|  |  |
| --- | --- |
| 3GPP TR 37.717-31-11 V0.2.0 (2020-11) | |
| Technical Report | |
| 3rd Generation Partnership Project;  Technical Specification Group Radio Access Networks;  Dual Connectivity (DC) of 3 bands LTE inter-band CA (3DL/1UL) and 1 NR band (1DL/1UL)  (Release 17) | |
|  | |
| *5G-logo_175px* | 3GPP-logo_web |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  | |
| The present document has been developed within the 3rd Generation Partnership Project (3GPP TM) and may be further elaborated for the purposes of 3GPP. The present document has not been subject to any approval process by the 3GPPOrganizational Partners and shall not be implemented. This Specification is provided for future development work within 3GPPonly. The Organizational Partners accept no liability for any use of this Specification. Specifications and Reports for implementation of the 3GPP TM system should be obtained via the 3GPP Organizational Partners' Publications Offices. | |

|  |
| --- |
|  |
| ***3GPP***  Postal address  3GPP support office address  650 Route des Lucioles - Sophia Antipolis  Valbonne - FRANCE  Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16  Internet  http://www.3gpp.org |
| ***Copyright Notification***  No part may be reproduced except as authorized by written permission. The copyright and the foregoing restriction extend to reproduction in all media.  © 2020, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC).  All rights reserved.  UMTS™ is a Trade Mark of ETSI registered for the benefit of its members  3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners LTE™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners  GSM® and the GSM logo are registered and owned by the GSM Association |

