReduced-v1450, SupportedBandCombinationReduced-v1470, SupportedBandCombinationReduced-v14b0, SupportedBandCombinationReduced-v1530, SupportedBandCombinationReduced-v1630***  If included, the UE shall include the same number of entries, and listed in the same order, as in *supportedBandCombinationReduced-r13*. | | - | |
| ***SupportedBandCombinationReduced-v1610***  If included, the UE shall include the same number of entries, and listed in the same order, as in *supportedBandCombinationReduced-r13*. If absent, network assumes gap is required when measurement is performed on any NR bands while UE is served by cell(s) belongs to an E-UTRA CA band combinations listed in *supportedBandCombinationReduced-r13* except for the FR2 inter-RAT measurement which depends on the support of *independentGapConfig.* | | - | |
| ***SupportedBandGERAN***  GERAN band as defined in TS 45.005 [20]. | | No | |
| ***SupportedBandList1XRTT***  One entry corresponding to each supported CDMA2000 1xRTT band class. | | - | |
| ***SupportedBandListEUTRA***  Includes the supported E-UTRA bands. This field shall include all bands which are indicated in *BandCombinationParameters*. | | - | |
| ***SupportedBandListEUTRA-v9e0, SupportedBandListEUTRA-v1250, SupportedBandListEUTRA-v1310, SupportedBandListEUTRA-v1320***  If included, the UE shall include the same number of entries, and listed in the same order, as in *supportedBandListEUTRA* (i.e. without suffix). | | - | |
| ***SupportedBandListGERAN*** | | No | |
| ***SupportedBandListHRPD***  One entry corresponding to each supported CDMA2000 HRPD band class. | | - | |
| ***SupportedBandListNR-SA***  Includes the NR bands supported by the UE in NR-SA (for handover and redirection). The field is included in case the UE supports NR SA as specified in TS 38.331 [32] and not otherwise. The presence of this field also indicates that the UE can perform both NR SS-RSRP and SS-RSRQ measurement in the included NR band(s) as specified in TS 38.215 [89]. | | No | |
| ***supportedBandListEN-DC***  Includes the NR bands supported by the UE in (NG)EN-DC. The field is included in case the parameter *en-DC* or *ng-EN-DC* is present and set to *supported* and not otherwise. The presence of this field also indicates that the UE can perform both NR SS-RSRP and SS-RSRQ measurement in the included NR band(s) as specified in TS 38.215 [89]. | | - | |
| ***supportedBandListWLAN***  Indicates the supported WLAN bands by the UE. | | - | |
| ***SupportedBandUTRA-FDD***  UTRA band as defined in TS 25.101 [17]. | | - | |
| ***SupportedBandUTRA-TDD128***  UTRA band as defined in TS 25.102 [18]. | | - | |
| ***SupportedBandUTRA-TDD384***  UTRA band as defined in TS 25.102 [18]. | | - | |
| ***SupportedBandUTRA-TDD768***  UTRA band as defined in TS 25.102 [18]. | | - | |
| ***supportedBandwidthCombinationSet***  The *supportedBandwidthCombinationSet* indicated for a band combination is applicable to all bandwidth classes indicated by the UE in this band combination.  Field encoded as a bit map, where bit N is set to "1" if UE support Bandwidth Combination Set N for this band combination, see 36.101 [42]. The leading / leftmost bit (bit 0) corresponds to the Bandwidth Combination Set 0, the next bit corresponds to the Bandwidth Combination Set 1 and so on. The UE shall neither include the field for a non-CA band combination, nor for a CA band combination for which the UE only supports Bandwidth Combination Set 0. | | - | |
| ***supportedCellGrouping***  This field indicates for which mapping of serving cells to cell groups (i.e. MCG or SCG) the UE supports asynchronous DC. This field is only present for a band combination with more than two but less than six band entries where the UE supports asynchronous DC. If this field is not present but asynchronous operation is supported, the UE supports all possible mappings of serving cells to cell groups for the band combination. The bitmap size is selected based on the number of entries in the combinations, i.e., in case of three entries, the bitmap corresponding to *threeEntries* is selected and so on.  A bit in the bit string set to 1 indicates that the UE supports asynchronous DC for the cell grouping option represented by the concerned bit position. Each bit position represents a different cell grouping option, as illustrated by a table, see NOTE 5. A cell grouping option is represented by a number of bits, each representing a particular band entry in the band combination with the left-most bit referring to the band listed first in the band combination, etc. Value 0 indicates that the carriers of the corresponding band entry are mapped to a first cell group, while value 1 indicates that the carriers of the corresponding band entry are mapped to a second cell group.  It is noted that the mapping table does not include entries with all bits set to the same value (0 or 1) as this does not represent a DC scenario (i.e. indicating that the UE supports that all carriers of the corresponding band entry are in one cell group). | | - | |
