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Technical Report

3rd Generation Partnership Project;

Technical Specification Group Radio Access Networks;

E-UTRA (Evolved Universal Terrestrial Radio Access) - NR Dual Connectivity (EN-DC) of 3 bands LTE inter-band Carrier aggregation (CA) (3 Down Link (DL) / 1 Up Link (UL)) and 1 NR band (1 DL / 1 UL)

(Release 16)

** 

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[5.1.126.2 Configuration for DC 186](#_Toc42499898)

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[5.2.19.2 Configuration for DC 207](#_Toc42499992)

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[5.2.32 2A-13A-66A\_n261M 215](#_Toc42500027)

[5.2.32.1 Operating bands for DC 215](#_Toc42500028)

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Foreword

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1 presented to TSG for information;

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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.

# 1 Scope

The present document is a technical report for Dual Connectivity (EN-DC) of 3 LTE bands (3DL/1UL) and 1 NR band (1DL/1UL) under Rel-16 time frame. The purpose is to gather the relevant background information and studies in order to address Dual Connectivity (EN-DC) of 3 LTE band (3DL/1UL) and 1 NR band (1DL/1UL)for the Rel-16 band combinations in Table 1-1. The co-existence analysis and RF front end requirements such as Delta RIB,C and TIB,C are described based on the band combination basis since such information have no difference between the EN-DC configulations consisting with the same E-UTRA band and the same NR band.

Table 1-1: Release 16 EN-DC of 3 LTE band (3DL/1UL) and 1 NR band (1DL/1UL), old request format