Contents

Foreword 8

1 Scope 10

2 References 10

3 Definitions of terms, symbols and abbreviations 10

3.1 Terms 10

3.2 Symbols 10

3.3 Abbreviations 10

4 Background 11

4.1 TR maintenance 11

5 DC of 3 LTE band (3DL/1UL) + 1 NR band: Specific Band Combination Part 11

5.1 Inter-band EN-DC 11

5.1.1 DC\_1-3\_(n)41 11

5.1.1.2 ∆TIB and ∆RIB values 11

5.1.1.3 REFSENS requirements 12

5.1.2 DC\_1-3-41\_n28 12

5.1.2.1 Configuration for EN-DC 12

5.1.2.2 ∆TIB and ∆RIB values 12

5.1.2.3 REFSENS requirements 12

5.1.3 DC\_3-7-8\_n40 13

5.1.3.1 Configurations for EN-DC 13

5.1.3.2 ∆TIB and ∆RIB values 13

5.1.3.3 Reference sensitivity exceptions 13

5.1.4 DC\_3-7-28\_n1 13

5.1.4.1 Configurations for EN-DC 13

5.1.4.2 ∆TIB and ∆RIB values 14

5.1.4.3 Reference sensitivity exceptions 14

5.1.5 DC\_5-7-66\_n66 14

5.1.5.1 Configurations for EN-DC 14

5.1.5.2 ∆TIB and ∆RIB values 14

5.1.5.3 Reference sensitivity exceptions 15

5.1.6 DC\_3-19-42\_n1 15

5.1.6.1 Configuration for EN-DC 15

5.1.6.2 ∆TIB and ∆RIB values 15

5.1.6.3 Reference sensitivity exceptions 15

5.1.7 DC\_3-21-42\_n1 15

5.1.7.1 Configuration for EN-DC 15

5.1.7.2 ∆TIB and ∆RIB values 16

5.1.7.3 Reference sensitivity exceptions 16

5.1.8 DC\_19-21-42\_n1 16

5.1.8.1 Configuration for EN-DC 16

5.1.8.2 ∆TIB and ∆RIB values 16

5.1.8.3 Reference sensitivity exceptions 17

5.1.9 DC\_2-28-66\_n66 17

5.1.9.1 Operating bands for EN-DC 17

5.1.9.2 Configuration for EN-DC 17

5.1.9.3 ∆TIB and ∆RIB values 17

5.1.10 DC\_7-28-66\_n66 18

5.1.10.1 Operating bands for EN-DC 18

5.1.10.2 Configuration for EN-DC 18

5.1.10.3 ∆TIB and ∆RIB values 18

5.1.11 DC\_2-7-28\_n66 18

5.1.11.1 Operating bands for EN-DC 18

5.1.11.2 Configuration for EN-DC 19

5.1.11.3 ∆TIB and ∆RIB values 19

5.1.12 DC\_1-8-11\_n3 19

5.1.12.1 Configurations for EN-DC 19

5.1.12.2 ∆TIB and ∆RIB values 19

5.1.12.3 Reference sensitivity exceptions 20

5.1.13 DC\_1-8-42\_n28 20

5.1.13.1 Configurations for EN-DC 20

5.1.13.2 ∆TIB and ∆RIB values 20

5.1.13.3 Reference sensitivity exceptions 20

5.1.14 DC\_1-7-32\_n28 21

5.1.14.1 Configuration for EN-DC 21

5.1.14.2 ∆TIB and ∆RIB values 21

5.1.14.3 Reference sensitivity exceptions 21

5.1.15 DC\_1-7-32\_n78 21

5.1.15.1 Configuration for EN-DC 21

5.1.15.2 ∆TIB and ∆RIB values 21

5.1.15.3 Reference sensitivity exceptions 22

5.1.16 DC\_1-20-32\_n28 22

5.1.16.1 Configuration for EN-DC 22

5.1.16.2 ∆TIB and ∆RIB values 22

5.1.16.3 Reference sensitivity exceptions 22

5.1.17 DC\_1-20-32\_n78 22

5.1.17.1 Configuration for EN-DC 22

5.1.17.2 ∆TIB and ∆RIB values 23

5.1.17.3 Reference sensitivity exceptions 23

5.1.18 DC\_3-7-32\_n78 23

5.1.18.1 Configuration for EN-DC 23

5.1.18.2 ∆TIB and ∆RIB values 23

5.1.18.3 Reference sensitivity exceptions 23

5.1.19 DC\_3-20-32\_n78 24

5.1.19.1 Configuration for EN-DC 24

5.1.19.2 ∆TIB and ∆RIB values 24

5.1.19.3 Reference sensitivity exceptions 24

5.1.20 DC\_7-20-32\_n1 24

5.1.20.1 Configuration for EN-DC 24

5.1.20.2 ∆TIB and ∆RIB values 24

5.1.20.3 Reference sensitivity exceptions 25

5.1.21 DC\_7-20-32\_n28 25

5.1.21.1 Configuration for EN-DC 25

5.1.21.2 ∆TIB and ∆RIB values 25

5.1.21.3 Reference sensitivity exceptions 25

5.1.22 DC\_1-20-32\_n3 25

5.1.23 DC\_2-4-7\_n28 26

5.1.24 DC\_2-5-7\_n66 27

5.1.25 DC\_2-5-66\_n7 28

5.1.26 DC\_2-5-66\_n66 29

5.1.27 DC\_2-7-66\_n28 30

5.1.28 DC\_3-20-32\_n1 30

5.1.29 DC\_1-3-18\_n3 31

5.1.29.1 Configuration for DC 31

5.1.29.2 ∆TIB and ∆RIB values 31

5.1.29.3 REFSENS requirements 32

5.1.30 DC\_1-3-41\_n3 32

5.1.30.1 Configuration for DC 32

5.1.30.2 ∆TIB and ∆RIB values 32

5.1.30.3 REFSENS requirements 33

5.1.31 DC\_1-3-41\_n41 33

5.1.31.1 Configuration for DC 33

5.1.31.2 ∆TIB and ∆RIB values 33

5.1.31.3 REFSENS requirements 34

5.1.32 DC\_2-5-7\_n66 and DC\_2-5-7-7\_n66 34

5.1.32.1 Configuration for DC 34

5.1.32.2 ∆TIB and ∆RIB values 34

5.1.32.3 REFSENS requirements 35

5.1.38 DC\_1-3-18\_n28 39

5.1.38.1 Configuration for EN-DC 39

5.1.38.2 ∆TIB and ∆RIB values 39

5.1.39 DC\_1-3-18\_n41 39

5.1.39.1 Configuration for EN-DC 39

5.1.39.2 ∆TIB and ∆RIB values 40

5.1.40 DC\_2-7-28\_n7 40

5.1.41 DC\_2A-66A-71A\_n71A 41

5.1.42 DC\_2-5-66\_n77A 42

5.1.43 DC\_2-13-66\_n77A 42

5.1.44 DC\_2-48-66\_n77A 43

5.1.45 DC\_1-3-40\_n78 44

5.1.45.1 Configuration for EN-DC 44

5.1.45.2 ∆TIB and ∆RIB values 44

5.1.45.3 REFSENS requirements 44

5.1.46 DC\_1-7-40\_n78 45

5.1.46.1 Configuration for EN-DC 45

5.1.46.2 ∆TIB and ∆RIB values 45

5.1.46.3 REFSENS requirements 45

5.1.47 DC\_1-8-40\_n78 45

5.1.47.1 Configuration for EN-DC 45

5.1.47.2 ∆TIB and ∆RIB values 45

5.1.47.3 REFSENS requirements 46

5.1.48 DC\_3-7-40\_n78 46

5.1.48.1 Configuration for EN-DC 46

5.1.48.2 ∆TIB and ∆RIB values 46

5.1.48.3 REFSENS requirements 47

5.1.49 DC\_3-8-40\_n78 47

5.1.49.1 Configuration for EN-DC 47

5.1.49.2 ∆TIB and ∆RIB values 47

5.1.49.3 REFSENS requirements 47

5.1.50 DC\_7-8-40\_n78 48

5.1.50.1 Configuration for EN-DC 48

5.1.50.2 ∆TIB and ∆RIB values 48

5.1.50.3 REFSENS requirements 48

5.1.51 DC\_1-7-8\_n28 48

5.1.51.1 Configurations for EN-DC 48

5.1.51.2 ∆TIB and ∆RIB values 49

5.1.51.3 Reference sensitivity exceptions 49

5.1.52 DC\_3-7-8\_n28 49

5.1.52.1 Configurations for EN-DC 49

5.1.52.2 ∆TIB and ∆RIB values 49

5.1.52.3 Reference sensitivity exceptions 50

5.1.53 DC\_1-7-28\_n3 50

5.1.53.1 Configurations for EN-DC 50

5.1.53.2 ∆TIB and ∆RIB values 50

5.1.53.3 Reference sensitivity exceptions 50

5.1.54 DC\_3-8-40\_n1 51

5.1.54.1 Configurations for EN-DC 51

5.1.54.2 ∆TIB and ∆RIB values 51

5.1.54.3 Reference sensitivity exceptions 51

5.1.55 DC\_7-8-40\_n1 51

5.1.55.1 Configurations for EN-DC 51

5.1.55.2 ∆TIB and ∆RIB values 52

5.1.55.3 Reference sensitivity exceptions 52

5.1.56 DC\_2-28-66\_n7 52

5.1.56.1 Configurations for EN-DC 52

5.1.56.2 ∆TIB and ∆RIB values 52

5.1.56.3 Reference sensitivity exceptions 53

5.1.57 DC\_2-5-7\_n7 53

5.1.57.1 Configurations for EN-DC 53

5.1.57.2 ∆TIB and ∆RIB values 53

5.1.57.3 Reference sensitivity exceptions 53

5.1.58 DC\_2-7-66\_n7/DC\_2-7-66-66\_n7 54

5.1.58.1 Configurations for EN-DC 54

5.1.58.2 ∆TIB and ∆RIB values 54

5.1.58.3 Reference sensitivity exceptions 54

5.1.59 DC\_5-7-66\_n7/DC\_5-7-66-66\_n7 54

5.1.59.1 Configurations for EN-DC 54

5.1.59.2 ∆TIB and ∆RIB values 55

5.1.59.3 Reference sensitivity exceptions 55

5.1.60 DC\_7-28-66\_n7 55

5.1.60.1 Configurations for EN-DC 55

5.1.60.2 ∆TIB and ∆RIB values 55

5.1.60.3 Reference sensitivity exceptions 56

5.1.61 DC\_2-7-66\_n77 56

5.1.61.1 Configurations for EN-DC 56

5.1.61.2 ∆TIB and ∆RIB values 56

5.1.61.3 Reference sensitivity exceptions 56

Annex A - Change history 57

# Foreword

This Technical Report has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

In the present document, modal verbs have the following meanings:

**shall** indicates a mandatory requirement to do something

**shall not** indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

**should** indicates a recommendation to do something

**should not** indicates a recommendation not to do something

**may** indicates permission to do something

**need not** indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

**can** indicates that something is possible

**cannot** indicates that something is impossible

The constructions "can" and "cannot" are not substitutes for "may" and "need not".

**will** indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**will not** indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document

**might** indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

**might not** indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document

In addition:

**is** (or any other verb in the indicative mood) indicates a statement of fact

**is not** (or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

# 1 Scope

The present document is a technical report for Dual Connectivity (DC) of 3 LTE bands (3DL/1UL) and 1 NR band (1DL/1UL) under Rel-17 time frame. The purpose is to gather the relevant background information and studies in order to address Dual Connectivity (DC) of 3 LTE band (3DL/1UL) and 1 NR band (1DL/1UL) for the Rel-17 band combinations. The co-existence analysis and RF front end requirements such as ΔRIB,c and ΔTIB,c are described based on the band combination basis since such information have no difference between the DC configurations consisting with the same E-UTRA band and the same NR band. The actual requirements are added to the corresponding technical specification.

# 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] RP-200664, “New WID: Dual Connectivity (EN-DC) of 3 bands LTE inter-band CA (3DL/1UL) and 1 NR band (1DL/1UL)”, RAN#88-e

# 3 Definitions of terms, symbols and abbreviations

## 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

**example:** text used to clarify abstract rules by applying them literally.

## 3.2 Symbols

For the purposes of the present document, the following symbols apply:

<symbol> <Explanation>

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

<ABBREVIATION> <Expansion>

# 4 Background

The present document is a technical report for Dual Connectivity (DC) of 3 bands LTE inter-band CA and 1 NR band under Rel-17 timeframe. The document covers each band combination specific issues (i.e. one sub-clause defined per band combination)

## 4.1 TR maintenance

A single company is responsible for introducing all approved TPs in the current TR, i.e. TR editor. However, it is the responsibility of the contact person of each band combination to ensure that the TPs related to the band combination have been implemented.

# 5 DC of 3 LTE band (3DL/1UL) + 1 NR band: Specific Band Combination Part

<Editor’s note: The requirements for specific band combinations shall be described according to the same manner as specified in TS38.101-3.>

## 5.1 Inter-band EN-DC

## 5.1.1 DC\_1-3\_(n)41

5.1.1.1 Configurations for DC

Table 5.1.1.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-3A\_(n)41AA | DC\_1A\_n41A  DC\_3A\_n41A |

### 5.1.1.2 ∆TIB and ∆RIB values

Table 5.1.1.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3\_(n)41 | 1 | 0.5 |
| 3 | 0.5 |
| 41 | 0.31/0.82 |
| n41 | 0.31/0.82 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz.  NOTE 2: Applicable for the frequency range of 2496-2515 MHz. | | |

**Table 5.1.1.2-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3\_(n)41 | 1 | 0 |
| 3 | 0 |
| 41 | 01/0.52 |
| n41 | 01/0.52 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz.  NOTE 2: Applicable for the frequency range of 2496-2515 MHz. | | |

### 5.1.1.3 REFSENS requirements

No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.2 DC\_1-3-41\_n28

### 5.1.2.1 Configuration for EN-DC

Table 5.1.2.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-3A-41A\_n28A | DC\_1A\_n28A  DC\_3A\_n28A  DC\_41A\_n28A |
| DC\_1A-3A-41C\_n28A | DC\_1A\_n28A  DC\_3A\_n28A  DC\_41A\_n28A  DC\_41C\_n28A |

### 5.1.2.2 ∆TIB and ∆RIB values

Table 5.1.2.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41\_n28 | 1 | 0.5 |
| 3 | 0.5 |
| 41 | 0.31/0.82 |
| n28 | 0.6 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545 – 2690 MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496 – 2545 MHz. | | |

**Table 5.1.2.2-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41\_n28 | 1 | 0 |
| 3 | 0 |
| 41 | 01/0.52 |
| n28 | 0.2 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545 – 2690 MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496 – 2545 MHz. | | |

### 5.1.2.3 REFSENS requirements

No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.3 DC\_3-7-8\_n40

### 5.1.3.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-7A-8A\_n40A | DC\_3A\_n40A  DC\_7A\_n40A DC\_8A\_n40A |

### 5.1.3.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_3-7-8\_n40 | 3 | 0.5 |
| 7 | 0.5 |
| 8 | 0.6 |
| n40 | 0.6 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-7-8\_n40 | 3 | 0 |
| 7 | 0 |
| 8 | 0.2 |
| n40 | 0.5 |

### 5.1.3.3 Reference sensitivity exceptions

No further REFSENS exceptions needed.

## 5.1.4 DC\_3-7-28\_n1

### 5.1.4.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-7A-28A\_n1A | DC\_3A\_n1A  DC\_7A\_n1A DC\_28A\_n1A |

### 5.1.4.2 ∆TIB and ∆RIB values

Table 5.1.4.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n1 | 3 | 0.6 |
| 7 | 0.6 |
| 28 | 0.5 |
| n1 | 0.6 |

**Table 5.1.4.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n1 | 3 | 0 |
| 7 | 0 |
| 28 | 0.2 |
| n1 | 0 |

### 5.1.4.3 Reference sensitivity exceptions

REFSENS exceptions needed due to band 28 uplink harmonic into band n1 is already specified for DC\_28A\_n1A.