| ***supportedCSI-Proc, sTTI-SupportedCSI-Proc***  Indicates the maximum number of CSI processes supported on a component carrier within a band. Value n1 corresponds to 1 CSI process, value n3 corresponds to 3 CSI processes, and value n4 corresponds to 4 CSI processes. If this field is included, the UE shall include the same number of entries listed in the same order as in *BandParameters/STTI-SPT-BandParameters*. If the UE supports at least 1 CSI process on any component carrier, then the UE shall include this field in all bands in all band combinations. | | - | |
| ***supportedCSI-Proc (in FeatureSetDL-PerCC)***  In MR-DC, indicates the number of CSI processes for the component carrier in the corresponding bandwidth class. If the UE supports at least 1 CSI process, then the UE shall include this field. | | - | |
| ***supportedMIMO-CapabilityDL-MRDC (in FeatureSetDL-PerCC)***  In MR-DC, indicates the maximum number of supported layers in TM9/10 for the component carrier in the corresponding bandwidth class. | | - | |
| ***supportedNAICS-2CRS-AP***  If included, the UE supports NAICS for the band combination. The UE shall include a bitmap of the same length, and in the same order, as in *naics-Capability-List,* to indicate 2 CRS AP NAICS capability of the band combination. The first/ leftmost bit points to the first entry of *naics-Capability-List*, the second bit points to the second entry of *naics-Capability-List*, and so on.  For band combinations with a single component carrier, UE is only allowed to indicate {*numberOfNAICS-CapableCC*, *numberOfAggregatedPRB*} = {1, 100} if NAICS is supported. | | - | |
| ***supportedOperatorDic***  Indicates whether the UE supports operator defined dictionary. If UE supports operator defined dictionary, the UE shall report *versionOfDictionary* and *associatedPLMN-ID* of the stored operator defined dictionary. This parameter is not required to be present if the UE is in VPLMN. In this release of the specification, UE can only support one operator defined dictionary. The *associatedPLMN-ID* is only associated to the operator defined dictionary which has no relationship with UE's HPLMN ID. | | - | |
| ***supportRohcContextContinue***  Indicates whether the UE supports ROHC context continuation operation where the UE does not reset the current ROHC context upon handover. | | - | |
| ***supportedROHC-Profiles***  Indicates the ROHC profiles that UE supports in both uplink and downlink. | | - | |
| ***supportedUplinkOnlyROHC-Profiles***  Indicates the ROHC profiles that UE supports in uplink and not in downlink, see TS 36.323 [8] | | - | |
| ***supportedStandardDic***  Indicates whether the UE supports standard dictionary for SIP and SDP as specified in TS 36.323 [8]. | | - | |
| ***supportedUDC***  Indicates whether the UE supports UL data compression, see TS 36.323 [8]. | | - | |
| ***tdd-SpecialSubframe***  Indicates whether the UE supports TDD special subframe defined in TS 36.211 [21]. A UE shall indicate *tdd-SpecialSubframe-r11* if it supports the TDD special subframes ssp7 and ssp9. A UE shall indicate *tdd-SpecialSubframe-r14* if it supports the TDD special subframe ssp10, except when *ssp10-TDD-Only-r14* is included. | | Yes | |
| ***tdd-FDD-CA-PCellDuplex***  The presence of this field indicates that the UE supports TDD/FDD CA in any supported band combination including at least one FDD band with *bandParametersUL* and at least one TDD band with *bandParametersUL*. The first bit is set to "1" if UE supports the TDD PCell. The second bit is set to "1" if UE supports FDD PCell. This field is included only if the UE supports band combination including at least one FDD band with *bandParametersUL* and at least one TDD band with *bandParametersUL*. If this field is included, the UE shall set at least one of the bits as "1". If this field is included with DC, then it is applicable within a CG, and the presence of this field indicates the capability of the UE to support TDD/FDD CA with at least one FDD band and at least one TDD band in the same CG, with the value indicating the support for TDD/FDD PCell (PSCell). | | No | |
| ***tdd-TTI-Bundling***  The presence of this field indicates whether the UE supporting TDD special subframe configuration 10 also supports TTI bundling for TDD configuration 2 and 3 when PUSCH transimission in UpPTS is configured, see TS 36.213 [23], clause 8.0. If this field is present, the *tdd-SpecialSubframe-r14* or *ssp10-TDD-Only-r14* shall be present. | | Yes | |
| ***timeReferenceProvision***  Indicates whether the UE supports provision of time reference in *DLInformationTransfer* message. | | - | |
| ***timeSeparationSlot2, timeSeparationSlot4***  Indicates whether the UE supports time staggering length of 2 slots (MBSFN reference signal pattern type 2) / 4 slots (MBSFN reference signal pattern type 1) for MBSFN-RS associated with PMCH with subcarrier spacing of 0.37 kHz for MBSFN subframes when operating on the E‑UTRA band given by the entry in *mbms-SupportedBandInfoList* as described in TS 36.211 [21], clause 6.10.2.2.4. | | - | |
