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Technical Report

3rd Generation Partnership Project;

Technical Specification Group Radio Access Networks;

Rel-17 Dual Connectivity (DC) of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL)

(Release 17)

** 

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# 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:

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where:

x the first digit:

1 presented to TSG for information;

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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 DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) under Rel-17 time frame, including EN-DC and NE-DC. The purpose is to gather the relevant background information and studies in order to address DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) in Rel-17 as .

This TR contains a general part and band specific combination part. The actual requirements are added to the corresponding technical specifications.

# 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] 3GPP TR 30.007: “Guideline on WI/SI for new Operating Bands”

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

[4] 3GPP TS 38.101-2: “NR; User Equipment (UE) radio transmission and reception; Part 2: Range 2 Standalone”

[5] 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”

# 3 Definitions, symbols and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 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 TR 21.905 [1].

## 3.2 Symbols

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

ΔRIB,c Allowed reference sensitivity relaxation due to support for CA or DC operation, for serving cell *c*.

ΔTIB,c Allowed maximum configured output power relaxation due to support for CA or DC operation, for serving cell *c*.

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 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 TR 21.905 [1].

# 4 Background

The present document is a technical report for DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) under Rel-17 time frame, including EN-DC and NE-DC.

## 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 band combinations of LTE x bands DL/1UL(x=1,2,3) + NR 3 bands DL/1UL: General Part

## 5.1 General

In order to support DC of LTE CA for up to 3 different bands DL with 1 band UL + NR CA for 3 different bands DL with 1 band UL in rel-17, the corresponding fallback modes shall be shall be completed and specified in advance.

Unless otherwise stated, the requirements for EN-DC and NE-DC for the same band combination are the same.

## 5.2 General treatment of ∆TIB and ∆RIB values

For DC of x bands (x=1,2,3) LTE inter-band CA (xDL/1UL) and 3 bands NR inter-band CA (3DL/1UL) band combination, RAN4 should consider to reuse agreed additional insertion losses for all EN-DC band combinations when new RF components are not introduced to support this basket WI. If the new RF components are introduced, then more detail description will be captured in some specific EN-DC band combinations.

# DC band combinations of LTE 1 band DL/1UL + NR 3 bands DL/1UL: Specific Band Combination Part

## 6.1 DC\_1\_n3-n28-n77

### 6.1.1 Operating bands for DC

Table 6.1.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_1\_n3-n28-n77 | 1 | CA\_n3-n28-n77 |

### 6.1.2 Inter-band DC Configurations

Table 6.1.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A |
| DC\_1A\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A |

### 6.1.3 Co-existence studies

Co-existence study for DC\_1\_n3-n28-n77 was covered by the studies for the fallback modes of DC\_1\_n3-n28, DC\_1\_n3-n77 and DC\_1\_n28-n77.

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

### 6.1.4 ∆TIB and ∆RIB values

For DC\_1\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.1.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1\_n3-n28-n77 | 1 | 0.6 |
| n3 | 0.8 |
| n28 | 0.6 |
| n77 | 0.8 |

Table 6.1.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1\_n3-n28-n77 | 1 | 0.2 |
| n3 | 0.2 |
| n28 | 0.2 |
| n77 | 0.5 |

### 6.1.5 MSD

As mentioned in 6.1.3, there is no need to specify additional MSD requirement for this UL DC configuration..

## 6.2 DC\_8\_n3-n28-n77

### 6.2.1 Operating bands for DC

Table 6.2.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_8\_n3-n28-n77 | 8 | CA\_n3-n28-n77 |

### 6.2.2 Inter-band DC Configurations

Table 6.2.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_8A\_n3A-n28A-n77A | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A |
| DC\_8A\_n3A-n28A-n77(2A) | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A |

### 6.2.3 Co-existence studies

Co-existence study for DC\_8\_n3-n28-n77 was covered by the studies for the fallback modes of DC\_8\_n3-n28, DC\_8\_n3-n77 and DC\_8\_n28-n77.

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

### 6.2.4 ∆TIB and ∆RIB values

For DC\_8\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_8\_n3-n28-n77 | 8 | 0.6 |
| n3 | 0.6 |
| n28 | 0.5 |
| n77 | 0.8 |

Table 6.2.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_8\_n3-n28-n77 | 8 | 0.2 |
| n3 | 0.2 |
| n28 | 0.2 |
| n77 | 0.5 |

### 6.2.5 MSD

As mentioned in 6.2.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 6.3 DC\_8A\_n40A-n41A-n79A

### 6.3.1 Operating bands for DC

Table 6.3.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_8\_n40-n41-n79 | 8 | CA\_n40-n41-n79 |

6.3.2 Inter-band DC Configurations

Table 6.3.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_8A\_n40A-n41A-n79A | DC\_8A\_n40A DC\_8A\_n41A DC\_8A\_n79A |

### 6.3.3 Co-existence studies

For DC\_8A\_n40A-n41A-n79A co-existence studies, the lower order DC\_8A\_n40A-n41A, DC\_8A\_n40A-n79A and DC\_8A\_n41A-n79A can be applied.

### 6.3.4 ∆TIB and ∆RIB values

For DC\_8A\_n40A-n41A-n79A , the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.3.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_8\_n40-n41-n79 | 8 | 0.3 |
| n40 | 0.3 |
| n41 | 0.3 |
| n79 | 0 |

Table 6.3.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_8\_n40-n41-n79 | 8 | 0 |
| n40 | 0 |
| n41 | 0 |
| n79 | 0 |

### 6.3.5 MSD

No additional MSD requirement is needed.

## 6.4 DC\_3\_n1-n78-n257, DC\_3-3\_n1-n78-n257

### 6.4.1 Operating bands for DC

Table 6.4.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3\_n1-n78-n257  DC\_3-3\_n1-n78-n257 | 3  CA\_3-3 | CA\_n1-n78-n257 |

### 6.4.2 Inter-band DC Configurations

Table 6.4.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A\_n1A-n78A-n257A  DC\_3A\_n1A-n78A-n257D  DC\_3A\_n1A-n78A-n257E  DC\_3A\_n1A-n78A-n257F  DC\_3A\_n1A-n78A-n257G  DC\_3A\_n1A-n78A-n257H  DC\_3A\_n1A-n78A-n257I  DC\_3A\_n1A-n78A-n257J  DC\_3A\_n1A-n78A-n257K  DC\_3A\_n1A-n78A-n257L  DC\_3A\_n1A-n78A-n257M | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n257A |
| DC\_3A-3A\_n1A-n78A-n257A  DC\_3A-3A\_n1A-n78A-n257D  DC\_3A-3A\_n1A-n78A-n257E  DC\_3A-3A\_n1A-n78A-n257F  DC\_3A-3A\_n1A-n78A-n257G  DC\_3A-3A\_n1A-n78A-n257H  DC\_3A-3A\_n1A-n78A-n257I  DC\_3A-3A\_n1A-n78A-n257J  DC\_3A-3A\_n1A-n78A-n257K  DC\_3A-3A\_n1A-n78A-n257L  DC\_3A-3A\_n1A-n78A-n257M | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n257A |

### 6.4.3 Co-existence studies

The co-existence studies can be covered by the studies of the constituent combinations mentioned in 37.716-21-21.

### 6.4.4 ∆TIB and ∆RIB values

For DC\_3\_n1-n78-n257, DC\_3-3\_n1-n78-n257, ΔTIB,c and ΔRIB,c values are set to zero for n257, and the values for constituent E-UTRA and FR1 NR bands are same as those for the corresponding inter band EN-DC configurations which are defined in the TS 38.101-3 already.

### 6.4.5 MSD

No additional MSD requirement is needed.