## 5.1.5 DC\_5-7-66\_n66

### 5.1.5.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_5A-7A-66A\_n66A  DC\_5A-7C-66A\_n66A | DC\_5A\_n66A  DC\_7A\_n66A  DC\_66A\_n66A2 |
| NOTE 2: Only single switched UL is supported | |

### 5.1.5.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_5-7-66\_n66 | 5 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n66 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_5-7-66\_n66 | 5 | 0.3 |
| 7 | 0 |
| 66 | 0.3 |
| n66 |

### 5.1.5.3 Reference sensitivity exceptions

MSD have been defined for lower order combinations. No further MSD is needed.

## 5.1.6 DC\_3-19-42\_n1

### 5.1.6.1 Configuration for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_3A-19A-42A\_n1A  DC\_3A-19A-42C\_n1A | DC\_3A\_n1A  DC\_19A\_n1A  DC\_42A\_n1A |

### 5.1.6.2 ∆TIB and ∆RIB values

For DC\_3-19-42\_n1, the ΔTIB,c and ΔRIB,c values are reused from the LTE combination CA\_1-3-19-42, and are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-19-42\_n1 | 3 | 0.6 |
| 19 | 0.3 |
| 42 | 0.8 |
| n1 | 0.6 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-19-42\_n1 | 3 | 0.2 |
| 19 | 0 |
| 42 | 0.5 |
| n1 | 0.2 |

### 5.1.6.3 Reference sensitivity exceptions

There is no additional MSD requirement for this configuration.

## 5.1.7 DC\_3-21-42\_n1

### 5.1.7.1 Configuration for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_3A-21A-42A\_n1A  DC\_3A-21A-42C\_n1A | DC\_3A\_n1A  DC\_21A\_n1A  DC\_42A\_n1A |

### 5.1.7.2 ∆TIB and ∆RIB values

For DC\_3-21-42\_n1, the ΔTIB,c and ΔRIB,c values are reused from the LTE combination CA\_1-3-21-42, and are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-21-42\_n1 | 3 | 0.8 |
| 21 | 0.9 |
| 42 | 0.8 |
| n1 | 0.6 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-21-42\_n1 | 3 | 0.3 |
| 21 | 0.5 |
| 42 | 0.5 |
| n1 | 0.2 |

### 5.1.7.3 Reference sensitivity exceptions

There is no additional MSD requirement for this configuration.

## 5.1.8 DC\_19-21-42\_n1

### 5.1.8.1 Configuration for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_19A-21A-42A\_n1A  DC\_19A-21A-42C\_n1A | DC\_19A\_n1A  DC\_21A\_n1A  DC\_42A\_n1A |

### 5.1.8.2 ∆TIB and ∆RIB values

For DC\_19-21-42\_n1, the ΔTIB,c and ΔRIB,c values are reused from the LTE combination CA\_1-19-21-42, and are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_19-21-42\_n1 | 19 | 0.3 |
| 21 | 0.4 |
| 42 | 0.8 |
| n1 | 0.3 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_19-21-42\_n1 | 19 | 0 |
| 21 | 0 |
| 42 | 0.5 |
| n1 | 0 |

### 5.1.8.3 Reference sensitivity exceptions

There is no additional MSD requirement for this configuration.

## 5.1.9 DC\_2-28-66\_n66

### 5.1.9.1 Operating bands for EN-DC

Table 5.1.9.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band |
| --- | --- | --- |
| DC\_2-28-66\_n66 | CA\_2-28-66 | n66 |

### 5.1.9.2 Configuration for EN-DC

Table 5.1.9.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-28A-66A\_n66A | DC\_2A\_n66A  DC\_28A\_n66A  DC\_66A\_n66A4 | CA\_2A-28A-66A | n66A |
| NOTE 4: Only single switched UL is supported. | | | |

### 5.1.9.3 ∆TIB and ∆RIB values

Table 5.1.9.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-28-66\_n66 | 2 | 0.5 |
| 28 | 0.6 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.9.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-28-66\_n66 | 2 | 0.3 |
| 28 | 0.2 |
| 66 | 0.3 |
| n66 | 0.3 |

## 5.1.10 DC\_7-28-66\_n66

### 5.1.10.1 Operating bands for EN-DC

Table 5.1.10.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band |
| --- | --- | --- |
| DC\_7-28-66\_n66 | CA\_7-28-66 | n66 |

### 5.1.10.2 Configuration for EN-DC

Table 5.1.10.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_7A-28A-66A\_n66A  DC\_7C-28A-66A\_n66A | DC\_7A\_n66A  DC\_28A\_n66A  DC\_66A\_n66A4 | CA\_7A-28A-66A  CA\_7C-28A-66A | n66A |
| NOTE 4: Only single switched UL is supported. | | | |

### 5.1.10.3 ∆TIB and ∆RIB values

Table 5.1.10.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-28-66\_n66 | 7 | 0.5 |
| 28 | 0.6 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.10.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_7-28-66\_n66 | 7 | 0.5 |
| 28 | 0.2 |
| 66 | 0.5 |
| n66 | 0.5 |

## 5.1.11 DC\_2-7-28\_n66

### 5.1.11.1 Operating bands for EN-DC

Table 5.1.11.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band |
| --- | --- | --- |
| DC\_2-7-28\_n66 | CA\_2-7-28 | n66 |

### 5.1.11.2 Configuration for EN-DC

Table 5.1.11.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-7A-28A\_n66A  DC\_2A-7C-28A\_n66A | DC\_2A\_n66A  DC\_7A\_n66A  DC\_28A\_n66A | CA\_2A-7A-28A  CA\_2A-7C-28A | n66A |

### 5.1.11.3 ∆TIB and ∆RIB values

Table 5.1.11.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-28\_n66 | 2 | 0.5 |
| 7 | 0.5 |
| 28 | 0.6 |
| n66 | 0.5 |

**Table 5.1.11.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-28\_n66 | 2 | 0.3 |
| 7 | 0.5 |
| 28 | 0.2 |
| n66 | 0.5 |

## 5.1.12 DC\_1-8-11\_n3

### 5.1.12.1 Configurations for EN-DC

Table 5.1.12.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-8A-11A\_n3A | DC\_1A\_n3A  DC\_8A\_n3A  DC\_11A\_n3A | CA\_1A-8A-11A | n3A |

### 5.1.12.2 ∆TIB and ∆RIB values

For DC\_1-8-11\_n3, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.12.2-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n3 | 1 | 0.3 |
| 8 | 0.3 |
| 11 | 0.8 |
| n3 | 0.9 |

Table 5.1.12.2-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n3 | 1 | 0 |
| 8 | 0 |
| 11 | 0.3 |
| n3 | 0.5 |

### 5.1.12.3 Reference sensitivity exceptions

Co-existence study for DC\_1-8-11\_n3 was covered by the studies for the fallback modes of DC\_1-8\_n3, DC\_1-11\_n3 and DC\_8-11\_n3. No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.13 DC\_1-8-42\_n28

### 5.1.13.1 Configurations for EN-DC

Table 5.1.13.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-8A-42A\_n28A | DC\_1A\_n28A  DC\_8A\_n28A  DC\_42A\_n28A | CA\_1A-8A-42A | n28A |
| DC\_1A-8A-42C\_n28A | DC\_1A\_n28A  DC\_8A\_n28A  DC\_42A\_n28A  DC\_42C\_n28A | CA\_1A-8A-42C | n28A |

### 5.1.13.2 ∆TIB and ∆RIB values

For DC\_1-8-42\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.13.2-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-42\_n28 | 1 | 0.3 |
| 8 | 0.6 |
| 42 | 0.8 |
| n28 | 0.8 |

Table 5.1.13.2-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-42\_n28 | 1 | 0 |
| 8 | 0.2 |
| 42 | 0.5 |
| n28 | 0.5 |

### 5.1.13.3 Reference sensitivity exceptions

Co-existence study for DC\_1-8-42\_n28 was covered by the studies for the fallback modes of DC\_1-8\_n28, DC\_1-42\_n28 and DC\_8-42\_n28.

No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.14 DC\_1-7-32\_n28

### 5.1.14.1 Configuration for EN-DC

Table 5.1.14.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-7A-32A\_n28A | DC\_1A\_n28A  DC\_7A\_n28A |

### 5.1.14.2 ∆TIB and ∆RIB values

Table 5.1.14.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-32\_n28 | 1 | 0.5 |
| 7 | 0.6 |
| n28 | 0.7 |

Table 5.1.14.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-7-32\_n28 | 1 | 0 |
| 7 | 0 |
| 32 | 0 |
| n28 | 0.2 |

### 5.1.14.3 Reference sensitivity exceptions

No additional IMD exceptions required compared to fallbacks.

## 5.1.15 DC\_1-7-32\_n78

### 5.1.15.1 Configuration for EN-DC

Table 5.1.15.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-7A-32A\_n78A | DC\_1A\_n78A  DC\_7A\_n78A |

### 5.1.15.2 ∆TIB and ∆RIB values

Table 5.1.15.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-32\_n78 | 1 | 0.2 |
| 7 | 0.2 |
| n78 | 0.5 |

Table 5.1.15.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-7-32\_n78 | 1 | 0.6 |
| 7 | 0.6 |
| 32 | 0 |
| n78 | 0.8 |

### 5.1.15.3 Reference sensitivity exceptions

Exceptions for IMD hits on B32 are TBD.