| ***timerT312***  Indicates whether the UE supports T312. | | No | |
| ***tm5-FDD***  Indicates whether the UE supports the PDSCH transmission mode 5 in FDD. | - | | |
| ***tm5-TDD***  Indicates whether the UE supports the PDSCH transmission mode 5 in TDD. | - | | |
| ***tm6-CE-ModeA***  Indicates whether the UE supports tm6 operation in CE mode A, see TS 36.213 [23], clause 7.2.3. This field can be included only if *ce-ModeA* is included. | | Yes | |
| ***tm8-slotPDSCH***  Indicates whether the UE supports configuration and decoding of TM8 for slot PDSCH in TDD. | | - | |
| ***tm9-CE-ModeA***  Indicates whether the UE supports tm9 operation in CE mode A, see TS 36.213 [23], clause 7.2.3. This field can be included only if *ce-ModeA* is included. | | Yes | |
| ***tm9-CE-ModeB***  Indicates whether the UE supports tm9 operation in CE mode B, see TS 36.213 [23], clause 7.2.3. This field can be included only if *ce-ModeB* is included. | | Yes | |
| ***tm9-LAA***  Indicates whether the UE supports tm9 operation on LAA cell(s). This field can be included only if *downlinkLAA* is included. | | - | |
| ***tm9-slotSubslot***  Indicates whether the UE supports configuration and decoding of TM9 for slot and/or subslot PDSCH for non-MBSFN. | | Yes | |
| ***tm9-slotSubslotMBSFN***  Indicates whether the UE supports configuration and decoding of TM9 for slot and/or subslot PDSCH for MBSFN. | | Yes | |
| ***tm9-With-8Tx-FDD***  Indicates whether the UE supports PDSCH transmission mode 9 with 8 CSI reference signal ports for FDD when not operating in CE mode. | | Yes | |
| ***tm10-LAA***  Indicates whether the UE supports tm10 operation on LAA cell(s). This field can be included only if *downlinkLAA* is included. | | - | |
| ***tm10-slotSubslot***  Indicates whether the UE supports configuration and decoding of TM10 for slot and/or subslot PDSCH for non-MBSFN. | | Yes | |
| ***tm10-slotSubslotMBSFN***  Indicates whether the UE supports configuration and decoding of TM10 for slot and/or subslot PDSCH for MBSFN. | | Yes | |
| ***totalWeightedLayers***  Indicates total number of weighted layers the UE can process for FD-MIMO. See NOTE 8. | | - | |
| ***twoAntennaPortsForPUCCH*** | | No | |
| ***twoStepSchedulingTimingInfo***  Presence of this field indicates that the UE supports uplink scheduling using PUSCH trigger A and PUSCH trigger B (as defined in TS 36.213 [23]).  This field also indicates the timing between the PUSCH trigger B and the earliest time the UE supports performing the associated UL transmission. For reception of PUSCH trigger B in subframe N, value *nPlus1* indicates that the UE supports performing the UL transmission in subframe N+1, value *nPlus2* indicates that the UE supports performing the UL transmission in subframe N+2, and so on.  This field can be included only if *uplinkLAA* is included. | | - | |
| ***txAntennaSwitchDL, txAntennaSwitchUL***  The presence of *txAntennaSwitchUL* indicates the UE supports transmit antenna selection for this UL band in the band combination as described in TS 36.213 [23], clauses 8.2 and 8.7.  The field *txAntennaSwitchDL* indicates the entry number of the first-listed band with UL in the band combination that affects this DL. The field *txAntennaSwitchUL* indicates the entry number of the first-listed band with UL in the band combination that switches together with this UL. Value 1 means first entry, value 2 means second entry and so on. All DL and UL that switch together indicate the same entry number.  For the case of carrier switching, the antenna switching capability for the target carrier configuration is indicated as follows:  For UE configured with a set of component carriers belonging to a band combination Cbaseline = {b1(1),…,bx(1),…,by(0),…}, where "1/0" denotes whether the corresponding band has an uplink, if a component carrier in bx is to be switched to a component carrier in by (according to *srs-SwitchFromServCellIndex*), the antenna switching capability is derived based on band combination Ctarget = {b1(1),…,bx(0),…,by(1),…}. | | - | |
| ***txDiv-PUCCH1b-ChSelect***  Indicates whether the UE supports transmit diversity for PUCCH format 1b with channel selection. | | Yes | |
| ***txDiv-SPUCCH***  Indicates whether the UE supports Tx diversity on SPUCCH format 1/1a/1b/3. | | Yes | |
| ***tx-Sidelink, rx-Sidelink***  Indicates that the UE supports sidelink transmission/reception on the band in the band combination.  For NR sidelink transmission, *tx-Sidelink* is only applicable if the UE supports at least one of *sl-TransmissionMode1-r16* and *sl-TransmissionMode2-r16* on the band as specified in TS 38.331 [82].  For NR sidelink reception, *rx-Sidelink* is only applicable if the UE supports *sl-Reception-r16* on the band as specified in TS 38.331 [82]. | | - | |
| ***uci-PUSCH-Ext***  Indicates whether the UE supports an extension of UCI delivering more than 22 HARQ-ACK bits on PUSCH as specified in TS 36.212 [22], clause 5.2.2.6 and TS 36.213 [23], clause 8.6.3. | | No | |