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## 6.5 DC\_7\_n1-n78-n257, DC\_7-7\_n1-n78-n257

### 6.5.1 Operating bands for DC

Table 6.5.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_7\_n1-n78-n257  DC\_7-7\_n1-n78-n257 | 7  CA\_7-7 | CA\_n1-n78-n257 |

### 6.5.2 Inter-band DC Configurations

Table 6.5.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_7A\_n1A-n78A-n257A  DC\_7A\_n1A-n78A-n257D  DC\_7A\_n1A-n78A-n257E  DC\_7A\_n1A-n78A-n257F  DC\_7A\_n1A-n78A-n257G  DC\_7A\_n1A-n78A-n257H  DC\_7A\_n1A-n78A-n257I  DC\_7A\_n1A-n78A-n257J  DC\_7A\_n1A-n78A-n257K  DC\_7A\_n1A-n78A-n257L  DC\_7A\_n1A-n78A-n257M | DC\_7A\_n1A  DC\_7A\_n78A  DC\_7A\_n257A |
| DC\_7A-7A\_n1A-n78A-n257A  DC\_7A-7A\_n1A-n78A-n257D  DC\_7A-7A\_n1A-n78A-n257E  DC\_7A-7A\_n1A-n78A-n257F  DC\_7A-7A\_n1A-n78A-n257G  DC\_7A-7A\_n1A-n78A-n257H  DC\_7A-7A\_n1A-n78A-n257I  DC\_7A-7A\_n1A-n78A-n257J  DC\_7A-7A\_n1A-n78A-n257K  DC\_7A-7A\_n1A-n78A-n257L  DC\_7A-7A\_n1A-n78A-n257M | DC\_7A\_n1A  DC\_7A\_n78A  DC\_7A\_n257A |

### 6.5.3 Co-existence studies

The co-existence studies can be covered by the studies for the constituent combinations mentioned in 37.716-21-21.

### 6.5.4 ∆TIB and ∆RIB values

For DC\_7\_n1-n78-n257, DC\_7-7\_n1-n78-n257, ΔTIB,c and ΔRIB,c values are set to zero for n257, and the values for constituent E-UTRA and FR1 NR bands are same as those for the corresponding inter band EN-DC configurations which are defined in the TS 38.101-3 already.

### 6.5.5 MSD

No additional MSD requirement is needed.

## 6.6 DC\_11\_n3-n28-n77

### 6.6.1 Operating bands for DC

Table 6.6.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_11\_n3-n28-n77 | 11 | CA\_n3-n28-n77 |

### 6.6.2 Inter-band DC Configurations

Table 6.6.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_11A\_n3A-n28A-n77A | DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |
| DC\_11A\_n3A-n28A-n77(2A) | DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |

### 6.6.3 Co-existence studies

Co-existence study for DC\_11\_n3-n28-n77 was covered by the studies for the fallback modes of DC\_11\_n3-n28, DC\_11\_n3-n77 and DC\_11\_n28-n77.

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

### 6.6.4 ∆TIB and ∆RIB values

For DC\_11\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.6.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_11\_n3-n28-n77 | 11 | 0.8 |
| n3 | 0.9 |
| n28 | 0.6 |
| n77 | 0.8 |

Table 6.6.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_11\_n3-n28-n77 | 11 | 0.3 |
| n3 | 0.5 |
| n28 | 0.2 |
| n77 | 0.5 |

### 6.6.5 MSD

As mentioned in 6.6.3, there is no need to specify additional MSD requirement for this UL DC configuration..

## 6.7 DC\_42\_n3-n28-n77

### 6.7.1 Operating bands for DC

Table 6.7.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_42\_n3-n28-n77 | 42 | CA\_n3-n28-n77 |

### 6.7.2 Inter-band DC Configurations

Table 6.7.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_42A\_n3A-n28A-n77A | DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_42A\_n3A-n28A-n77(2A) | DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_42C\_n3A-n28A-n77A | DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |
| DC\_42C\_n3A-n28A-n77(2A) | DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |

### 6.7.3 Co-existence studies

Co-existence study for DC\_42\_n3-n28-n77 was covered by the studies for the fallback modes of DC\_42\_n3-n28, DC\_42\_n3-n77 and DC\_42\_n28-n77.

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

### 6.7.4 ∆TIB and ∆RIB values

For DC\_42\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.7.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_42\_n3-n28-n77 | 42 | 0.8 |
| n3 | 0.6 |
| n28 | 0.8 |
| n77 | 0.8 |

Table 6.7.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_42\_n3-n28-n77 | 42 | 0.5 |
| n3 | 0.2 |
| n28 | 0.5 |
| n77 | 0.5 |

### 6.7.5 MSD

As mentioned in 6.7.3, there is no need to specify additional MSD requirement for this UL DC configuration..

## 6.8 DC\_1A\_n28A-n77A-n79A

### 6.8.1 Operating bands for DC

Table 6.8.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1\_n28-n77-n79 | 1 | CA\_n28-n77-n79 |

### 6.8.2 Inter-band DC Configurations

Table 6.8.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A\_n28A-n77A-n79A | DC\_1A\_n28A  DC\_1A\_n77A  DC\_1A\_n79A |

### 6.8.3 Co-existence studies

Co-existence study for DC\_1A\_n28A-n77A-n79A was covered by the studies for the fallback modes of DC\_1A\_n28A-n77A, DC\_1A\_n28A-n79A and DC\_1A\_n77A-n79A.

### 6.8.4 ∆TIB and ∆RIB values

For DC\_1A\_n28A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.8.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_1A\_n28A-n77A-n79A | 1 | 0.6 |
| n28 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 6.8.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_1\_n28-n77-n79 | 1 | 0.3 |
| n28 | 0.3 |
| n77 | 0.5 |

### 6.8.5 MSD

No additional MSD requirement is needed.

## 6.9 DC\_1A\_n28A-n78A-n79A

### 6.9.1 Operating bands for DC

Table 6.9.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1\_n28-n78-n79 | 1 | CA\_n28-n78-n79 |

### 6.9.2 Inter-band DC Configurations

Table 6.9.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A\_n28A-n78A-n79A | DC\_1A\_n28A  DC\_1A\_n78A  DC\_1A\_n79A |

### 6.9.3 Co-existence studies

Co-existence study for DC\_1A\_n28A-n78A-n79A was covered by the studies for the fallback modes of DC\_1A\_n28A-n78A, DC\_1A\_n28A-n79A and DC\_1A\_n78A-n79A.

### 6.9.4 ∆TIB and ∆RIB values

For DC\_1A\_n28A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.9.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_1A\_n28A-n78A-n79A | 1 | 0.3 |
| n28 | 0.6 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 6.9.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_1A\_n28A-n78A-n79A | 1 | 0.3 |
| n28 | 0.3 |
| n78 | 0.5 |
| n79 | 0 |

### 6.9.5 MSD

No additional MSD requirement is needed.

## 6.10 DC\_3A\_n1A-n77A-n79A

### 6.10.1 Operating bands for DC

Table 6.10.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3\_n1-n77-n79 | 3 | CA\_n1-n77-n79 |

### 6.10.2 Inter-band DC Configurations

Table 6.10.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A\_n1A-n77A-n79A | DC\_3A\_n1A  DC\_3A\_n77A  DC\_3A\_n79A |

### 6.10.3 Co-existence studies

Co-existence study for DC\_3A\_n1A-n77A-n79A was covered by the studies for the fallback modes of DC\_3A\_n1A-n77A, DC\_3A\_n1A-n79A and DC\_3A\_n77A-n79A.

### 6.10.4 ∆TIB and ∆RIB values

For DC\_3A\_n1A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.10.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n1A-n77A-n79A | 3 | 0.6 |
| n1 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 6.10.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n1A-n77A-n79A | 3 | 0.2 |
| n1 | 0.2 |
| n77 | 0.5 |
| n79 | 0 |

### 6.10.5 MSD

No additional MSD requirement is needed.