## 5.1.16 DC\_1-20-32\_n28

### 5.1.16.1 Configuration for EN-DC

Table 5.1.16.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-20A-32A\_n28A | DC\_1A\_n28A  DC\_20A\_n28A |

### 5.1.16.2 ∆TIB and ∆RIB values

Table 5.1.16.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-20-32\_n28 | 1 | 0.3 |
| 20 | 0.6 |
| n28 | 0.7 |

Table 5.1.16.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-20-32\_n28 | 1 | 0 |
| 20 | 0.2 |
| 32 | 0 |
| n28 | 0.2 |

### 5.1.16.3 Reference sensitivity exceptions

Exceptions for the B1 IMD5 hit from the 20A\_n28A UL are TBD.

## 5.1.17 DC\_1-20-32\_n78

### 5.1.17.1 Configuration for EN-DC

Table 5.1.17.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-20A-32A\_n78A | DC\_1A\_n78A  DC\_20A\_n78A |

### 5.1.17.2 ∆TIB and ∆RIB values

Table 5.1.17.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-20-32\_n78 | 1 | 0.3 |
| 20 | 0.3 |
| n78 | 0.8 |

Table 5.1.17.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-20-32\_n78 | 1 | 0 |
| 20 | 0 |
| 32 | 0 |
| n78 | 0.5 |

### 5.1.17.3 Reference sensitivity exceptions

Exceptions for IMD hits on B32 are TBD.

## 5.1.18 DC\_3-7-32\_n78

### 5.1.18.1 Configuration for EN-DC

Table 5.1.18.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_3A-7A-32A\_n78A | DC\_3A\_n78A  DC\_7A\_n78A |

### 5.1.18.2 ∆TIB and ∆RIB values

Table 5.1.18.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-32\_n78 | 3 | 0.6 |
| 7 | 0.6 |
| n78 | 0.8 |

Table 5.1.18.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-7-32\_n78 | 3 | 0.2 |
| 7 | 0.2 |
| 32 | 0 |
| n78 | 0.5 |

### 5.1.18.3 Reference sensitivity exceptions

Exceptions for IMD hits on B32 are TBD.

## 5.1.19 DC\_3-20-32\_n78

### 5.1.19.1 Configuration for EN-DC

Table 5.1.19.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_3A-20A-32A\_n78A | DC\_3A\_n78A  DC\_20A\_n78A |

### 5.1.19.2 ∆TIB and ∆RIB values

Table 5.1.19.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-20-32\_n78 | 3 | 0.5 |
| 20 | 0.3 |
| n78 | 0.8 |

Table 5.1.19.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-20-32\_n78 | 3 | 0.2 |
| 20 | 0 |
| 32 | 0 |
| n78 | 0.5 |

### 5.1.19.3 Reference sensitivity exceptions

Exceptions for IMD hits on B32 are TBD.

## 5.1.20 DC\_7-20-32\_n1

### 5.1.20.1 Configuration for EN-DC

Table 5.1.20.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_7A-20A-32A\_n1A | DC\_7A\_n1A  DC\_20A\_n1A |

### 5.1.20.2 ∆TIB and ∆RIB values

Table 5.1.20.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-20-32\_n1 | 7 | 0.6 |
| 20 | 0.3 |
| n1 | 0.5 |

Table 5.1.20.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_7-20-32\_n1 | 7 | 0 |
| 20 | 0 |
| 32 | 0 |
| n1 | 0 |

### 5.1.20.3 Reference sensitivity exceptions

Exceptions for IMD hits on B32 are TBD.

## 5.1.21 DC\_7-20-32\_n28

### 5.1.21.1 Configuration for EN-DC

Table 5.1.21.1-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_7A-20A-32A\_n28A | DC\_7A\_n28A  DC\_20A\_n28A |

### 5.1.21.2 ∆TIB and ∆RIB values

Table 5.1.21.2.-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-20-32\_n28 | 7 | 0.3 |
| 20 | 0.5 |
| n28 | 0.7 |

Table 5.1.21.2.-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_7-20-32\_n28 | 7 | 0 |
| 20 | 0 |
| 32 | 0 |
| n28 | 0.2 |

### 5.1.21.3 Reference sensitivity exceptions

Compared to its fallback modes, there are no additional MSD requirements for this band combination.

## 5.1.22 DC\_1-20-32\_n3

5.1.22.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_1A-20A-32A\_n3A | DC\_1A\_n3A  DC\_20A\_n3A |

5.1.22.2 ∆TIB and ∆RIB values

For DC\_1-20-32\_n3, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-20-32\_n3 | 1 | 0.5 |
| 20 | 0.3 |
| n3 | 0.5 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-20-32\_n3 | 1 | 0 |
| 20 | 0 |
| 32 | 0 |
| n3 | 0 |

5.1.22.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.23 DC\_2-4-7\_n28

5.1.23.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_2A-4A-7A\_n28A | DC\_2A\_n28A  DC\_4A\_n28A  DC\_7A\_n28A |

5.1.23.2 ∆TIB and ∆RIB values

For DC\_2-4-7\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-4-7\_n28 | 2 | 0.5 |
| 4 | 0.5 |
| 7 | 0.5 |
| n28 | 0.6 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-4-7\_n28 | 2 | 0.3 |
| 4 | 0.5 |
| 7 | 0.5 |
| n28 | 0.2 |

5.1.23.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.24 DC\_2-5-7\_n66

5.1.24.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_2A-5A-7A\_n66A  DC\_2A-5A-7C\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_7A\_n66A |

5.1.24.2 ∆TIB and ∆RIB values

For DC\_2-5-7\_n66, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-7\_n66 | 2 | 0.5 |
| 5 | 0.3 |
| 7 | 0.5 |
| n66 | 0.5 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-7\_n66 | 2 | 0.3 |
| 5 | 0 |
| 7 | 0.5 |
| n66 | 0.5 |

5.1.24.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.25 DC\_2-5-66\_n7

5.1.25.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_2A-5A-66A\_n7A  DC\_2A-5A-66A-66A\_n7A | DC\_2A\_n7A  DC\_5A\_n7A  DC\_66A\_n7A |

5.1.25.2 ∆TIB and ∆RIB values

For DC\_2-5-66\_n7, the ΔTIB,c and ΔRIB,c values are reused from the DC\_2-7-13\_n66, and are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n7 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n7 | 0.5 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n7 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.5 |
| n7 | 0.5 |

5.1.25.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.26 DC\_2-5-66\_n66

5.1.26.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_2A-5A-66A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_66A\_n66A1 |
| NOTE1: Only single switched UL is supported | |

5.1.26.2 ∆TIB and ∆RIB values

For DC\_2-5-66\_n66, the ΔTIB,c and ΔRIB,c values are reused from the DC\_2-5\_n66, and are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n66 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n66 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n66 | 0.3 |

5.1.26.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.27 DC\_2-7-66\_n28

5.1.27.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_2A-7A-66A\_n28A | DC\_2A\_n28A  DC\_7A\_n28A  DC\_66A\_n28A |

5.1.27.2 ∆TIB and ∆RIB values

For DC\_2-7-66\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n28 | 2 | 0.5 |
| 7 | 0.5 |
| 66 | 0.5 |
| n28 | 0.6 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n28 | 2 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n28 | 0.2 |

5.1.27.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.28 DC\_3-20-32\_n1

5.1.28.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band configurations EN-DC (four bands)

| DC  configuration | Uplink  configuration |
| --- | --- |
| DC\_3A-20A-32A\_n1A | DC\_3A\_n1A  DC\_20A\_n1A |

5.1.28.2 ∆TIB and ∆RIB values

For DC\_3-20-32\_n1, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-20-32\_n1 | 3 | 0.5 |
| 20 | 0.3 |
| n1 | 0.5 |

**Table 7.3B.3.3.4-1: ΔRIB due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-20-32\_n1 | 3 | 0 |
| 20 | 0 |
| 32 | 0 |
| n1 | 0 |

5.1.28.3 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.29 DC\_1-3-18\_n3

### 5.1.29.1 Configuration for DC

**Table 5.1.29.1-1: Inter-band EN-DC configurations (four bands)**

| DC configuration | Uplink configuration  (NOTE 1) |
| --- | --- |
| DC\_1A-3A-18A\_n3A | DC\_1A\_n3A  DC\_3A\_n3A2  DC\_18A\_n3A |
| NOTE 2: Only single switched UL is supported | |

### 5.1.29.2 ∆TIB and ∆RIB values

For DC\_1-3-18\_n3, the ΔTIB,c and ΔRIB,c values are given in the tables below. Numbers come from LTE CA\_1A-3A-18A.

Table 5.1.29.2-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18\_n3 | 1 | 0.3 |
| 3 | 0.3 |
| 18 | 0.3 |
| n3 | 0.3 |

Table 5.1.29.2-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18\_n3 | 1 | 0 |
| 3 | 0 |
| 18 | 0 |
| n3 | 0 |

### 5.1.29.3 REFSENS requirements

There are no additional MSD requirements for this band combination.