| ***ue-AutonomousWithFullSensing***  Indicates whether the UE supports transmitting PSCCH/PSSCH using UE autonomous resource selection mode with full sensing (i.e., continuous channel monitoring) for V2X sidelink communication and the UE supports maximum transmit power associated with Power class 3 V2X UE, see TS 36.101 [42]. | | - | |
| ***ue-AutonomousWithPartialSensing***  Indicates whether the UE supports transmitting PSCCH/PSSCH using UE autonomous resource selection mode with partial sensing (i.e., channel monitoring in a limited set of subframes) for V2X sidelink communication and the UE supports maximum transmit power associated with Power class 3 V2X UE, see TS 36.101 [42]. | | - | |
| ***ue-Category***  UE category as defined in TS 36.306 [5]. Set to values 1 to 12 in this version of the specification. | | - | |
| ***ue-CategoryDL***  UE DL category as defined in TS 36.306 [5]. Value *n17* corresponds to UE category 17, value *m1* corresponds to UE category M1, value *oneBis* corresponds to UE category 1bis, value m2 corresponds to UE category M2. For ASN.1 compatibility, a UE indicating DL category 0, m1 or m2 shall also indicate any of the categories (1..5) in *ue-Category* (without suffix), which is ignored by the eNB, a UE indicating UE category oneBis shall also indicate UE category 1 in *ue-Category* (without suffix), and a UE indicating UE category m2 shall also indicate UE category m1. The field *ue-CategoryDL* is set to values 0, m1, oneBis, m2, 4, 6, 7, 9 to 16, n17, 18, 19, 20, 21, 22, 23, 24, 25, 26 in this version of the specification. | | - | |
| ***ue-CategorySL-C-TX***  UE SL category for V2X transmission as defined in TS 36.306 [5]. Set to values 1 to 5 in this version of the specification. | | | - |
| ***ue-CategorySL-C-RX***  UE SL category for V2X reception as defined in TS 36.306 [5]. Set to values 1 to 4 in this version of the specification. | | | - |
| ***ue-CategoryUL***  UE UL category as defined in TS 36.306 [5]. Value *n14* corresponds to UE category 14, value *n16* corresponds to UE category 16 and so on. Value *m1* corresponds to UE category M1, value *m2* corresponds to UE category M2, value *oneBis* corresponds to UE category 1bis. The field *ue-CategoryUL* is set to values m1, m2, 0, oneBis, 3, 5, 7, 8, 13, n14, 15, n16 to n21 or 22 to 26 in this version of the specification. | | - | |
| ***ue-CA-PowerClass-N***  Indicates whether the UE supports UE power class N in the E-UTRA band combination, see TS 36.101 [42] and TS 36.307 [78]. If *ue-CA-PowerClass-N* is not included, UE supports the default UE power class in the E-UTRA band combination, see TS 36.101 [42]. | | - | |
| ***ue-CE-NeedULGaps***  Indicates whether the UE needs uplink gaps during continuous uplink transmission in FDD as specified in TS 36.211 [21] and TS 36.306 [5]. | | - | |
| ***ue-PowerClass-N, ue-PowerClass-5***  Indicates whether the UE supports UE power class 1, 2, 4 or 5 in the E-UTRA band, see TS 36.101 [42] and TS 36.307 [79]. UE includes either *ue-PowerClass-N* or *ue-PowerClass-5*. If neither *ue-PowerClass-N* nor *ue-PowerClass-5* is included, UE supports the default UE power class in the E-UTRA band, see TS 36.101 [42]. | | - | |
| ***ue-Rx-TxTimeDiffMeasurements***  Indicates whether the UE supports Rx - Tx time difference measurements. | | No | |
| ***ue-SpecificRefSigsSupported*** | | No | |
| ***ue-SSTD-Meas***  Indicates whether the UE supports SSTD measurements between the PCell and the PSCell as specified in TS 36.214 [48] and TS 36.133 [16]. | | - | |
| ***ue-TxAntennaSelectionSupported***  Except for the supported band combinations for which *bandParameterList-v1380* is included, TRUE indicates that the UE is capable of supporting UE transmit antenna selection such that all the supported bands in the band combination are affected by transmit antenna switching, as described in TS 36.213 [23], clause 8.7. E-UTRAN ignores this field for band combinations for which *bandParameterList-v1380* is included. | | Yes | |
| ***ue-TxAntennaSelection-SRS-1T4R***  Indicates whether the UE supports selecting one antenna among four antennas to transmit SRS for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***ue-TxAntennaSelection-SRS-2T4R-2Pairs***  Indicates whether the UE supports selecting one antenna pair between two antenna pairs to transmit SRS simultaneously for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***ue-TxAntennaSelection-SRS-2T4R-3Pairs***  Indicates whether the UE supports selecting one antenna pair among three antenna pairs to transmit SRS simultaneously for the corresponding band of the band combination as described in TS 36.213 [23]. | | - | |
| ***ul-64QAM***  Indicates whether the UE supports 64QAM in UL on the band. This field is only present when the field ue*-CategoryUL* indicates UL UE category that supports UL 64QAM, see TS 36.306 [5], Table 4.1A-2. If the field is present for one band, the field shall be present for all bands including downlink only bands. | | - | |