## 6.11 DC\_3A\_n1A-n78A-n79A

### 6.11.1 Operating bands for DC

Table 6.11.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3\_n1-n78-n79 | 3 | CA\_n1-n78-n79 |

### 6.11.2 Inter-band DC Configurations

Table 6.11.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A\_n1A-n78A-n79A | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n79A |

### 6.11.3 Co-existence studies

Co-existence study for DC\_3A\_n1A-n78A-n79A was covered by the studies for the fallback modes of DC\_3A\_n1A-n78A, DC\_3A\_n1A-n79A and DC\_3A\_n78A-n79A.

### 6.11.4 ∆TIB and ∆RIB values

For DC\_3A\_n1A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.11.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n1A-n78A-n79A | 3 | 0.6 |
| n1 | 0.3 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 6.11.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n1A-n78A-n79A | 3 | 0.2 |
| n1 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 6.11.5 MSD

No additional MSD requirement is needed.

## 6.12 DC\_3A\_n28A-n77A-n79A

### 6.12.1 Operating bands for DC

Table 6.12.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3\_n28-n77-n79 | 3 | CA\_n28-n77-n79 |

### 6.12.2 Inter-band DC Configurations

Table 6.12.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A\_n28A-n77A-n79A | DC\_3A\_n28A  DC\_3A\_n77A  DC\_3A\_n79A |

### 6.12.3 Co-existence studies

Co-existence study for DC\_3A\_n28A-n77A-n79A was covered by the studies for the fallback modes of DC\_3A\_n28A-n77A, DC\_3A\_n28A-n79A and DC\_3A\_n77A-n79A.

### 6.12.4 ∆TIB and ∆RIB values

For DC\_3A\_n28A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.12.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n28A-n77A-n79A | 3 | 0.6 |
| n28 | 0.5 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 6.12.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n28A-n77A-n79A | 3 | 0.2 |
| n28 | 0.2 |
| n77 | 0.5 |
| n79 | 0 |

### 6.12.5 MSD

No additional MSD requirement is needed.

## 6.13 DC\_3A\_n28A-n78A-n79A

### 6.13.1 Operating bands for DC

Table 6.13.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3\_n28-n78-n79 | 3 | CA\_n28-n78-n79 |

### 6.13.2 Inter-band DC Configurations

Table 6.13.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A\_n28A-n78A-n79A | DC\_3A\_n28A  DC\_3A\_n78A  DC\_3A\_n79A |

### 6.13.3 Co-existence studies

Co-existence study for DC\_3A\_n28A-n78A-n79A was covered by the studies for the fallback modes of DC\_3A\_n28A-n78A, DC\_3A\_n28A-n79A and DC\_3A\_n78A-n79A.

### 6.13.4 ∆TIB and ∆RIB values

For DC\_3A\_n28A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.13.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n28A-n78A-n79A | 3 | 0.6 |
| n28 | 0.5 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 6.13.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A\_n28A-n78A-n79A | 3 | 0.2 |
| n28 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 6.13.5 MSD

No additional MSD requirement is needed.

## 6.14 DC\_19A\_n1A-n77A-n79A

### 6.14.1 Operating bands for DC

Table 6.14.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_19\_n1-n77-n79 | 19 | CA\_n1-n77-n79 |

### 6.14.2 Inter-band DC Configurations

Table 6.14.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_19A\_n1A-n77A-n79A | DC\_19A\_n1A  DC\_19A\_n77A  DC\_19A\_n79A |

### 6.14.3 Co-existence studies

Co-existence study for DC\_19A\_n1A-n77A-n79A was covered by the studies for the fallback modes of DC\_19A\_n1A-n77A, DC\_19A\_n1A-n79A and DC\_19A\_n77A-n79A.

### 6.14.4 ∆TIB and ∆RIB values

For DC\_19A\_n1A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.14.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_19A\_n1A-n77A-n79A | 19 | 0.3 |
| n1 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 6.14.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_19A\_n1A-n77A-n79A | 19 | 0.3 |
| n1 | 0.3 |
| n77 | 0.5 |
| n79 | 0 |

### 6.14.5 MSD

No additional MSD requirement is needed.

## 6.15 DC\_19A\_n1A-n78A-n79A

### 6.15.1 Operating bands for DC

Table 6.15.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_19\_n1-n78-n79 | 19 | CA\_n1-n78-n79 |

### 6.15.2 Inter-band DC Configurations

Table 6.15.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_19A\_n1A-n78A-n79A | DC\_19A\_n1A  DC\_19A\_n78A  DC\_19A\_n79A |

### 6.15.3 Co-existence studies

Co-existence study for DC\_19A\_n1A-n78A-n79A was covered by the studies for the fallback modes of DC\_19A\_n1A-n78A, DC\_19A\_n1A-n79A and DC\_19A\_n78A-n79A.

### 6.15.4 ∆TIB and ∆RIB values

For DC\_19A\_n1A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.15.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_19A\_n1A-n78A-n79A | 19 | 0.3 |
| n1 | 0.3 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 6.15.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_19A\_n1A-n78A-n79A | 19 | 0.3 |
| n1 | 0.3 |
| n78 | 0.5 |
| n79 | 0 |

### 6.15.5 MSD

No additional MSD requirement is needed.

## 6.16 DC\_21A\_n1A-n77A-n79A

### 6.16.1 Operating bands for DC

Table 6.16.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_21\_n1-n77-n79 | 21 | CA\_n1-n77-n79 |

### 6.16.2 Inter-band DC Configurations

Table 6.16.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_21A\_n1A-n77A-n79A | DC\_21A\_n1A  DC\_21A\_n77A  DC\_21A\_n79A |

### 6.16.3 Co-existence studies

Co-existence study for DC\_21A\_n1A-n77A-n79A was covered by the studies for the fallback modes of DC\_21A\_n1A-n77A, DC\_21A\_n1A-n79A and DC\_21A\_n77A-n79A.

### 6.16.4 ∆TIB and ∆RIB values

For DC\_21A\_n1A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.16.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_21\_n1-n77-n79 | 21 | 0.4 |
| n1 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 6.16.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_21\_n1-n77-n79 | n1 | 0.2 |
| n77 | 0.5 |

### 6.16.5 MSD

No additional MSD requirement is needed.

### 6.17 DC\_21A\_n1A-n78A-n79A

### 6.17.1 Operating bands for DC

Table 6.17.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_21\_n1-n78-n79 | 21 | CA\_n1-n78-n79 |

### 6.17.2 Inter-band DC Configurations

Table 6.17.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_21A\_n1A-n78A-n79A | DC\_21A\_n1A  DC\_21A\_n78A  DC\_21A\_n79A |

### 6.17.3 Co-existence studies

Co-existence study for DC\_21A\_n1A-n78A-n79A was covered by the studies for the fallback modes of DC\_21A\_n1A-n78A, DC\_21A\_n1A-n79A and DC\_21A\_n78A-n79A.

### 6.17.4 ∆TIB and ∆RIB values

For DC\_21A\_n1A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.17.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_21A\_n1A-n78A-n79A | 21 | 0.4 |
| n1 | 0.6 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 6.17.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_21A\_n1A-n78A-n79A | 21 | 0 |
| n1 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 6.17.5 MSD

No additional MSD requirement is needed.