|  |  |
| --- | --- |
| **EN-DC configuration** | **REL-indep.**  **from** |
| DL\_1A-3A-5A\_n79A\_UL\_1A\_n79A | Rel-15 |
| DL\_1A-3A-5A\_n79A\_UL\_3A\_n79A | Rel-15 |
| DL\_1A-3A-5A\_n79A\_UL\_5A\_n79A | Rel-15 |
| DL\_1A-3A-41A\_n79A\_UL\_1A\_n79A | Rel-15 |
| DL\_1A-3A-41A\_n79A\_UL\_3A\_n79A | Rel-15 |
| DL\_1A-3A-41A\_n79A\_UL\_41A\_n79A | Rel-15 |
| DL\_1A-5A-41A\_n79A\_UL\_1A\_n79A | Rel-15 |
| DL\_1A-5A-41A\_n79A\_UL\_5A\_n79A | Rel-15 |
| DL\_1A-5A-41A\_n79A\_UL\_41A\_n79A | Rel-15 |
| DL\_3A-5A-41A\_n79A\_UL\_3A\_n79A | Rel-15 |
| DL\_3A-5A-41A\_n79A\_UL\_5A\_n79A | Rel-15 |
| DL\_3A-5A-41A\_n79A\_UL\_41A\_n79A | Rel-15 |
| DC\_1A-8A-20A\_n78A | Rel-15 |
| DC\_3A-8A-20A\_n78A | Rel-15 |
| DC\_1A-3A-41A\_n77A | Rel-15 |
| DC\_1A-3A-41A\_n78A | Rel-15 |
| DC\_1A-3A-41A\_n79A | Rel-15 |
| DC\_3A-41C-42C\_n77A | Rel-15 |
| DC\_3A-41C-42C\_n78A | Rel-15 |
| DC\_3A-41C-42C\_n79A | Rel-15 |
| DC\_3A-41C-42A\_n77A | Rel-15 |
| DC\_3A-41C-42A\_n78A | Rel-15 |
| DC\_3A-41C-42A\_n79A | Rel-15 |
| DC\_3A-41A-42C\_n77A | Rel-15 |
| DC\_3A-41A-42C\_n78A | Rel-15 |
| DC\_3A-41A-42C\_n79A | Rel-15 |
| DC\_3A-41A-42A\_n77A | Rel-15 |
| DC\_3A-41A-42A\_n78A | Rel-15 |
| DC\_3A-41A-42A\_n79A | Rel-15 |
| DC\_1A-3A-18A\_n77A | Rel-15 |
| DC\_1A-3A-18A\_n78A | Rel-15 |
| DC\_1A-3A-18A\_n79A | Rel-15 |
| DC\_1A-3C-7C\_n78A | Rel 15 |
| DC\_1A-3A-7C\_n78A | Rel 15 |
| DC\_1A-21A-42D\_n77A1 | Rel-15 |
| DC\_1A-21A-42D\_n77C1 | Rel-15 |
| DC\_1A-21A-42D\_n78A1 | Rel-15 |
| DC\_1A-21A-42D\_n78C1 | Rel-15 |
| DC\_1A-21A-42D\_n79A | Rel-15 |
| DC\_1A-21A-42D\_n79C | Rel-15 |
| DC\_3A-19A-42D\_n77A1 | Rel-15 |
| DC\_3A-19A-42D\_n77C1 | Rel-15 |
| DC\_3A-19A-42D\_n78A1 | Rel-15 |
| DC\_3A-19A-42D\_n78C1 | Rel-15 |
| DC\_3A-19A-42D\_n79A | Rel-15 |
| DC\_3A-19A-42D\_n79C | Rel-15 |
| DC\_3A-21A-42D\_n77A1 | Rel-15 |
| DC\_3A-21A-42D\_n77C1 | Rel-15 |
| DC\_3A-21A-42D\_n78A1 | Rel-15 |
| DC\_3A-21A-42D\_n78C1 | Rel-15 |
| DC\_3A-21A-42D\_n79A | Rel-15 |
| DC\_3A-21A-42D\_n79C | Rel-15 |
| DL\_1A-3C-8A\_n78A\_UL\_1A\_n78A | Rel-15 |
| DL\_1A-3C-8A\_n78A\_UL\_3A\_n78A | Rel-15 |
| DL\_1A-3C-8A\_n78A\_UL\_8A\_n78A | Rel-15 |
| DC\_3A-7A-8A\_n77A | Rel-15 |
| DC\_3A-7A-8A\_n78A | Rel-15 |
| DC\_1A-18A-42A\_n77A | Rel-15 |
| DC\_1A-18A-42A\_n78A | Rel-15 |
| DC\_1A-18A-42A\_n79A | Rel-15 |
| DC\_1A-18A-42C\_n77A | Rel-15 |
| DC\_1A-18A-42C\_n78A | Rel-15 |
| DC\_1A-18A-42C\_n79A | Rel-15 |
| DC\_3A-18A-42A\_n77A | Rel-15 |
| DC\_3A-18A-42A\_n78A | Rel-15 |
| DC\_3A-18A-42A\_n79A | Rel-15 |
| DC\_3A-18A-42C\_n77A | Rel-15 |
| DC\_3A-18A-42C\_n78A | Rel-15 |
| DC\_3A-18A-42C\_n79A | Rel-15 |
| DC\_1A-3A-41C\_n77A | Rel-15 |
| DC\_1A-3A-41C\_n78A | Rel-15 |
| DC\_1A-3A-41C\_n79A | Rel-15 |
| DC\_2A-7A-66A\_n78A | Rel-15 |
| DL\_2A-66C-(n)71B\_UL\_(n)71B | Rel-15 |
| DL\_2A-66C-(n)71B\_UL\_66A-n71A | Rel-15 |
| DL\_2A-66C-(n)71B\_UL\_2A-n71A | Rel-15 |
| DL\_2A-66A-(n)71AA\_UL\_(n)71B | Rel-15 |
| DL\_2A-66A-(n)71AA\_UL\_66A\_n71A | Rel-15 |
| DL\_2A-66A-(n)71AA\_UL\_2A\_n71A | Rel-15 |
| DL\_1A-3C-7A\_n28A \_UL\_1A\_n28A | Rel. 15 |
| DL\_1A-3C-7A\_n28A \_UL\_3C\_n28A | Rel. 15 |
| DL\_1A-3C-7A\_n28A \_UL\_3A\_n28A | Rel. 15 |
| DL\_1A-3C-7A\_n28A \_UL\_7A\_n28A | Rel. 15 |
| DL\_1A-3A-7C\_n28A \_UL\_1A\_n28A | Rel. 15 |
| DL\_1A-3A-7C\_n28A \_UL\_3A\_n28A | Rel. 15 |
| DL\_1A-3A-7C\_n28A \_UL\_7C\_n28A | Rel. 15 |
| DL\_1A-3C-7C\_n28A \_UL\_1A\_n28A | Rel. 15 |
| DL\_1A-3C-7C\_n28A \_UL\_3C\_n28A | Rel. 15 |
| DL\_1A-3C-7C\_n28A \_UL\_3A\_n28A | Rel. 15 |
| DL\_1A-3C-7C\_n28A \_UL\_7C\_n28A | Rel. 15 |
| DL\_1A-3A-7C\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1A-3A-7C\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3A-7C\_n78A \_UL\_7A\_n78A | Rel. 15 |
| DL\_1A-3A-7C\_n78A \_UL\_7C\_n78A | Rel. 15 |
| DL\_1A-3C-7C\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1A-3C-7C\_n78A \_UL\_3C\_n78A | Rel. 15 |
| DL\_1A-3C-7C\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3C-7C\_n78A \_UL\_7A\_n78A | Rel. 15 |
| DL\_1A-3C-7C\_n78A \_UL\_7C\_n78A | Rel. 15 |
| DC\_1A-7C-28A\_n78A\_BCS0 | Rel-15 |
| DC\_1A-7A-28A\_n78A\_BCS0 | Rel-15 |
| DC\_1A-3C-28A\_n78A\_BCS0 | Rel-15 |
| DC\_1A-3A-41A\_n257A | Rel-15 |
| DC\_3A-41C-42C\_n257A | Rel-15 |
| DC\_3A-41C-42A\_n257A | Rel-15 |
| DC\_3A-41A-42C\_n257A | Rel-15 |
| DC\_3A-41A-42A\_n257A | Rel-15 |
| DC\_1A-3A-18A\_n257A | Rel-15 |
| DC\_1A-21A-42D\_n257A | Rel-15 |
| DC\_1A-21A-42D\_n257D | Rel-15 |
| DC\_1A-21A-42D\_n257E | Rel-15 |
| DC\_1A-21A-42D\_n257F | Rel-15 |
| DC\_3A-19A-42D\_n257A | Rel-15 |
| DC\_3A-19A-42D\_n257D | Rel-15 |
| DC\_3A-19A-42D\_n257E | Rel-15 |
| DC\_3A-19A-42D\_n257F | Rel-15 |
| DC\_3A-21A-42D\_n257A | Rel-15 |
| DC\_3A-21A-42D\_n257D | Rel-15 |
| DC\_3A-21A-42D\_n257E | Rel-15 |
| DC\_3A-21A-42D\_n257F | Rel-15 |