| ***ul-256QAM***  Indicates whether the UE supports 256QAM in UL on the band in the band combination. This field is only present when the field ue*-CategoryUL* indicates UL UE category that supports 256QAM in UL, see TS 36.306 [5], Table 4.1A-2. The UE includes this field only if the field *ul-256QAM-perCC-InfoLis*t is not included. | | - | |
| ***ul-256QAM (in FeatureSetUL-PerCC)***  Indicates whether the UE supports 256QAM in UL for MR-DC within the indicated feature set. This field is only present when the field ue-CategoryUL indicates UL UE category that supports 256QAM in UL, see TS 36.306 [5], Table 4.1A-2. | | - | |
| ***ul-256QAM-perCC-InfoList***  Indicates, per serving carrier of which the corresponding bandwidth class includes multiple serving carriers (i.e. bandwidth class B, C, D and so on), whether the UE supports 256QAM in the band combination. The number of entries is equal to the number of component carriers in the corresponding bandwidth class. The UE shall support the setting indicated in each entry of the list regardless of the order of entries in the list. This field is only present when the field *ue-CategoryUL* indicates UL UE category that supports 256QAM in UL, see TS 36.306 [5], Table 4.1A-2. The UE includes this field only if the field *ul-256QAM* is not included. | | - | |
| ***ul-256QAM-Slot***  Indicates whether the UE supports 256QAM in UL for slot TTI operation on the band. | | - | |
| ***ul-256QAM-Subslot***  Indicates whether the UE supports 256QAM in UL for subslot TTI operation on the band. | | - | |
| ***ul-AsyncHarqSharingDiff-TTI-Lengths***  Indicates whether the UE supports UL asynchronous HARQ sharing between different TTI lengths for an UL serving cell. | | Yes | |
| ***ul-CoMP***  Indicates whether the UE supports UL Coordinated Multi-Point operation. | | No | |
| ***ul-dmrs-Enhancements***  Indicates whether the UE supports UL DMRS enhancements as defined in TS 36.211 [21], clause 6.10.3A. | | Yes | |
| ***ul-PDCP-AvgDelay***  Indicates whether the UE supports UL PDCP Packet Average Delay measurement (as specified in TS 38.314 [103]) and reporting in RRC\_CONNECTED. | | - | |
| ***ul-PDCP-Delay***  Indicates whether the UE supports UL PDCP Packet Delay per QCI measurement as specified in TS 36.314 [71]. | | - | |
| ***ul-powerControlEnhancements***  Indicates whether UE supports UplinkPowerControlDedicated. | | Yes | |
| ***uplinkLAA***  Presence of the field indicates that the UE supports uplink LAA operation. | | - | |
| ***uss-BlindDecodingAdjustment***  Indicates whether the UEsupports blind decoding adjustment on UE specific search space as defined in TS 36.213 [22]. This field can be included only if uplinkLAA is included. | | - | |
| ***uss-BlindDecodingReduction***  Indicates whether the UE supports blind decoding reduction on UE specific search space by not monitoring DCI format 0A/0B/4A/4B as defined in TS 36.213 [22]. This field can be included only if uplinkLAA is included. | | - | |
| ***unicastFrequencyHopping***  Indicates whether the UE supports frequency hopping for unicast MPDCCH/PDSCH (configured by *mpdcch-pdsch-HoppingConfig*) and unicast PUSCH (configured by *pusch-HoppingConfig*). | | - | |
| ***unicast-fembmsMixedSCell***  Indicates whether the UE supports unicast reception from FeMBMS/Unicast mixed cell. This field is included only if UE supports carrier aggregation. | | No | |
| ***utra-GERAN-CGI-Reporting-ENDC***  Indicates whether the UE supports Inter-RAT report CGI procedure towards GERAN/UTRA cell when it is configured with (NG)EN-DC wherein either MN and SN have different DRX cycles, or on-duration configured by MN does not contain on-duration configured by SN if their DRX cycles are same. | | | Yes |
| ***utran-ProximityIndication***  Indicates whether the UE supports proximity indication for UTRAN CSG member cells. | | - | |
| ***utran-SI-AcquisitionForHO***  Indicates whether the UE supports, upon configuration of si-RequestForHO by the network, acquisition and reporting of relevant information using autonomous gaps by reading the SI from a neighbouring UMTS cell. | | Yes | |
| ***v2x-BandParametersNR***  Includes the NR *BandParametersSidelink-r16* IE as specified in TS 38.331 [82]. The field includes the per-band sidelink capability for NR-PC5. | | - | |
| ***v2x-BandwidthClassTxSL, v2x-BandwidthClassRxSL***  The bandwidth class for V2X sidelink transmission and reception supported by the UE as defined in TS 36.101 [42], Table 5.6G.1-3.  The UE explicitly includes all the supported bandwidth class combinations for V2X sidelink transmission or reception in the band combination signalling. Support for one bandwidth class does not implicitly indicate support for another bandwidth class. | | - | |
| ***v2x-eNB-Scheduled***  Indicates whether the UE supports transmitting PSCCH/PSSCH using dynamic scheduling, SPS in eNB scheduled mode for V2X sidelink communication, reporting SPS assistance information and the UE supports maximum transmit power associated with Power class 3 V2X UE, see TS 36.101 [42] in a band. | | - | |