## 6.18 DC\_21A\_n28A-n77A-n79A

### 6.18.1 Operating bands for DC

Table 6.18.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_21\_n28-n77-n79 | 21 | CA\_n28-n77-n79 |

### 6.18.2 Inter-band DC Configurations

Table 6.18.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_21A\_n28A-n77A-n79A | DC\_21A\_n28A  DC\_21A\_n77A  DC\_21A\_n79A |

### 6.18.3 Co-existence studies

Co-existence study for DC\_21A\_n28A-n77A-n79A was covered by the studies for the fallback modes of DC\_21A\_n28A-n77A, DC\_21A\_n28A-n79A and DC\_21A\_n77A-n79A.

### 6.18.4 ∆TIB and ∆RIB values

For DC\_21A\_n28A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.18.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_21A\_n28A-n77A-n79A | 21 | 0.4 |
| n28 | 0.5 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 6.18.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_21A\_n28A-n77A-n79A | 21 | 0 |
| n28 | 0.2 |
| n77 | 0.5 |
| n79 | 0 |

### 6.18.5 MSD

No additional MSD requirement is needed.

## 6.19 DC\_21A\_n28A-n78A-n79A

### 6.19.1 Operating bands for DC

Table 6.19.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_21\_n28-n78-n79 | 21 | CA\_n28-n78-n79 |

### 6.19.2 Inter-band DC Configurations

Table 6.19.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_21A\_n28A-n78A-n79A | DC\_21A\_n28A  DC\_21A\_n78A  DC\_21A\_n79A |

### 6.19.3 Co-existence studies

Co-existence study for DC\_21A\_n28A-n78A-n79A was covered by the studies for the fallback modes of DC\_21A\_n28A-n78A, DC\_21A\_n28A-n79A and DC\_21A\_n78A-n79A.

### 6.19.4 ∆TIB and ∆RIB values

For DC\_21A\_n28A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.19.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_21\_n28-n78-n79 | 21 | 0.4 |
| n28 | 0.5 |
| n78 | 0.8 |

**Table 6.19.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_21\_n28-n78-n79 | 21 | 0 |
| n28 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 6.19.5 MSD

No additional MSD requirement is needed.

## 6.20 DC\_42A\_n1A-n77A-n79A

### 6.20.1 Operating bands for DC

Table 6.20.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_42\_n1-n77-n79 | 42 | CA\_n1-n77-n79 |

### 6.20.2 Inter-band DC Configurations

Since Uplink EN-DC configuration is N/A, the combination is not used alone as described in NOTE X. This is the same NOTE with NOTE 9 specified in Table 5.5B.4.1-1 in TS 38.101-3 v17.0.0.

Table 6.20.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_42A\_n1A-n77A-n79A | N/A |
| NOTE X: The combination is not used alone as fall back mode of other band combinations in which UL in Band 42 is not used. | |

### 6.20.3 Co-existence studies

Co-existence study for DC\_42A\_n1A-n77A-n79A was covered by the studies for the fallback modes of DC\_42A\_n1A-n77A, DC\_42A\_n1A-n79A and DC\_42A\_n77A-n79A.

### 6.20.4 ∆TIB and ∆RIB values

For DC\_42A\_n1A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.20.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_42\_n1-n77-n79 | 42 | 0.8 |
| n1 | 0.6 |
| n77 | 0.8 |

**Table 6.20.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_42\_n1-n77-n79 | 42 | 0.5 |
| n1 | 0.2 |
| n77 | 0.5 |

### 6.20.5 MSD

No additional MSD requirement is needed.

## 6.21 DC\_42A\_n1A-n78A-n79A

### 6.21.1 Operating bands for DC

Table 6.21.1-1: EN-DC band combination (four bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_42\_n1-n78-n79 | 42 | CA\_n1-n78-n79 |

### 6.21.2 Inter-band DC Configurations

Since Uplink EN-DC configuration is N/A, the combination is not used alone as described in NOTE X. This is the same NOTE with NOTE 9 specified in Table 5.5B.4.1-1 in TS 38.101-3 v17.0.0.

Table 6.21.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_42A\_n1A-n78A-n79A | N/A |
| NOTE X: The combination is not used alone as fall back mode of other band combinations in which UL in Band 42 is not used. | |

### 6.21.3 Co-existence studies

Co-existence study for DC\_42A\_n1A-n78A-n79A was covered by the studies for the fallback modes of DC\_42A\_n1A-n78A, DC\_42A\_n1A-n79A and DC\_42A\_n78A-n79A.

### 6.21.4 ∆TIB and ∆RIB values

For DC\_42A\_n1A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 6.21.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_42A\_n1A-n78A-n79A | 42 | 0.8 |
| n1 | 0.3 |
| n78 | 0.8 |
| n79 | 0 |

**Table 6.21.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_42A\_n1A-n78A-n79A | 42 | 0.5 |
| n1 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 6.21.5 MSD

No additional MSD requirement is needed.

## 6.22 DC\_8A\_n39-n40-n41

### 6.22.1 Operating bands for DC

Table 6.22.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_8\_n39-n40-n41 | 8 | CA\_n39-n40-n41 |

6.22.2 Inter-band DC Configurations

Table 6.22.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_8A\_n39A-n40A-n41A | DC\_8A\_n39A  DC\_8A\_n40A DC\_8A\_n41A |

### 6.22.3 Co-existence studies

For DC\_8A\_n39A-n40A-n41A co-existence studies, the lower order DC\_8A\_n40A-n41A, DC\_8A\_n39A-n40A and DC\_8A\_n39A-n41A can be applied.

### 6.22.4 ∆TIB and ∆RIB values

For DC\_8A\_n40A-n41A-n79A , the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.22.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_8\_n39-n40-n41 | 8 | 0.3 |
| n39 | 0.3 |
| n40 | 0.3 |
| n41 | 0.3 |

Table 6.22.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_8\_n39-n40-n41 | 8 | 0 |
| n39 | 0 |
| n40 | 0 |
| n41 | 0 |

### 6.22.5 MSD

No additional MSD requirement is needed.

## 6.23 DC\_8A\_n39-n40-n79

### 6.23.1 Operating bands for DC

Table 6.23.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_8\_n39-n40-n79 | 8 | CA\_n39-n40-n79 |

6.23.2 Inter-band DC Configurations

Table 6.23.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_8A\_n39A-n40A-n79A | DC\_8A\_n39A  DC\_8A\_n40A DC\_8A\_n79A |

### 6.23.3 Co-existence studies

For DC\_8A\_n39A-n40A-n79A co-existence studies, the lower order DC\_8A\_n40A-n79A, DC\_8A\_n39A-n40A and DC\_8A\_n39A-n79A can be applied.

### 6.23.4 ∆TIB and ∆RIB values

For DC\_8A\_n40A-n79A-n79A , the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.23.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_8\_n39-n40-n79 | 8 | 0.3 |
| n39 | 0.3 |
| n40 | 0.3 |
| n79 | 0.8 |

Table 6.23.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_8\_n39-n40-n79 | 8 | 0 |
| n39 | 0.3 |
| n40 | 0.3 |
| n79 | 0.5 |

### 6.23.5 MSD

No additional MSD requirement is needed.

## 6.24 DC\_3\_n41-n79-n258

### 6.24.1 Operating bands for DC

Table 6.24.1-1: EN-DC band combination (four bands)

| EN-DC Band | E-UTRA Band | NR CA Band |
| --- | --- | --- |
| DC\_3\_n41-n79-n258 | 3 | CA\_n41-n79-n258 |

6.24.2 Inter-band DC Configurations

Table 6.24.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A\_n41A-n79A-n258A | DC\_3A\_n41A  DC\_3A\_n79A DC\_3A\_n258A |

### 6.24.3 Co-existence studies

For DC\_3A\_n41A-n79A-n258A co-existence studies, the lower order DC\_3A\_n41A-n79A, DC\_3A\_n41A-n258A and DC\_3A\_n79A-n258A can be applied.