## 5.1.30 DC\_1-3-41\_n3

### 5.1.30.1 Configuration for DC

**Table 5.1.30.1-1: Inter-band EN-DC configurations (four bands)**

| DC configuration | Uplink configuration  (NOTE 1) |
| --- | --- |
| DC\_1A-3A-41A\_n3A  DC\_1A-3A-41C\_n3A | DC\_1A\_n3A  DC\_3A\_n3A2  DC\_41A\_n3A  DC\_41C\_n3A |
| NOTE 2: Only single switched UL is supported | |

### 5.1.30.2 ∆TIB and ∆RIB values

For DC\_1-3-41\_n3, the ΔTIB,c and ΔRIB,c values are given in the tables below. Numbers come from LTE CA\_1A-3A-41A.

Table 5.1.30.2-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41\_n3 | 1 | 0.5 |
| 3 | 0.5 |
| 41 | 0.31/0.82 |
| n3 | 0.5 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz.  NOTE 2: Applicable for the frequency range of 2496-2515 MHz. | | |

Table 5.1.30.2-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41\_n3 | 1 | 0 |
| 3 | 0 |
| 41 | 01/0.52 |
| n3 | 0 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz.  NOTE 2: Applicable for the frequency range of 2496-2515 MHz. | | |

### 5.1.30.3 REFSENS requirements

There are no additional MSD requirements for this band combination.

## 5.1.31 DC\_1-3-41\_n41

### 5.1.31.1 Configuration for DC

**Table 5.1.31.1-1: Inter-band EN-DC configurations (four bands)**

| DC configuration | Uplink configuration  (NOTE 1) |
| --- | --- |
| DC\_1A-3A-41A\_n41A | DC\_1A\_n41A  DC\_3A\_n41A |

### 5.1.31.2 ∆TIB and ∆RIB values

For DC\_1-3-41\_n41, the ΔTIB,c and ΔRIB,c values are given in the tables below. Numbers come from LTE CA\_1A-3A-41A.

Table 5.1.31.2-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41\_n41 | 1 | 0.5 |
| 3 | 0.5 |
| 41 | 0.31/0.82 |
| n41 | 0.31/0.82 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz.  NOTE 2: Applicable for the frequency range of 2496-2515 MHz. | | |

Table 5.1.31.2-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41\_n41 | 1 | 0 |
| 3 | 0 |
| 41 | 01/0.52 |
| n41 | 01/0.52 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz.  NOTE 2: Applicable for the frequency range of 2496-2515 MHz. | | |

### 5.1.31.3 REFSENS requirements

There are no additional MSD requirements for this band combination.

## 5.1.32 DC\_2-5-7\_n66 and DC\_2-5-7-7\_n66

### 5.1.32.1 Configuration for DC

**Table 5.1.32.1-1: Inter-band EN-DC configurations (four bands)**

| DC configuration | Uplink configuration  (NOTE 1) |
| --- | --- |
| DC\_2A-5A-7A\_n66A  DC\_2A-5A-7C\_n66A  DC\_2A-5A-7A-7A\_n66A | DC\_2A\_n66A DC\_5A\_n66A  DC\_7A\_n66A |

### 5.1.32.2 ∆TIB and ∆RIB values

For DC\_2-5-7\_n66 and DC\_2-5-7-7\_n66, the ΔTIB,c and ΔRIB,c values are given in the tables below. Numbers come from LTE CA\_2A-5A-7A-66A.

Table 5.1.32.2-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-7\_n66  DC\_2-5-7-7\_n66 | 2 | 0.5 |
| 5 | 0.3 |
| 7 | 0.5 |
| n66 | 0.5 |

Table 5.1.32.2-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-7\_n66  DC\_2-5-7-7\_n66 | 2 | 0.3 |
| 5 | 0 |
| 7 | 0.5 |
| n66 | 0.5 |

### 5.1.32.3 REFSENS requirements

There are no additional MSD requirements for this band combination.

5.1.33 DC\_1-3-11\_n28

5.1.33.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-3A-11A\_n28A | DC\_1A\_n28A  DC\_3A\_n28A  DC\_11A\_n28A |

5.1.33.2 ∆TIB and ∆RIB values

For DC\_1-3-11\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-11\_n28 | 1 | 0.3 |
| 3 | 0.8 |
| 11 | 0.9 |
| n28 | 0.6 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-3-11\_n28 | 1 | 0 |
| 3 | 0.3 |
| 11 | 0.5 |
| n28 | 0.2 |

5.1.33.3 Reference sensitivity exceptions

Co-existence study for DC\_1-3-11\_n28 was covered by the studies for the fallback modes of DC\_1-3\_n28, DC\_1-11\_n28 and DC\_3-11\_n28.

No additional MSD requirement need to be defined for this dual connectivity configuration.

5.1.34 DC\_1-3-11\_n77

5.1.34.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-3A-11A\_n77A | DC\_1A\_n77A  DC\_3A\_n77A  DC\_11A\_n77A |
| DC\_1A-3A-11A\_n77(2A) | DC\_1A\_n77A  DC\_3A\_n77A  DC\_11A\_n77A |

5.1.34.2 ∆TIB and ∆RIB values

For DC\_1-3-11\_n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-11\_n77 | 1 | 0.6 |
| 3 | 0.8 |
| 11 | 0.9 |
| n77 | 0.8 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-3-11\_n77 | 1 | 0.2 |
| 3 | 0.3 |
| 11 | 0.5 |
| n77 | 0.5 |

5.1.34.3 Reference sensitivity exceptions

Co-existence study for DC\_1-3-11\_n77 was covered by the studies for the fallback modes of DC\_1-3\_n77, DC\_1-11\_n77 and DC\_3-11\_n77.

No additional MSD requirement need to be defined for this dual connectivity configuration.

5.1.35 DC\_3-8-11\_n28

5.1.35.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_3A-8A-11A\_n28A | DC\_3A\_n28A  DC\_8A\_n28A  DC\_11A\_n28A |

5.1.35.2 ∆TIB and ∆RIB values

For DC\_3-8-11\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-11\_n28 | 3 | 0.8 |
| 8 | 0.6 |
| 11 | 0.9 |
| n28 | 0.6 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-8-11\_n28 | 3 | 0.3 |
| 8 | 0.2 |
| 11 | 0.5 |
| n28 | 0.2 |

5.1.35.3 Reference sensitivity exceptions

Co-existence study for DC\_3-8-11\_n28 was covered by the studies for the fallback modes of DC\_3-8\_n28, DC\_3-11\_n28 and DC\_8-11\_n28.

No additional MSD requirement need to be defined for this dual connectivity configuration.

5.1.36 DC\_3-8-11\_n77

5.1.36.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_3A-8A-11A\_n77A | DC\_3A\_n77A  DC\_8A\_n77A  DC\_11A\_n77A |
| DC\_3A-8A-11A\_n77(2A) | DC\_3A\_n77A  DC\_8A\_n77A  DC\_11A\_n77A |

5.1.36.2 ∆TIB and ∆RIB values

For DC\_3-8-11\_n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-11\_n77 | 3 | 0.8 |
| 8 | 0.6 |
| 11 | 0.9 |
| n77 | 0.8 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_3-8-11\_n77 | 3 | 0.3 |
| 8 | 0.2 |
| 11 | 0.5 |
| n77 | 0.5 |

5.1.36.3 Reference sensitivity exceptions

Co-existence study for DC\_3-8-11\_n77 was covered by the studies for the fallback modes of DC\_3-8\_n77, DC\_3-11\_n77 and DC\_8-11\_n77.

No additional MSD requirement need to be defined for this dual connectivity configuration.

5.1.37 DC\_1-8-11\_n28

5.1.37.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC band configuration | UL configuration(s) |
| --- | --- |
| DC\_1A-8A-11A\_n28A | DC\_1A\_n28A  DC\_8A\_n28A  DC\_11A\_n28A |

5.1.37.2 ∆TIB and ∆RIB values

For DC\_1-8-11\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n28 | 1 | 0.3 |
| 8 | 0.6 |
| 11 | 0.4 |
| n28 | 0.6 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| EN-DC band | E-UTRA and NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_1-8-11\_n28 | 1 | 0 |
| 8 | 0.2 |
| 11 | 0 |
| n28 | 0.2 |

5.1.37.3 Reference sensitivity exceptions

Co-existence study for DC\_1-8-11\_n28 was covered by the studies for the fallback modes of DC\_1-8\_n28, DC\_1-11\_n28 and DC\_8-11\_n28.