| ***v2x-EnhancedHighReception***  Indicates whether the UE supports reception of 30 PSCCH in a subframe and decoding of 204 RBs per subframe counting both PSCCH and PSSCH in a band for V2X sidelink communication. | | | - |
| ***v2x-HighPower***  Indicates whether the UE supports maximum transmit power associated with Power class 2 V2X UE for V2X sidelink transmission in a band, see TS 36.101 [42]. | | - | |
| ***v2x-HighReception***  Indicates whether the UE supports reception of 20 PSCCH in a subframe and decoding of 136 RBs per subframe counting both PSCCH and PSSCH in a band for V2X sidelink communication. | | - | |
| ***v2x-nonAdjacentPSCCH-PSSCH***  Indicates whether the UE supports transmission and reception in the configuration of non-adjacent PSCCH and PSSCH for V2X sidelink communication. | | - | |
| ***v2x-numberTxRxTiming***  Indicates the number of multiple reference TX/RX timings counted over all the configured sidelink carriers for V2X sidelink communication. | | - | |
| ***v2x-SensingReportingMode3***  Indicates whether the UE supports sensing measurements and reporting of measurement results in eNB scheduled mode for V2X sidelink communication. | | - | |
| ***v2x-SupportedBandCombinationList***  Indicates the supported band combination list on which the UE supports simultaneous transmission and/or reception of V2X sidelink communication. | |  | |
| ***v2x-SupportedBandCombinationListEUTRA-NR***  Indicates the supported band combination list on which the UE supports simultaneous transmission and/or reception of NR sidelink communication only, or joint V2X sidelink communication and NR sidelink communication. | | - | |
| ***v2x-SupportedTxBandCombListPerBC, v2x-SupportedRxBandCombListPerBC***  Indicates, for a particular band combination of EUTRA, the supported band combination list among *v2x-SupportedBandCombinationList* on which the UE supports simultaneous transmission or reception of EUTRA and V2X sidelink communication respectively. The first bit refers to the first entry of *v2x-SupportedBandCombinationList*, with value 1 indicating V2X sidelink transmission/reception is supported. | | - | |
| ***v2x-SupportedTxBandCombListPerBC-v1630, v2x-SupportedRxBandCombListPerBC-v1630***  Indicates, for a particular band combination of EUTRA, the supported band combination list among *v2x-SupportedBandCombinationListEUTRA-NR* on which the UE supports simultaneous transmission or reception of EUTRA and NR sidelink communication respectively, or simultaneous transmission or reception of EUTRA and joint V2X sidelink communication and NR sidelink communication respectively. The first bit refers to the first entry of *v2x-SupportedBandCombinationListEUTRA-NR*, with value 1 indicating V2X sidelink transmission/reception is supported. | | - | |
| ***v2x-TxWithShortResvInterval***  Indicates whether the UE supports 20 ms and 50 ms resource reservation periods for UE autonomous resource selection and eNB scheduled resource allocation for V2X sidelink communication. | | - | |
| ***virtualCellID-BasicSRS***  Indicates whether the UE supports virtual cell ID for basic SRS symbol(s). | | - | |
| ***virtualCellID-AddSRS***  This field indicates whether the UE supports virtual cell ID for additional SRS symbol(s). | | - | |
| ***voiceOverPS-HS-UTRA-FDD***  Indicates whether UE supports IMS voice according to GSMA IR.58 profile in UTRA FDD. | | - | |
| ***voiceOverPS-HS-UTRA-TDD128***  Indicates whether UE supports IMS voice in UTRA TDD 1.28Mcps. | | - | |
| ***whiteCellList***  Indicates whether the UE supports EUTRA white cell listing to limit the set of cells applicable for measurements. | | - | |
| ***widebandPRG-Slot, widebandPRG-Subslot, widebandPRG-Subframe***  Indicates whether the UE supports wideband precoding resource block group size for slot/subslot/subframe operation as specified in TS 36.213 [23]. | | - | |
| ***wlan-IW-RAN-Rules***  Indicates whether the UE supports RAN-assisted WLAN interworking based on access network selection and traffic steering rules. | | - | |
| ***wlan-IW-ANDSF-Policies***  Indicates whether the UE supports RAN-assisted WLAN interworking based on ANDSF policies. | | - | |
| ***wlan-MAC-Address***  Indicates the WLAN MAC address of this UE. | | - | |
| ***wlan-PeriodicMeas***  Indicates whether the UE supports periodic reporting of WLAN measurements. | | - | |
| ***wlan-ReportAnyWLAN***  Indicates whether the UE supports reporting of WLANs not listed in the *measObjectWLAN*. | | - | |
| ***wlan-SupportedDataRate***  Indicates the maximum WLAN data rate supported by the UE over all LWA bearers. Actual value of supported data rate is field value \* 10 Mbps (i.e., value 1 corresponds to 10 Mbps, value 2 corresponds to 20 Mbps and so on). | | - | |
| ***zp-CSI-RS-AperiodicInfo***  Indicates whether the UE supports aperiodic ZP-CSI-RS transmission for the indicated transmission mode. | | Yes | |