### 6.24.4 ∆TIB and ∆RIB values

For DC\_3A\_n41A-n79A-n258A, ΔTIB,c and ΔRIB,c values are set to zero for n258, and the values for constituent E-UTRA and FR1 NR bands are same as those for the corresponding inter band EN-DC configurations which are defined in the TS 38.101-3 already.

### 6.24.5 MSD

No additional MSD requirement is needed.

# 7 DC band combinations of LTE 2 bands DL/1UL + NR 3 bands DL/1UL: Specific Band Combination Part

## 7.1 DC\_3-7\_n1-n78-n257, DC\_3-3-7\_n1-n78-n257, DC\_3-7-7\_n1-n78-n257, DC\_3-3-7-7\_n1-n78-n257

### 7.1.1 Operating bands for DC

Table 7.1.1-1: EN-DC band combination (five bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3-7\_n1-n78-n257  DC\_3-3-7\_n1-n78-n257  DC\_3-7-7\_n1-n78-n257  DC\_3-3-7-7\_n1-n78-n257 | CA\_3-7  CA\_3-3-7  CA\_3-7-7  CA\_3-3-7-7 | CA\_n1-n78-n257 |

### 7.1.2 Inter-band DC Configurations

Table 7.1.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-7A\_n1A-n78A-n257A  DC\_3A-7A\_n1A-n78A-n257D  DC\_3A-7A\_n1A-n78A-n257E  DC\_3A-7A\_n1A-n78A-n257F  DC\_3A-7A\_n1A-n78A-n257G  DC\_3A-7A\_n1A-n78A-n257H  DC\_3A-7A\_n1A-n78A-n257I  DC\_3A-7A\_n1A-n78A-n257J  DC\_3A-7A\_n1A-n78A-n257K  DC\_3A-7A\_n1A-n78A-n257L  DC\_3A-7A\_n1A-n78A-n257M | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n257A  DC\_7A\_n1A  DC\_7A\_n78A  DC\_7A\_n257A |
| DC\_3A-3A-7A\_n1A-n78A-n257A  DC\_3A-3A-7A\_n1A-n78A-n257D  DC\_3A-3A-7A\_n1A-n78A-n257E  DC\_3A-3A-7A\_n1A-n78A-n257F  DC\_3A-3A-7A\_n1A-n78A-n257G  DC\_3A-3A-7A\_n1A-n78A-n257H  DC\_3A-3A-7A\_n1A-n78A-n257I  DC\_3A-3A-7A\_n1A-n78A-n257J  DC\_3A-3A-7A\_n1A-n78A-n257K  DC\_3A-3A-7A\_n1A-n78A-n257L  DC\_3A-3A-7A\_n1A-n78A-n257M | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n257A  DC\_7A\_n1A  DC\_7A\_n78A  DC\_7A\_n257A |
| DC\_3A-7A-7A\_n1A-n78A-n257A  DC\_3A-7A-7A\_n1A-n78A-n257D  DC\_3A-7A-7A\_n1A-n78A-n257E  DC\_3A-7A-7A\_n1A-n78A-n257F  DC\_3A-7A-7A\_n1A-n78A-n257G  DC\_3A-7A-7A\_n1A-n78A-n257H  DC\_3A-7A-7A\_n1A-n78A-n257I  DC\_3A-7A-7A\_n1A-n78A-n257J  DC\_3A-7A-7A\_n1A-n78A-n257K  DC\_3A-7A-7A\_n1A-n78A-n257L  DC\_3A-7A-7A\_n1A-n78A-n257M | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n257A  DC\_7A\_n1A  DC\_7A\_n78A  DC\_7A\_n257A |
| DC\_3A-3A-7A-7A\_n1A-n78A-n257A  DC\_3A-3A-7A-7A\_n1A-n78A-n257D  DC\_3A-3A-7A-7A\_n1A-n78A-n257E  DC\_3A-3A-7A-7A\_n1A-n78A-n257F  DC\_3A-3A-7A-7A\_n1A-n78A-n257G  DC\_3A-3A-7A-7A\_n1A-n78A-n257H  DC\_3A-3A-7A-7A\_n1A-n78A-n257I  DC\_3A-3A-7A-7A\_n1A-n78A-n257J  DC\_3A-3A-7A-7A\_n1A-n78A-n257K  DC\_3A-3A-7A-7A\_n1A-n78A-n257L  DC\_3A-3A-7A-7A\_n1A-n78A-n257M | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n257A  DC\_7A\_n1A  DC\_7A\_n78A  DC\_7A\_n257A |

### 7.1.3 Co-existence studies

The co-existence studies can be covered by the studies for the constituent combinations mentioned in 37.716-21-21.

### 7.1.4 ∆TIB and ∆RIB values

For DC\_3-7\_n1-n78-n257, DC\_3-3-7\_n1-n78-n257, DC\_3-7-7\_n1-n78-n257, DC\_3-3-7-7\_n1-n78-n257, ΔTIB,c and ΔRIB,c values are set to zero for n257, and the values for constituent E-UTRA and FR1 NR bands are same as those for the corresponding inter band EN-DC configurations which are defined in the TS 38.101-3 already.

### 7.1.5 MSD

No additional MSD requirement is needed.

## 7.2 DC\_1-8\_n3-n28-n77

### 7.2.1 Operating bands for DC

Table 7.2.1-1: EN-DC band combination (five bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-8\_n3-n28-n77 | CA\_1-8 | CA\_n3-n28-n77 |

### 7.2.2 Inter-band DC Configurations

Table 7.2.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-8A\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A |
| DC\_1A-8A\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A |

### 7.2.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 2DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_1-8\_n3-n28, DC\_1-8\_n3-n77, DC\_1-8\_n28-n77, DC\_1\_n3\_n28-n77 and DC\_8\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 7.2.4 ∆TIB and ∆RIB values

For DC\_1-8\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 7.2.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8\_n3-n28-n77 | 1 | 0.6 |
| 8 | 0.6 |
| n3 | 0.8 |
| n28 | 0.6 |
| n77 | 0.8 |

Table 8.X.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-8\_n3-n28-n77 | 1 | 0.2 |
| 8 | 0.2 |
| n3 | 0.2 |
| n28 | 0.2 |
| n77 | 0.5 |

### 7.2.5 MSD

As mentioned in 7.2.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 7.3 DC\_1-11\_n3-n28-n77

### 7.3.1 Operating bands for DC

Table 7.3.1-1: EN-DC band combination (five bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-11\_n3-n28-n77 | CA\_1-11 | CA\_n3-n28-n77 |

### 7.3.2 Inter-band DC Configurations

Table 7.3.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-11A\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |
| DC\_1A-11A\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |

### 7.3.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 2DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_1-11\_n3-n28, DC\_1-11\_n3-n77, DC\_1-11\_n28-n77, DC\_1\_n3\_n28-n77 and DC\_11\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 7.3.4 ∆TIB and ∆RIB values

For DC\_1-11\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 7.3.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-11\_n3-n28-n77 | 1 | 0.6 |
| 11 | 0.8 |
| n3 | 0.9 |
| n28 | 0.6 |
| n77 | 0.8 |

Table 8.X.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-11\_n3-n28-n77 | 1 | 0.2 |
| 11 | 0.3 |
| n3 | 0.5 |
| n28 | 0.2 |
| n77 | 0.3 |

### 7.3.5 MSD

As mentioned in 7.3.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 7.4 DC\_1-42\_n3-n28-n77

### 7.4.1 Operating bands for DC

Table 7.4.1-1: EN-DC band combination (five bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-42\_n3-n28-n77 | CA\_1-42 | CA\_n3-n28-n77 |

### 7.4.2 Inter-band DC Configurations

Table 7.4.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-42A\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_1A-42A\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_1A-42C\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |
| DC\_1A-42C\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |

### 7.4.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 2DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_1-42\_n3-n28, DC\_1-42\_n3-n77, DC\_1-42\_n28-n77, DC\_1\_n3\_n28-n77 and DC\_42\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 7.4.4 ∆TIB and ∆RIB values

For DC\_1-42\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 7.4.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-42\_n3-n28-n77 | 1 | 0.6 |
| 42 | 0.8 |
| n3 | 0.8 |
| n28 | 0.8 |
| n77 | 0.8 |

Table 8.X.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-42\_n3-n28-n77 | 1 | 0.2 |
| 42 | 0.5 |
| n3 | 0.2 |
| n28 | 0.5 |
| n77 | 0.5 |

### 7.4.5 MSD

As mentioned in 7.4.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 7.5 DC\_8-11\_n3-n28-n77

### 7.5.1 Operating bands for DC

Table 7.5.1-1: EN-DC band combination (five bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_8-11\_n3-n28-n77 | CA\_8-11 | CA\_n3-n28-n77 |

### 7.5.2 Inter-band DC Configurations

Table 7.5.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_8A-11A\_n3A-n28A-n77A | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |
| DC\_8A-11A\_n3A-n28A-n77(2A) | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |

### 7.5.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 2DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_8-11\_n3-n28, DC\_8-11\_n3-n77, DC\_8-11\_n28-n77, DC\_8\_n3\_n28-n77 and DC\_11\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 7.5.4 ∆TIB and ∆RIB values

For DC\_8-11\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 7.5.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_8-11\_n3-n28-n77 | 8 | 0.6 |
| 11 | 0.8 |
| n3 | 0.9 |
| n28 | 0.6 |
| n77 | 0.8 |

Table 8.X.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_8-11\_n3-n28-n77 | 8 | 0.2 |
| 11 | 0.3 |
| n3 | 0.5 |
| n28 | 0.2 |
| n77 | 0.5 |

### 7.5.5 MSD

As mentioned in 7.5.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 7.6 DC\_8-42\_n3-n28-n77

### 7.6.1 Operating bands for DC

Table 7.6.1-1: EN-DC band combination (five bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_8-42\_n3-n28-n77 | CA\_8-42 | CA\_n3-n28-n77 |

### 7.6.2 Inter-band DC Configurations

Table 7.6.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_8A-42A\_n3A-n28A-n77A | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_8A-42A\_n3A-n28A-n77(2A) | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_8A-42C\_n3A-n28A-n77A | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |
| DC\_8A-42C\_n3A-n28A-n77(2A) | DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |

### 7.6.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 2DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_8-42\_n3-n28, DC\_8-42\_n3-n77, DC\_8-42\_n28-n77, DC\_8\_n3\_n28-n77 and DC\_42\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 7.6.4 ∆TIB and ∆RIB values

For DC\_8-42\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 7.6.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_8-42\_n3-n28-n77 | 8 | 0.6 |
| 42 | 0.8 |
| n3 | 0.6 |
| n28 | 0.8 |
| n77 | 0.8 |

Table 8.X.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_8-42\_n3-n28-n77 | 8 | 0.2 |
| 42 | 0.5 |
| n3 | 0.2 |
| n28 | 0.5 |
| n77 | 0.5 |

### 7.6.5 MSD

As mentioned in 7.6.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 7.7 DC\_1A-3A\_n28A-n77A-n79A

### 7.7.1 Operating bands for DC

Table 7.7.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-3\_n28-n77-n79 | CA\_1-3 | CA\_n28-n77-n79 |

### 7.7.2 Inter-band DC Configurations

Table 7.7.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-3A\_n28A-n77A-n79A | DC\_1A\_n28A  DC\_1A\_n77A  DC\_1A\_n79A  DC\_3A\_n28A  DC\_3A\_n77A  DC\_3A\_n79A |

### 7.7.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.7.4 ∆TIB and ∆RIB values

For DC\_1A-3A\_n28A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.7.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_1A-3A\_n28A-n77A-n79A | 1 | 0.6 |
| 3 | 0.6 |
| n28 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 7.7.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_1A-3A\_n28A-n77A-n79A | 1 | 0.2 |
| 3 | 0.2 |
| n28 | 0.2 |
| n77 | 0.5 |
| n79 | 0 |

### 7.7.5 MSD

No additional MSD requirement is needed.

## 7.8 DC\_1A-3A\_n28A-n78A-n79A

### 7.8.1 Operating bands for DC

Table 7.8.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-3\_n28-n78-n79 | CA\_1-3 | CA\_n28-n78-n79 |

### 7.8.2 Inter-band DC Configurations

Table 7.8.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-3A\_n28A-n78A-n79A | DC\_1A\_n28A  DC\_1A\_n78A  DC\_1A\_n79A  DC\_3A\_n28A  DC\_3A\_n78A  DC\_3A\_n79A |

### 7.8.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.8.4 ∆TIB and ∆RIB values

For DC\_1A-3A\_n28A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.8.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_1A-3A\_n28A-n78A-n79A | 1 | 0.3 |
| 3 | 0.6 |
| n28 | 0.6 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 7.8.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_1A-3A\_n28A-n78A-n79A | 1 | 0.2 |
| 3 | 0.2 |
| n28 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 7.8.5 MSD

No additional MSD requirement is needed.

## 7.9 DC\_1A-21A\_n28A-n77A-n79A

### 7.9.1 Operating bands for DC

Table 7.9.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-21\_n28-n77-n79 | CA\_1-21 | CA\_n28-n77-n79 |

### 7.9.2 Inter-band DC Configurations

Table 7.9.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-21A\_n28A-n77A-n79A | DC\_1A\_n28A  DC\_1A\_n77A  DC\_1A\_n79A  DC\_21A\_n28A  DC\_21A\_n77A  DC\_21A\_n79A |

### 7.9.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.9.4 ∆TIB and ∆RIB values

For DC\_1A-21A\_n28A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.9.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_1A-21A\_n28A-n77A-n79A | 1 | 0.6 |
| 21 | 0.4 |
| n28 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 7.9.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_1A-21A\_n28A-n77A-n79A | 1 | 0.3 |
| 21 | 0 |
| n28 | 0.3 |
| n77 | 0.5 |
| n79 | 0 |

### 7.9.5 MSD

No additional MSD requirement is needed.

## 7.10 DC\_1A-21A\_n28A-n78A-n79A

### 7.10.1 Operating bands for DC

Table 7.10.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-21\_n28-n78-n79 | CA\_1-21 | CA\_n28-n78-n79 |

### 7.10.2 Inter-band DC Configurations

Table 7.10.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-21A\_n28A-n78A-n79A | DC\_1A\_n28A  DC\_1A\_n78A  DC\_1A\_n79A  DC\_21A\_n28A  DC\_21A\_n78A  DC\_21A\_n79A |

### 7.10.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.10.4 ∆TIB and ∆RIB values

For DC\_1A-21A\_n28A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.10.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_1A-21A\_n28A-n78A-n79A | 1 | 0.6 |
| 21 | 0.4 |
| n28 | 0.6 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 7.10.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_1A-21A\_n28A-n78A-n79A | 1 | 0.3 |
| 21 | 0 |
| n28 | 0.3 |
| n78 | 0.5 |
| n79 | 0 |

### 7.10.5 MSD

No additional MSD requirement is needed.