No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.38 DC\_1-3-18\_n28

### 5.1.38.1 Configuration for EN-DC

Table 5.1.38.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-3A-18A\_n28A | DC\_1A\_n28A  DC\_3A\_n28A  DC\_18A\_n28A |

### 5.1.38.2 ∆TIB and ∆RIB values

Table 5.1.38.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18-n28 | 1 | 0.3 |
| 3 | 0.3 |
| 18 | 0.3 |
| n28 | 0.6 |

**Table 5.1.38.2-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18-n28 | 1 | 0 |
| 3 | 0 |
| 18 | 0 |
| n28 | 0.2 |

5.1.38.3 REFSENS requirements

## No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.39 DC\_1-3-18\_n41

### 5.1.39.1 Configuration for EN-DC

Table 5.1.39.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-3A-18A\_n41A | DC\_1A\_n41A  DC\_3A\_n41A  DC\_18A\_n41A |

### 5.1.39.2 ∆TIB and ∆RIB values

Table 5.1.39.2-1: ΔTIB,c due to EN-DC(four bands)

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB,c [dB]** |
| --- | --- | --- |
| DC\_1-3-18-n41 | 1 | 0.3 |
| 3 | 0.3 |
| 18 | 0.3 |
| n41 | 0.31 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz. | | |

**Table 5.1.39.2-1: ΔRIB,c due to EN-DC (four bands)**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB,c [dB]** |
| --- | --- | --- |
| DC\_1-3-18-n41 | 1 | 0 |
| 3 | 0 |
| 18 | 0 |
| n41 | 01 |
| NOTE 1: Applicable for the frequency range of 2515-2690 MHz. | | |

5.1.39.3 REFSENS requirements

No additional MSD requirement need to be defined for this dual connectivity configuration.

## 5.1.40 DC\_2-7-28\_n7

5.1.40.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-7A-28A\_n7A | DC\_2A\_n7A  DC\_7A\_n7A4 DC\_28A\_n7A |
| NOTE 4: Only single switched UL is supported. | |

5.1.40.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_2-7-28\_n7 | 2 | 0.5 |
| 7 | 0.5 |
| 28 | 0.3 |
| n7 | 0.5 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_2-7-28\_n7 | 2 | 0 |
| 7 | 0 |
| 28 | 0 |
| n7 | 0 |

5.1.40.3 Reference sensitivity exceptions

No further MSD is needed defined.

## 5.1.41 DC\_2A-66A-71A\_n71A

5.1.41.1 Configurations for EN-DC

Table 5.5B.4.3-1: Inter-band EN-DC configurations within FR1 (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-66A-71A\_n71A | DC\_2A\_n71A  DC\_66A\_n71A |

Note that DC\_71\_n71 is not used as uplink configuration.

5.1.41.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_2-66-71\_n71 | 2 | 0.5 |
| 66 | 0.5 |
| 71 | 0.3 |
| n71 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_2-66-71\_n71 | 2 | 0.3 |
| 66 | 0.3 |
| 71 | 0 |
| n71 |

5.1.41.3 Reference sensitivity exceptions

REFSENS exceptions needed due to band 71 uplink harmonic into band 2 is already specified in Table 7.3B.2.3.1-1 of TS 38.101-3.

## 5.1.42 DC\_2-5-66\_n77A

5.1.42.1 Configurations for EN-DC

Table 5.5B.4.3-1: Inter-band EN-DC configurations within FR1 (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-5A-66A\_n77A DC\_2A-2A-5A-66A\_n77A DC\_2A-5A-66A-66A\_n77A | DC\_2A\_n77A  DC\_5A\_n77A  DC\_66A\_n77A |

5.1.42.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_2-5-66\_n77  DC\_2-2-5-66\_n77  DC\_2-5-66-66\_n77 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n77 | 0.8 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_2-5-66\_n77  DC\_2-2-5-66\_n77  DC\_2-5-66-66\_n77 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n77 | 0.5 |

5.1.42.3 Reference sensitivity exceptions

REFSENS exception have when needed been defined for lower order combinations.

## 5.1.43 DC\_2-13-66\_n77A

5.1.43.1 Configurations for EN-DC

Table 5.5B.4.3-1: Inter-band EN-DC configurations within FR1 (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-13A-66A\_n77A DC\_2A-2A-13A-66A\_n77A DC\_2A-13A-66A-66A\_n77A | DC\_2A\_n77A  DC\_13A\_n77A  DC\_66A\_n77A |

5.1.43.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_2-13-66\_n77  DC\_2-2-13-66\_n77  DC\_2-13-66-66\_n77 | 2 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n77 | 0.8 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_2-13-66\_n77  DC\_2-2-13-66\_n77  DC\_2-13-66-66\_n77 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n77 | 0.5 |

5.1.43.3 Reference sensitivity exceptions

REFSENS exception have when needed been defined for lower order combinations.

## 5.1.44 DC\_2-48-66\_n77A

5.1.44.1 Configurations for EN-DC

Table 5.5B.4.3-1: Inter-band EN-DC configurations within FR1 (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-48A-66A\_n77A | DC\_2A\_n77A  DC\_48A\_n77A  DC\_66A\_n77A |

5.1.44.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_2-48-66\_n77 | 2 | 0.6 |
| 48 | 0.8 |
| 66 | 0.6 |
| n77 | 0.8 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_2-48-66\_n77 | 2 | 0.3 |
| 48 | 0.5 |
| 66 | 0.3 |
| n77 | 0.5 |

5.1.44.3 Reference sensitivity exceptions

REFSENS exception have when needed been defined for lower order combinations.

## 5.1.45 DC\_1-3-40\_n78

### 5.1.45.1 Configuration for EN-DC

Table 5.1.45.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-3A-40A\_n78A  DC\_1A-3A-40C\_n78A | DC\_1A\_n78A  DC\_3A\_n78A  DC\_40A\_n78A |

### 5.1.45.2 ∆TIB and ∆RIB values

Table 5.1.45.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-40\_n78 | 1 | 0.6 |
| 3 | 0.6 |
| 40 | 0.35 |
| n78 | 0.85 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

**Table 5.1.45.2-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-40\_n78 | 1 | 0.2 |
| 3 | 0.2 |
| 40 | 0.45 |
| n78 | 0.55 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

### 5.1.45.3 REFSENS requirements

No additional MSD requirement needs to be defined for this dual connectivity configuration.

## 5.1.46 DC\_1-7-40\_n78

### 5.1.46.1 Configuration for EN-DC

Table 5.1.46.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-7A-40A\_n78A  DC\_1A-7A-40C\_n78A | DC\_1A\_n78A  DC\_7A\_n78A  DC\_40A\_n78A |

### 5.1.46.2 ∆TIB and ∆RIB values

Table 5.1.46.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-40\_n78 | 1 | 0.6 |
| 7 | 0.5 |
| 40 | 0.35 |
| n78 | 0.85 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

Table 5.1.46.2-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-40\_n78 | 1 | 0.2 |
| 7 | 0 |
| 40 | 0.45 |
| n78 | 0.55 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

### 5.1.46.3 REFSENS requirements

No additional MSD requirement needs to be defined for this dual connectivity configuration.

## 5.1.47 DC\_1-8-40\_n78

### 5.1.47.1 Configuration for EN-DC

Table 5.1.47.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_1A-8A-40A\_n78A  DC\_1A-8A-40C\_n78A | DC\_1A\_n78A  DC\_8A\_n78A  DC\_40A\_n78A |

### 5.1.47.2 ∆TIB and ∆RIB values

Table 5.1.47.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-40\_n78 | 1 | 0.6 |
| 8 | 0.6 |
| 40 | 0.35 |
| n78 | 0.85 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

Table 5.1.47.2-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-40\_n78 | 1 | 0.2 |
| 8 | 0.2 |
| 40 | 0.45 |
| n78 | 0.55 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

### 5.1.47.3 REFSENS requirements

No additional MSD requirement needs to be defined for this dual connectivity configuration.

## 5.1.48 DC\_3-7-40\_n78

### 5.1.48.1 Configuration for EN-DC

Table 5.1.48.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_3A-7A-40A\_n78A  DC\_3A-7A-40C\_n78A | DC\_3A\_n78A  DC\_7A\_n78A  DC\_40A\_n78A |

### 5.1.48.2 ∆TIB and ∆RIB values

Table 5.1.48.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-40\_n78 | 3 | 0.6 |
| 7 | 0.5 |
| 40 | 0.35 |
| n78 | 0.85 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

Table 5.1.48.2-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-40\_n78 | 3 | 0.2 |
| 7 | 0 |
| 40 | 0.45 |
| n78 | 0.55 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

### 5.1.48.3 REFSENS requirements

No additional MSD requirement needs to be defined for this dual connectivity configuration.

## 5.1.49 DC\_3-8-40\_n78

### 5.1.49.1 Configuration for EN-DC

Table 5.1.49.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_3A-8A-40A\_n78A  DC\_3A-8A-40C\_n78A | DC\_3A\_n78A  DC\_8A\_n78A  DC\_40A\_n78A |

### 5.1.49.2 ∆TIB and ∆RIB values

Table 5.1.49.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-40\_n78 | 3 | 0.6 |
| 8 | 0.6 |
| 40 | 0.35 |
| n78 | 0.85 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

Table 5.1.49.2-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-40\_n78 | 3 | 0.2 |
| 8 | 0.2 |
| 40 | 0.45 |
| n78 | 0.55 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

### 5.1.49.3 REFSENS requirements

No additional MSD requirement needs to be defined for this dual connectivity configuration.