NOTE 1: The IE *UE-EUTRA-Capability* does not include AS security capability information, since these are the same as the security capabilities that are signalled by NAS. Consequently, AS need not provide "man-in-the-middle" protection for the security capabilities.

NOTE 2: The column FDD/ TDD diff indicates if the UE is allowed to signal, as part of the additional capabilities for an XDD mode i.e. within *UE-EUTRA-CapabilityAddXDD-Mode-xNM*, a different value compared to the value signalled elsewhere within *UE-EUTRA-Capability* (i.e. the common value, supported for both XDD modes). A '-' is used to indicate that it is not possible to signal different values (used for fields for which the field description is provided for other reasons). Annex E specifies for which TDD and FDD serving cells a UE supporting TDD/FDD CA shall support a capability for which it indicates support within the capability signalling.

NOTE 2a: From REL-15 onwards, the UE is not allowed to signal different values for FDD and TDD unless yes is indicated in column FDD/ TDD diff (i.e. no need to introduce field description solely for the purpose of indicate no).

NOTE 3: The *BandCombinationParameters* for the same band combination can be included more than once.

NOTE 4: UE CA and measurement capabilities indicate the combinations of frequencies that can be configured as serving frequencies.

NOTE 5: The grouping of the cells to the first and second cell group, as indicated by *supportedCellGrouping*, is shown in the table below. The leading / leftmost bit of *supportedCellGrouping* corresponds to the Bit String Position 1.

|  |  |  |  |
| --- | --- | --- | --- |
| Nr of Band Entries: | 5 | 4 | 3 |
| Length of Bit-String: | 15 | 7 | 3 |
| Bit String Position | Cell grouping option (0= first cell group, 1= second cell group) | | |
| 1 | 00001 | 0001 | 001 |
| 2 | 00010 | 0010 | 010 |
| 3 | 00011 | 0011 | 011 |
| 4 | 00100 | 0100 |  |
| 5 | 00101 | 0101 |  |
| 6 | 00110 | 0110 |  |
| 7 | 00111 | 0111 |  |
| 8 | 01000 |  |  |
| 9 | 01001 |  |  |
| 10 | 01010 |  |  |
| 11 | 01011 |  |  |
| 12 | 01100 |  |  |
| 13 | 01101 |  |  |
| 14 | 01110 |  |  |
| 15 | 01111 |  |  |

NOTE 6: UE includes the *intraBandContiguousCC-InfoList-r12* also for bandwidth class A because of the presence conditions in *BandCombinationParameters-v1270*. For example, if UE supports CA\_1A\_41D band combination, if UE includes the field *intraBandContiguousCC-InfoList-r12* for band 41, the UE includes *intraBandContiguousCC-InfoList-r12* also for band 1.