## 7.11 DC\_3A-21A\_n1A-n77A-n79A

### 7.11.1 Operating bands for DC

Table 7.11.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3-21\_n1-n77-n79 | CA\_3-21 | CA\_n1-n77-n79 |

### 7.11.2 Inter-band DC Configurations

Table 7.11.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-21A\_n1A-n77A-n79A | DC\_3A\_n1A  DC\_3A\_n77A  DC\_3A\_n79A  DC\_21A\_n1A  DC\_21A\_n77A  DC\_21A\_n79A |

### 7.11.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.11.4 ∆TIB and ∆RIB values

For DC\_3A-21A\_n1A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.11.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n1A-n77A-n79A | 3 | 0.8 |
| 21 | 0.9 |
| n1 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 7.11.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n1A-n77A-n79A | 3 | 0.3 |
| 21 | 0.5 |
| n1 | 0.2 |
| n77 | 0.5 |
| n79 | 0 |

### 7.11.5 MSD

No additional MSD requirement is needed.

## 7.12 DC\_3A-21A\_n1A-n78A-n79A

### 7.12.1 Operating bands for DC

Table 7.12.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3-21\_n1-n78-n79 | CA\_3-21 | CA\_n1-n78-n79 |

### 7.12.2 Inter-band DC Configurations

Table 7.12.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-21A\_n1A-n78A-n79A | DC\_3A\_n1A  DC\_3A\_n78A  DC\_3A\_n79A  DC\_21A\_n1A  DC\_21A\_n78A  DC\_21A\_n79A |

### 7.12.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.12.4 ∆TIB and ∆RIB values

For DC\_3A-21A\_n1A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.12.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n1A-n78A-n79A | 3 | 0.8 |
| 21 | 0.9 |
| n1 | 0.6 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 7.12.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n1A-n78A-n79A | 3 | 0.3 |
| 21 | 0.5 |
| n1 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 7.12.5 MSD

No additional MSD requirement is needed.

## 7.13 DC\_3A-21A\_n28A-n77A-n79A

### 7.13.1 Operating bands for DC

Table 7.13.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3-21\_n28-n77-n79 | CA\_3-21 | CA\_n28-n77-n79 |

### 7.13.2 Inter-band DC Configurations

Table 7.13.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-21A\_n28A-n77A-n79A | DC\_3A\_n28A  DC\_3A\_n77A  DC\_3A\_n79A  DC\_21A\_n28A  DC\_21A\_n77A  DC\_21A\_n79A |

### 7.13.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.13.4 ∆TIB and ∆RIB values

For DC\_3A-21A\_n28A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.13.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n28A-n77A-n79A | 3 | 0.8 |
| 21 | 0.9 |
| n28 | 0.5 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 7.13.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n28A-n77A-n79A | 3 | 0.3 |
| 21 | 0.5 |
| n28 | 0.2 |
| n77 | 0.5 |
| n79 | 0 |

### 7.13.5 MSD

No additional MSD requirement is needed.

## 7.14 DC\_3A-21A\_n28A-n78A-n79A

### 7.14.1 Operating bands for DC

Table 7.14.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_3-21\_n28-n78-n79 | CA\_3-21 | CA\_n28-n78-n79 |

### 7.14.2 Inter-band DC Configurations

Table 7.14.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_3A-21A\_n28A-n78A-n79A | DC\_3A\_n28A  DC\_3A\_n78A  DC\_3A\_n79A  DC\_21A\_n28A  DC\_21A\_n78A  DC\_21A\_n79A |

### 7.14.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.14.4 ∆TIB and ∆RIB values

For DC\_3A-21A\_n28A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.14.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n28A-n78A-n79A | 3 | 0.8 |
| 21 | 0.9 |
| n28 | 0.5 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 7.14.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_3A-21A\_n28A-n78A-n79A | 3 | 0.3 |
| 21 | 0.5 |
| n28 | 0.2 |
| n78 | 0.5 |
| n79 | 0 |

### 7.14.5 MSD

No additional MSD requirement is needed.

## 7.15 DC\_19A-42A\_n1A-n77A-n79A

### 7.15.1 Operating bands for DC

Table 7.15.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_19-42\_n1-n77-n79 | CA\_19-42 | CA\_n1-n77-n79 |

### 7.15.2 Inter-band DC Configurations

Table 7.15.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_19A-42A\_n1A-n77A-n79A | DC\_19A\_n1A  DC\_19A\_n77A  DC\_19A\_n79A |

### 7.15.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.15.4 ∆TIB and ∆RIB values

For DC\_19A-42A\_n1A-n77A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.15.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_19A-42A\_n1A-n77A-n79A | 19 | 0.3 |
| 42 | 0.8 |
| n1 | 0.6 |
| n77 | 0.8 |
| n79 | 0.5 |

**Table 7.15.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_19A-42A\_n1A-n77A-n79A | 19 | 0.3 |
| 42 | 0.5 |
| n1 | 0.3 |
| n77 | 0.5 |
| n79 | 0 |

### 7.15.5 MSD

No additional MSD requirement is needed.

## 7.16 DC\_19A-42A\_n1A-n78A-n79A

### 7.16.1 Operating bands for DC

Table 7.16.1-1: EN-DC band combination (five bands).

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_19-42\_n1-n78-n79 | CA\_19-42 | CA\_n1-n78-n79 |

### 7.16.2 Inter-band DC Configurations

Table 7.16.2-1: Inter-band EN-DC configurations (five bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_19A-42A\_n1A-n78A-n79A | DC\_19A\_n1A  DC\_19A\_n78A  DC\_19A\_n79A |

### 7.16.3 Co-existence studies

Co-existence study of this DL of LTE 2 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration are already covered by those of DL of LTE 1 band + NR 3 band and UL of 1 LTE band + 1 NR band DC configuration, and those of the DL of LTE 2 band + NR 2 band and UL of 1 LTE band + 1 NR band DC configuration, respectively. Therefore, additional analysis is not needed.

### 7.16.4 ∆TIB and ∆RIB values

For DC\_19A-42A\_n1A-n78A-n79A, the ∆TIB and ∆RIB values are given in the tables below.

**Table 7.16.4-1: ΔTIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB [dB]** |
| --- | --- | --- |
| DC\_19A-42A\_n1A-n78A-n79A | 19 | 0.3 |
| 42 | 0.8 |
| n1 | 0.3 |
| n78 | 0.8 |
| n79 | 0.5 |

**Table 7.16.4-2: ΔRIB**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB [dB]** |
| --- | --- | --- |
| DC\_19A-42A\_n1A-n78A-n79A | 19 | 0.3 |
| 42 | 0.5 |
| n1 | 0.3 |
| n78 | 0.5 |
| n79 | 0 |

### 7.16.5 MSD

No additional MSD requirement is needed.

# 8 DC band combinations of LTE 3 bands DL/1UL + NR 3 bands DL/1UL: Specific Band Combination Part

## 8.1 DC\_1-8-11\_n3-n28-n77

### 8.1.1 Operating bands for DC

Table 8.1.1-1: EN-DC band combination (six bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-8-11\_n3-n28-n77 | CA\_1-8-11 | CA\_n3-n28-n77 |

### 8.1.2 Inter-band DC Configurations

Table 8.1.2-1: Inter-band EN-DC configurations (six bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-8A-11A\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |
| DC\_1A-8A-11A\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_11A\_n3A  DC\_11A\_n28A  DC\_11A\_n77A |

### 8.1.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 3DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_1-8-11\_n3-n28, DC\_1-8-11\_n3-n77, DC\_1-8-11\_n28-n77, DC\_1-8\_n3-n28-n77, DC\_1-11\_n3\_n28-n77 and DC\_8-11\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 8.1.4 ∆TIB and ∆RIB values

For DC\_1-8-11\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 8.1.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n3-n28-n77 | 1 | 0.6 |
| 8 | 0.6 |
| 11 | 0.8 |
| n3 | 0.9 |
| n28 | 0.6 |
| n77 | 0.8 |

Table 8.1.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n3-n28-n77 | 1 | 0.2 |
| 8 | 0.2 |
| 11 | 0.3 |
| n3 | 0.5 |
| n28 | 0.2 |
| n77 | 0.5 |

### 8.1.5 MSD

As mentioned in 8.1.3, there is no need to specify additional MSD requirement for this UL DC configuration.