## 5.1.50 DC\_7-8-40\_n78

### 5.1.50.1 Configuration for EN-DC

Table 5.1.50.1-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC configuration |
| --- | --- |
| DC\_7A-8A-40A\_n78A  DC\_7A-8A-40C\_n78A | DC\_7A\_n78A  DC\_8A\_n78A  DC\_40A\_n78A |

### 5.1.50.2 ∆TIB and ∆RIB values

Table 5.1.50.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-8-40\_n78 | 7 | 0.5 |
| 8 | 0.6 |
| 40 | 0.35 |
| n78 | 0.85 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

Table 5.1.50.2-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_7-8-40\_n78 | 7 | 0 |
| 8 | 0.2 |
| 40 | 0.45 |
| n78 | 0.55 |
| NOTE 5: Only applicable for UE supporting inter-band carrier aggregation with uplink in one NR band and without simultaneous Rx/Tx. | | |

### 5.1.50.3 REFSENS requirements

No additional MSD requirement needs to be defined for this dual connectivity configuration.

## 5.1.51 DC\_1-7-8\_n28

### 5.1.51.1 Configurations for EN-DC

Table 5.1.51.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-7A-8A\_n28A | DC\_1A\_n28A  DC\_7A\_n28A  DC\_8A\_n28A |

### 5.1.51.2 ∆TIB and ∆RIB values

Table 5.1.51.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-8\_n28 | 1 | 0.5 |
| 7 | 0.6 |
| 8 | 0.6 |
| n28 | 0.6 |

**Table 5.1.51.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-8\_n28 | 1 | 0 |
| 7 | 0 |
| 8 | 0.2 |
| n28 | 0.2 |

### 5.1.51.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.52 DC\_3-7-8\_n28

### 5.1.52.1 Configurations for EN-DC

Table 5.1.52.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-7A-8A\_n28A | DC\_3A\_n28A  DC\_7A\_n28A  DC\_8A\_n28A |

### 5.1.52.2 ∆TIB and ∆RIB values

Table 5.1.52.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n28 | 3 | 0.5 |
| 7 | 0.5 |
| 8 | 0.6 |
| n28 | 0.5 |

**Table 5.1.52.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n28 | 3 | 0 |
| 7 | 0 |
| 8 | 0.2 |
| n28 | 0.1 |

### 5.1.52.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.53 DC\_1-7-28\_n3

### 5.1.53.1 Configurations for EN-DC

Table 5.1.53.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-7A-28A\_n3A | DC\_1A\_n3A  DC\_7A\_n3A  DC\_28A\_n3A |

### 5.1.53.2 ∆TIB and ∆RIB values

Table 5.1.53.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n3 | 1 | 0.6 |
| 7 | 0.6 |
| 28 | 0.6 |
| n3 | 0.6 |

**Table 5.1.53.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n3 | 1 | 0 |
| 7 | 0 |
| 28 | 0.2 |
| n3 | 0 |

### 5.1.53.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.54 DC\_3-8-40\_n1

### 5.1.54.1 Configurations for EN-DC

Table 5.1.54.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-8A-40A\_n1A  DC\_3A-8A-40C\_n1A | DC\_3A\_n1A  DC\_8A\_n1A  DC\_40A\_n1A |

### 5.1.54.2 ∆TIB and ∆RIB values

Table 5.1.54.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-40\_n1 | 3 | 0.5 |
| 8 | 0.5 |
| 40 | 0.6 |
| n1 | 0.5 |

**Table 5.1.54.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-8-40\_n1 | 3 | 0 |
| 8 | 0 |
| 40 | 0.2 |
| n1 | 0.1 |

### 5.1.54.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.55 DC\_7-8-40\_n1

### 5.1.55.1 Configurations for EN-DC

Table 5.1.55.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_7A-8A-40A\_n1A  DC\_7A-8A-40C\_n1A | DC\_7A\_n1A  DC\_8A\_n1A  DC\_40A\_n1A |

### 5.1.55.2 ∆TIB and ∆RIB values

Table 5.1.55.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-8-40\_n1 | 7 | 0.8 |
| 8 | 0.6 |
| 40 | 0.9 |
| n1 | 0.6 |

**Table 5.1.55.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_7-8-40\_n1 | 7 | 0.3 |
| 8 | 0.2 |
| 40 | 0.8 |
| n1 | 0 |

### 5.1.55.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

### 5.1.56 DC\_2-28-66\_n7

### 5.1.56.1 Configurations for EN-DC

Table 5.1.56.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-28A-66A\_n7A | DC\_2A\_n7A  DC\_28A\_n7A  DC\_66A\_n7A |

### 5.1.56.2 ∆TIB and ∆RIB values

Table 5.1.56.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-28-66\_n7 | 2 | 0.5 |
| 28 | 0.6 |
| 66 | 0.5 |
| n7 | 0.5 |

**Table 5.1.56.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-28-66\_n7 | 2 | 0.3 |
| 28 | 0.2 |
| 66 | 0.5 |
| n7 | 0.5 |

### 5.1.56.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.57 DC\_2-5-7\_n7

### 5.1.57.1 Configurations for EN-DC

Table 5.1.57.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-5A-7A\_n7A | DC\_2A\_n7A  DC\_5A\_n7A  DC\_7A\_n7A1 |
| NOTE 1: Only single switched UL is supported. | |

### 5.1.57.2 ∆TIB and ∆RIB values

Table 5.1.57.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-7\_n7 | 2 | 0.5 |
| 5 | 0.3 |
| 7 | 0.5 |
| n7 | 0.5 |

**Table 5.1.57.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-7\_n7 | 2 | 0 |
| 5 | 0 |
| 7 | 0 |
| n7 | 0 |

### 5.1.57.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.58 DC\_2-7-66\_n7/DC\_2-7-66-66\_n7

### 5.1.58.1 Configurations for EN-DC

Table 5.1.58.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-7A-66A\_n7A  DC\_2A-7A-66A-66A\_n7A | DC\_2A\_n7A  DC\_7A\_n7A1  DC\_66A\_n7A |
| NOTE 1: Only single switched UL is supported. | |

### 5.1.58.2 ∆TIB and ∆RIB values

Table 5.1.58.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n7  DC\_2-7-66-66\_n7 | 2 | 0.5 |
| 7 | 0.5 |
| 66 | 0.5 |
| n7 | 0.5 |

**Table 5.1.58.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n7  DC\_2-7-66-66\_n7 | 2 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n7 | 0.5 |

### 5.1.58.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.59 DC\_5-7-66\_n7/DC\_5-7-66-66\_n7

### 5.1.59.1 Configurations for EN-DC

Table 5.1.59.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_5A-7A-66A\_n7A  DC\_5A-7A-66A-66A\_n7A | DC\_5A\_n7A  DC\_7A\_n7A1  DC\_66A\_n7A |
| NOTE 1: Only single switched UL is supported. | |

### 5.1.59.2 ∆TIB and ∆RIB values

Table 5.1.59.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_5-7-66\_n7  DC\_5-7-66-66\_n7 | 5 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n7 | 0.5 |

**Table 5.1.59.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_5-7-66\_n7  DC\_5-7-66-66\_n7 | 5 | 0 |
| 7 | 0.5 |
| 66 | 0.5 |
| n7 | 0.5 |

### 5.1.59.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

## 5.1.60 DC\_7-28-66\_n7

### 5.1.60.1 Configurations for EN-DC

Table 5.1.60.1-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_7A-28A-66A\_n7A | DC\_7A\_n7A1  DC\_78A\_n7A  DC\_66A\_n7A |
| NOTE 1: Only single switched UL is supported. | |

### 5.1.60.2 ∆TIB and ∆RIB values

Table 5.1.60.2-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-28-66\_n7 | 7 | 0.5 |
| 28 | 0.6 |
| 66 | 0.5 |
| n7 | 0.5 |

**Table 5.1.60.2-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_7-28-66\_n7 | 7 | 0.5 |
| 28 | 0.2 |
| 66 | 0.5 |
| n7 | 0.5 |

### 5.1.60.3 Reference sensitivity exceptions

REFSENS exceptions are not needed.

### 5.1.61 DC\_2-7-66\_n77

### 5.1.61.1 Configurations for EN-DC

Table 5.2B.4.4-1: Band combinations EN-DC (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_2A-7A-66A\_n77A  DC\_2A-7A-7A-66A\_n77A  DC\_2A-7A-66A\_n77(2A)  DC\_2A-7A-7A-66A\_n77(2A)  DC\_2A-7C-66A\_n77A  DC\_2A-7C-66A\_n77(2A) | DC\_2A\_n77A  DC\_7A\_n77A  DC\_66A\_n77A |

### 5.1.61.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.4-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔTIB,c (dB) |
| --- | --- | --- |
| DC\_2-7-66\_n77 | 2 | 0.6 |
| 7 | 0.5 |
| 66 | 0.6 |
| n77 | 0.8 |

Table 7.3B.3.3.4-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band EN-DC configuration | E-UTRA or NR Band | ΔRIB,c (dB) |
| --- | --- | --- |
| DC\_2-7-66\_n77 | 2 | 0.2 |
| 7 | 0.5 |
| 66 | 0.5 |
| n77 | 0.5 |

### 5.1.61.3 Reference sensitivity exceptions

No further REFSENS exceptions needed.