NOTE 6a: For multiple *BandParameters* entries with the same *bandEUTRA* and same *ca-BandwidthClassDL* in a supported band combination, the UE capabilities indicated by *BandParameters* are agnostic to the order in which they are indicated in the *bandParameterList*, under the condition that the set of the capabilities indicated for the concerned *bandEUTRA* (e.g. *bandParametersDL* and *bandParametersUL)* are used together, and the concerned *BandParameters* correspond to the *supportedBandwithCombinationSet* for which set of channel bandwidths for carrier(s) is the same among sub-blocks, as defined in TS 36.101 [42], Table 5.6A.1-3, Table 5.6A.1-4, Table 5.6A.1-5.

NOTE 7: For a UE that indicates release X in field *accessStratumRelease* but supports a feature specified in release X+ N (i.e. early UE implementation), the ASN.1 comprehension requirement are specified in Annex F.

NOTE 8: For a UE that does not include *mimo-WeightedLayersCapabilities-r13*, or for the case with no CC configured with FD-MIMO, the FD-MIMO processing capability condition is not applicable (i.e. considered as satisfied). For a UE that includes *mimo-WeightedLayersCapabilities-r13*, the FD-MIMO processing capability condition is satisfied if the equation 4.3.28.13-1 in TS 36.306 [5] is satisfied.

/\* end of ninth change \*/

/\* start of tenth change \*/

## 7.1 UE variables

/\*Unaffected IEs are excluded\*/

#### – *VarLogMeasConfig*

The UE variable *VarLogMeasConfig* includes the configuration of the logging of measurements to be performed by the UE while in RRC\_IDLE, covering intra-frequency, inter-frequency, inter-RAT mobility and MBSFN related measurements. If MBSFN logging is configured, the UE performs logging of measurements while in both RRC\_IDLE and RRC\_CONNECTED. Otherwise, the UE performs logging of measurements only while in RRC\_IDLE.

*VarLogMeasConfig* UE variable-- ASN1START

VarLogMeasConfig-r10 ::= SEQUENCE {

areaConfiguration-r10 AreaConfiguration-r10 OPTIONAL,

loggingDuration-r10 LoggingDuration-r10,

loggingInterval-r10 LoggingInterval-r10

}

VarLogMeasConfig-r11 ::= SEQUENCE {

areaConfiguration-r10 AreaConfiguration-r10 OPTIONAL,

areaConfiguration-v1130 AreaConfiguration-v1130 OPTIONAL,

loggingDuration-r10 LoggingDuration-r10,

loggingInterval-r10 LoggingInterval-r10

}

VarLogMeasConfig-r12 ::= SEQUENCE {

areaConfiguration-r10 AreaConfiguration-r10 OPTIONAL,

areaConfiguration-v1130 AreaConfiguration-v1130 OPTIONAL,

loggingDuration-r10 LoggingDuration-r10,

loggingInterval-r10 LoggingInterval-r10,

targetMBSFN-AreaList-r12 TargetMBSFN-AreaList-r12 OPTIONAL

}

VarLogMeasConfig-r15 ::= SEQUENCE {

areaConfiguration-r10 AreaConfiguration-r10 OPTIONAL,

areaConfiguration-v1130 AreaConfiguration-v1130 OPTIONAL,

loggingDuration-r10 LoggingDuration-r10,

loggingInterval-r10 LoggingInterval-r10,

targetMBSFN-AreaList-r12 TargetMBSFN-AreaList-r12 OPTIONAL,

bt-NameList-r15 BT-NameList-r15 OPTIONAL,

wlan-NameList-r15 WLAN-NameList-r15 OPTIONAL

}

VarLogMeasConfig-r17 ::= SEQUENCE {

areaConfiguration-r10 AreaConfiguration-r10 OPTIONAL,

areaConfiguration-v1130 AreaConfiguration-v1130 OPTIONAL,

loggingDuration-r10 LoggingDuration-r10,

loggingInterval-r10 LoggingInterval-r10,

targetMBSFN-AreaList-r12 TargetMBSFN-AreaList-r12 OPTIONAL,

bt-NameList-r15 BT-NameList-r15 OPTIONAL,

wlan-NameList-r15 WLAN-NameList-r15 OPTIONAL,

measUncomBarPre-r17 ENUMERATED {true} OPTIONAL

}

-- ASN1STOP

/\* end of tenth change \*/