## 8.2 DC\_1-8-42\_n3-n28-n77

### 8.2.1 Operating bands for DC

Table 8.2.1-1: EN-DC band combination (six bands)

| EN-DC Band | E-UTRA CA Band | NR CA Band |
| --- | --- | --- |
| DC\_1-8-42\_n3-n28-n77 | CA\_1-8-42 | CA\_n3-n28-n77 |

### 8.2.2 Inter-band DC Configurations

Table 8.2.2-1: Inter-band EN-DC configurations (six bands)

| EN-DC configuration | Uplink EN-DC  configuration |
| --- | --- |
| DC\_1A-8A-42A\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_1A-8A-42A\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42A\_n28A |
| DC\_1A-8A-42C\_n3A-n28A-n77A | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |
| DC\_1A-8A-42C\_n3A-n28A-n77(2A) | DC\_1A\_n3A  DC\_1A\_n28A  DC\_1A\_n77A  DC\_8A\_n3A  DC\_8A\_n28A  DC\_8A\_n77A  DC\_42A\_n3A  DC\_42C\_n3A  DC\_42A\_n28A  DC\_42C\_n28A |

### 8.2.3 Co-existence studies

Co-existence studies of this DC LTE inter-band 3DL/1UL + inter-band NR3DL/1UL are already covered by the fallback configurations, DC\_1-8-42\_n3-n28, DC\_1-8-42\_n3-n77, DC\_1-8-42\_n28-n77, DC\_1-8\_n3-n28-n77, DC\_1-42\_n3\_n28-n77 and DC\_8-42\_n3-n28-n77. Therefore, there is no additional harmonic and intermodulation impact for the additional band receiver.

### 8.2.4 ∆TIB and ∆RIB values

For DC\_1-8-42\_n3-n28-n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 8.2.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-42\_n3-n28-n77 | 1 | 0.6 |
| 8 | 0.6 |
| 42 | 0.8 |
| n3 | 0.8 |
| n28 | 0.8 |
| n77 | 0.8 |

Table 8.2.4-2: ΔRIB

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-8-42\_n3-n28-n77 | 1 | 0.2 |
| 8 | 0.2 |
| 42 | 0.5 |
| n3 | 0.2 |
| n28 | 0.5 |
| n77 | 0.5 |

### 8.2.5 MSD

As mentioned in 8.2.3, there is no need to specify additional MSD requirement for this UL DC configuration.

# Annex A: Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Subject/Comment** | **Old** | **New** |
| 2020-08 | RAN4 #96-e | R4-2010661 |  |  | Skeleton | N/A | 0.0.1 |
| 2020-08 | RAN4 #96-e | R4-2010662 |  |  | Some Editor’s note are corrected |  | 0.1.0 |
| 2020-11 | RAN4 #97-e | R4-2015067 |  |  | Including the following approved TPs.   1. R4-2016765 TP for TR 37.716-11-31: EN-DC\_1\_n3-n28-n77 2. R4-2016766 TP for TR 37.717-11-31: EN-DC\_8\_n3-n28-n77 3. R4-2015050 TP for 37.717-11-31\_ DC\_8A\_n40A-n41A-n79A 4. R4-2015802 TP for TR 37.717-11-31: support of DC\_3\_n1-n78-n257, DC\_3-3\_n1-n78-n257, DC\_7\_n1-n78-n257, DC\_7-7\_n1-n78-n257 5. R4-2015806 TP for TR 37.717-11-31: support of DC\_3-7\_n1-n78-n257, DC\_3-3-7\_n1-n78-n257, DC\_3-7-7\_n1-n78-n257, DC\_3-3-7-7\_n1-n78-n257 |  | 0.2.0 |
| 2021-02 | RAN4 #98-e | R4-2102232 |  |  | Including the following approved TPs.   1. R4-2100669 TP for TR 37.717-11-31: EN-DC\_11\_n3-n28-n77 SoftBank Corp. 2. R4-2100670 TP for TR 37.717-11-31: EN-DC\_42\_n3-n28-n77 SoftBank Corp. 3. R4-2100681 TP for TR 37.717-11-31: EN-DC\_1-8\_n3-n28-n77 SoftBank Corp. 4. R4-2100682 TP for TR 37.717-11-31: EN-DC\_1-11\_n3-n28-n77 SoftBank Corp. 5. R4-2100685 TP for TR 37.717-11-31: EN-DC\_1-42\_n3-n28-n77 SoftBank Corp. 6. R4-2100686 TP for TR 37.717-11-31: EN-DC\_8-11\_n3-n28-n77 SoftBank Corp. 7. R4-2100687 TP for TR 37.717-11-31: EN-DC\_8-42\_n3-n28-n77 SoftBank Corp. 8. R4-2100690 TP for TR 37.717-11-31: EN-DC\_1-8-11\_n3-n28-n77 SoftBank Corp. 9. R4-2100691 TP for TR 37.717-11-31: EN-DC\_1-8-42\_n3-n28-n77 SoftBank Corp. 10. R4-2101019 TP for DC\_1A\_n28A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 11. R4-2101020 TP for DC\_1A\_n28A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 12. R4-2101021 TP for DC\_3A\_n1A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 13. R4-2101022 TP for DC\_3A\_n1A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 14. R4-2101023 TP for DC\_3A\_n28A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 15. R4-2101024 TP for DC\_3A\_n28A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 16. R4-2101025 TP for DC\_19A\_n1A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 17. R4-2101026 TP for DC\_19A\_n1A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 18. R4-2101027 TP for DC\_21A\_n1A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 19. R4-2101028 TP for DC\_21A\_n1A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 20. R4-2101029 TP for DC\_21A\_n28A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 21. R4-2101030 TP for DC\_21A\_n28A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 22. R4-2101031 TP for DC\_1A-3A\_n28A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 23. R4-2101032 TP for DC\_1A-3A\_n28A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 24. R4-2101033 TP for DC\_1A-21A\_n28A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 25. R4-2101034 TP for DC\_1A-21A\_n28A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 26. R4-2101035 TP for DC\_3A-21A\_n1A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 27. R4-2101036 TP for DC\_3A-21A\_n1A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 28. R4-2101037 TP for DC\_3A-21A\_n28A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 29. R4-2101038 TP for DC\_3A-21A\_n28A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 30. R4-2101039 TP for DC\_19A-42A\_n1A-n77A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 31. R4-2101040 TP for DC\_19A-42A\_n1A-n78A-n79A for TR37.717-11-31 NTT DOCOMO, INC. 32. R4-2101186 TP for DC\_42A\_n1A-n77A-n79A for TR37.717-11-31 NTT DOCOMO INC. 33. R4-2101187 TP for DC\_42A\_n1A-n78A-n79A for TR37.717-11-31 NTT DOCOMO INC.   R4-2102219 TP for 37.717-11-31\_ DC\_8A\_n39A-n40A-n41A ZTE Corporation |  | 0.3.0 |
| 2021-05 | RAN4 #99-e | R4-2110473 |  |  | Including the following approved TPs.   1. R4-2110456 TP for 37.717-11-31\_DC\_8A\_n39A-n40A-n79A,ZTE Corporation |  | 0.4.0 |
| 2021-08 | RAN4 #100-e | R4-2112952 |  |  | Including the following approved TPs.   1. R4-2112927, TP for 37.717-11-31\_DC\_3A\_n41A-n79A-n258A,ZTE Corporation |  | 0.5.0 |