# Annex A - Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
| 2020-08 | 3GPP RAN4#96-e | R4-2010681 |  |  |  | TR skeleton | 0.0.1 |
| 2020-08 | 3GPP RAN4#96-e |  |  |  |  | Implemented TP’s from RAN4 #96-e:  R4-2010246, “TP for TR 37.717-31-11 DC\_1-3\_(n)41”, Samsung, KDDI  R4-2010247, “TP for TR 37.717-31-11 DC\_1-3-41\_n28”, Samsung, KDDI  R4-2010434, “TP for 37.717-31-11 to introduce DC\_3A-7A-8A\_n40A”, Nokia  R4-2010435, “TP for 37.717-31-11 to introduce DC\_3A-7A-28A\_n1A”, Nokia  R4-2010437. “TP for 37.717-31-11 to introduce DC\_5A-7-66A\_n66A”, Nokia  R4-2010514, “TP for DC\_3-19-42\_n1 for TR 37.717-31-11”, NTT DOCOMO INC.  R4-2010515, “TP for DC\_3-21-42\_n1 for TR 37.717-31-11”, NTT DOCOMO INC.  R4-2010516, “TP for DC\_19-21-42\_n1 for TR 37.717-31-11”, NTT DOCOMO INC.  R4-2010896, “TP for TR 37.717-31-11: DC\_2A-28A-66A\_n66A”, Huawei, HiSilicon  R4-2010897, “TP for TR 37.717-31-11: DC\_7A-28A-66A\_n66A / DC\_7C-28A-66A\_n66A”, Huawei, HiSilicon  R4-2010898, “TP for TR 37.717-31-11: DC\_2A-7A-28A\_n66A / DC\_2A-7C-28A\_n66A”, Huawei, HiSilicon  R4-2010899, “TP for TR 37.717-31-11: DC\_3A-7A-28A\_n1A”, Huawei, HiSilicon  R4-2009996, ”TP for TR 37.717-31-11: EN-DC\_1-8-11\_n3”, SoftBank Corp.  R4-2009997, ”TP for TR 37.717-31-11: EN-DC\_1-8-42\_n28”, SoftBank Corp.  R4-2009770, “TP for TR 37.717-31-11: DC\_1-7-32\_n28”, VODAFONE Group Plc  R4-2009771, “TP for TR 37.717-31-11: DC\_1-7-32\_n78”, VODAFONE Group Plc  R4-2009772, “TP for TR 37.717-31-11: DC\_1-20-32\_n28”, VODAFONE Group Plc  R4-2009774, “TP for TR 37.717-31-11: DC\_1-20-32\_n78”, VODAFONE Group Plc  R4-2009775, “TP for TR 37.717-31-11: DC\_3-7-32\_n78”, VODAFONE Group Plc  R4-2009776, “TP for TR 37.717-31-11: DC\_3-20-32\_n78”, VODAFONE Group Plc  R4-2009777, “TP for TR 37.717-31-11: DC\_7-20-32\_n1”, VODAFONE Group Plc  R4-2009778, “TP for TR 37.717-31-11: DC\_7-20-32\_n28”, VODAFONE Group Plc | 0.1.0 |
| 2020-11 | 3GPP RAN4#97-e | R4-2015925 |  |  |  | Implemented TP’s from RAN4 #96-e:  R4-2014037, “TP for 37.717-31-11 for DC\_1-20-32\_n3”, Huawei,HiSilicon  R4-2014038, “TP for 37.717-31-11 for DC\_2-4-7\_n28”, Huawei,HiSilicon  R4-2014039, “TP for 37.717-31-11 for DC\_2-5-7\_n66”, Huawei,HiSilicon  R4-2014040, “TP for 37.717-31-11 for DC\_2-5-66\_n7”, Huawei,HiSilicon  R4-2014041, “TP for 37.717-31-11 for DC\_2-5-66\_n66”, Huawei,HiSilicon  R4-2014042, “TP for 37.717-31-11 for DC\_2-7-66\_n28”, Huawei,HiSilicon  R4-2014043, “TP for 37.717-31-11 for DC\_3-20-32\_n1”, Huawei,HiSilicon  R4-2014107, “TP for TR 37.717-31-11 DC\_1-3-18\_n3”, Samsung, KDDI  R4-2014108, “TP for TR 37.717-31-11 DC\_1-3-41\_n3”, Samsung, KDDI  R4-2014109, “TP for TR 37.717-31-11 DC\_1-3-41\_n41”, Samsung, KDDI  R4-2014130, “TP for TR 37.717-31-11 DC\_2-5-7\_n66”, Samsung, TELUS, Bell mobility  R4-2014615, ”TP for TR 37.717-31-11: EN-DC\_1-3-11\_n28”, SoftBank Corp.  R4-2014616, ”TP for TR 37.717-31-11: EN-DC\_1-  3-11\_n77”, SoftBank Corp.  R4-2014617, ”TP for TR 37.717-31-11: EN-DC\_3-8-11\_n28”, SoftBank Corp.  R4-2014618, ”TP for TR 37.717-31-11: EN-DC\_3-8-11\_n77”, SoftBank Corp.  R4-2014619, ”TP for TR 37.717-31-11: EN-DC\_1-8-11\_n28”, SoftBank Corp.  R4-2014807, “TP for TR 37.717-31-11: DC\_1A-3A-18A\_n28A”, KDDI Corporation  R4-2014845, “TP for TR 37.717-31-11: DC\_1A-3A-18A\_n41A”, KDDI Corporation  R4-2015231, “TP for 37.717-31-11 to introduce DC\_2A-7A-28A\_n7A”, Nokia  R4-2015247, “TP for 37.717-31-11 to introduce DC\_2A-66A-71A\_n71A”, Nokia, T-Mobile  R4-2015248, “TP for 37.717-31-11 to introduce DC\_2-5-66\_n77A”, Nokia, Verizon  R4-2015249, “TP for 37.717-31-11 to introduce DC\_2-13-66\_n77A”, Nokia, Verizon  R4-2015250, “TP for 37.717-31-11 to introduce DC\_2-48-66\_n77A”, Nokia, Verizon  R4-2015272, “TP to TR 37.717-31-11 DC\_1A-3A-40C\_n78A”, Huawei, HiSilicon, Nokia, Ericsson  R4-2015273, “TP to TR 37.717-31-11 DC\_1A-7A-40C\_n78A”, Huawei, HiSilicon, Ericsson  R4-2015274, “TP to TR 37.717-31-11 DC\_1A-8A-40C\_n78A”, Huawei, HiSilicon, Nokia  R4-2015275, “TP to TR 37.717-31-11 DC\_3A-7A-40C\_n78A”, Huawei, HiSilicon, Ericsson  R4-2015276, “TP to TR 37.717-31-11 DC\_3A-8A-40C\_n78A”, Huawei, HiSilicon, Nokia  R4-2015277, “TP to TR 37.717-31-11 DC\_7A-8A-40C\_n78A”, Huawei, HiSilicon  R4-2015405, “TP for TR 37.717-31-11: DC\_1A-7A-8A\_n28A”, Huawei, HiSilicon  R4-2015406, “TP for TR 37.717-31-11: DC\_3A-7A-8A\_n28A”, Huawei, HiSilicon  R4-2015407, “TP for TR 37.717-31-11: DC\_1A-7A-28A\_n3A”, Huawei, HiSilicon  R4-2015408, “TP for TR 37.717-31-11: DC\_3A-8A-40A\_n1A/DC\_3A-8A-40C\_n1A”, Huawei, HiSilicon  R4-2015409, “TP for TR 37.717-31-11: DC\_7A-8A-40A\_n1A/DC\_7A-8A-40C\_n1A”, Huawei, HiSilicon  R4-2015411, “TP for TR 37.717-31-11: DC\_2A-28A-66A\_n7A”, Huawei, HiSilicon  R4-2015412, “TP for TR 37.717-31-11: DC\_2A-5A-7A\_n7A”, Huawei, HiSilicon  R4-2015413, “TP for TR 37.717-31-11: DC\_2A-7A-66A\_n7A/DC\_2A-7A-66A-66A\_n7A”, Huawei, HiSilicon  R4-2015414, “TP for TR 37.717-31-11: DC\_5A-7A-66A\_n7A/DC\_5A-7A-66A-66A\_n7A”, Huawei, HiSilicon  R4-2015415, “TP for TR 37.717-31-11: DC\_7A-28A-66A\_n7A”, Huawei, HiSilicon  R4-2015712, “TP for TR 37.717-31-11: DC\_2-7-66\_n77”, Huawei, HiSilicon, Bell Mobility, Telus | 0.2.0 |