| DL\_1A-3A-8A\_n257A\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257A\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257A\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257E\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257D\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257E\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257F\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257A\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257E\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257A\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257A\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257D\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257E\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257F\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257E\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257F\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257E\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257D\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257M\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257L\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257K\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257J\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257I\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257H\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-5A\_n257G\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257E\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257F\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257E\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257D\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257M\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257L\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257K\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257J\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257I\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257H\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A\_n257G\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257F\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257F\_UL\_7A\_n25EA | Rel-15 |
| DL\_1A-3A-7A-7A\_n257F\_UL\_7A\_n25DA | Rel-15 |
| DL\_1A-3A-7A-7A\_n257M\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257L\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257K\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257J\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257I\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257H\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-3A-7A-7A\_n257G\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257E\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257F\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257E\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257D\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257F\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257E\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257D\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257M\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257L\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257K\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257J\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257I\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257H\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257G\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257M\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257L\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257K\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257J\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257I\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257H\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A\_n257G\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257F\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257E\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257F\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257E\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257D\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257M\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257L\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257K\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257J\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257I\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257H\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257G\_UL\_5A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257F\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257E\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257D\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257M\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257L\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257K\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257J\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257I\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257H\_UL\_7A\_n257A | Rel-15 |
| DL\_1A-5A-7A-7A\_n257G\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257F\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257E\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257D\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257F\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257E\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257D\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257M\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257L\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257K\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257J\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257I\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257H\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257G\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257M\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257L\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257K\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257J\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257I\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257H\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A\_n257G\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257F\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257E\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257D\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257F\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257E\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257D\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257M\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257L\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257K\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257J\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257I\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257H\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257G\_UL\_5A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257F\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257E\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257D\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257M\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257L\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257K\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257J\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257I\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257H\_UL\_7A\_n257A | Rel-15 |
| DL\_3A-5A-7A-7A\_n257G\_UL\_7A\_n257A | Rel-15 |
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| DC\_1A-18A-42A\_n257D | Rel-15 |
| DC\_1A-18A-42A\_n257E | Rel-15 |
| DC\_1A-18A-42A\_n257F | Rel-15 |
| DC\_1A-18A-42A\_n257G | Rel-15 |
| DC\_1A-18A-42A\_n257H | Rel-15 |
| DC\_1A-18A-42A\_n257I | Rel-15 |
| DC\_1A-18A-42A\_n257J | Rel-15 |
| DC\_1A-18A-42A\_n257K | Rel-15 |
| DC\_1A-18A-42A\_n257L | Rel-15 |
| DC\_1A-18A-42A\_n257M | Rel-15 |
| DC\_1A-18A-42C\_n257A | Rel-15 |
| DC\_1A-18A-42C\_n257D | Rel-15 |
| DC\_1A-18A-42C\_n257E | Rel-15 |
| DC\_1A-18A-42C\_n257F | Rel-15 |
| DC\_1A-18A-42C\_n257G | Rel-15 |
| DC\_1A-18A-42C\_n257H | Rel-15 |
| DC\_1A-18A-42C\_n257I | Rel-15 |
| DC\_1A-18A-42C\_n257J | Rel-15 |
| DC\_1A-18A-42C\_n257K | Rel-15 |
| DC\_1A-18A-42C\_n257L | Rel-15 |
| DC\_1A-18A-42C\_n257M | Rel-15 |
| DC\_3A-18A-42A\_n257A | Rel-15 |
| DC\_3A-18A-42A\_n257D | Rel-15 |
| DC\_3A-18A-42A\_n257E | Rel-15 |
| DC\_3A-18A-42A\_n257F | Rel-15 |
| DC\_3A-18A-42A\_n257G | Rel-15 |
| DC\_3A-18A-42A\_n257H | Rel-15 |
| DC\_3A-18A-42A\_n257I | Rel-15 |
| DC\_3A-18A-42A\_n257J | Rel-15 |
| DC\_3A-18A-42A\_n257K | Rel-15 |
| DC\_3A-18A-42A\_n257L | Rel-15 |
| DC\_3A-18A-42A\_n257M | Rel-15 |
| DC\_3A-18A-42C\_n257A | Rel-15 |
| DC\_3A-18A-42C\_n257D | Rel-15 |
| DC\_3A-18A-42C\_n257E | Rel-15 |
| DC\_3A-18A-42C\_n257F | Rel-15 |
| DC\_3A-18A-42C\_n257G | Rel-15 |
| DC\_3A-18A-42C\_n257H | Rel-15 |
| DC\_3A-18A-42C\_n257I | Rel-15 |
| DC\_3A-18A-42C\_n257J | Rel-15 |
| DC\_3A-18A-42C\_n257K | Rel-15 |
| DC\_3A-18A-42C\_n257L | Rel-15 |
| DC\_3A-18A-42C\_n257M | Rel-15 |
| DC\_1A-3A-41A\_n257D | Rel-15 |
| DC\_1A-3A-41A\_n257E | Rel-15 |
| DC\_1A-3A-41A\_n257F | Rel-15 |
| DC\_1A-3A-41A\_n257G | Rel-15 |
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| DC\_3A-28A-42A\_n257M\_UL\_3A\_n257M | Rel-15 |
| DC\_3A-28A-42A\_n257M\_UL\_28A\_n257M | Rel-15 |
| DC\_3A-21A-42C\_n257M\_UL\_3A\_n257M | Rel-15 |
| DC\_3A-21A-42C\_n257M\_UL\_21A\_n257M | Rel-15 |
| DC\_3A-21A-42A\_n257M\_UL\_3A\_n257M | Rel-15 |
| DC\_3A-21A-42A\_n257M\_UL\_21A\_n257M | Rel-15 |
| DC\_3A-21A-28A\_n257M\_UL\_3A\_n257M | Rel-15 |
| DC\_3A-21A-28A\_n257M\_UL\_21A\_n257M | Rel-15 |
| DC\_3A-21A-28A\_n257M\_UL\_28A\_n257M | Rel-15 |
| DC\_3A-28A-42D\_n77C\_UL\_3A\_n77C | Rel-15 |
| DC\_3A-28A-42D\_n77C\_UL\_28A\_n77C | Rel-15 |
| DC\_3A-28A-42D\_n78C\_UL\_3A\_n78C | Rel-15 |
| DC\_3A-28A-42D\_n78C\_UL\_28A\_n78C | Rel-15 |
| DC\_3A-28A-42D\_n79C\_UL\_3A\_n79C | Rel-15 |
| DC\_3A-28A-42D\_n79C\_UL\_28A\_n79C | Rel-15 |
| DC\_3A-28A-42D\_n257M\_UL\_3A\_n257M | Rel-15 |
| DC\_3A-28A-42D\_n257M\_UL\_28A\_n257M | Rel-15 |
| DL\_3C-20A-38C\_n1A \_UL\_3C\_n1A | Rel. 15 |
| DL\_3C-20A-38A\_n1A \_UL\_3C\_n1A | Rel. 15 |
| DL\_3A-20A-38C\_n1A \_UL\_3A\_n1A | Rel. 15 |
| DL\_3A-20A-38A\_n1A \_UL\_3A\_n1A | Rel. 15 |
| DL\_1C-20A-38C\_n3A \_UL\_1C\_n3A | Rel. 15 |
| DL\_1C-20A-38A\_n3A \_UL\_1C\_n3A | Rel. 15 |
| DL\_1A-20A-38C\_n3A \_UL\_1A\_n3A | Rel. 15 |
| DL\_1A-20A-38A\_n3A \_UL\_1A\_n3A | Rel. 15 |
| DL\_1C-3C-7A\_n78A \_UL\_1C\_n78A | Rel. 15 |
| DL\_1C-3C-7A\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1C-3A-7A\_n78A \_UL\_1C\_n78A | Rel. 15 |
| DL\_1C-3A-7A\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1C-3C-7A\_n78A \_UL\_3C\_n78A | Rel. 15 |
| DL\_1C-3C-7A\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3C-7A\_n78A \_UL\_3C\_n78A | Rel. 15 |
| DL\_1A-3C-7A\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1C-3C-20A\_n78A \_UL\_1C\_n78A | Rel. 15 |
| DL\_1C-3C-20A\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1C-3C-20A\_n78A \_UL\_20A\_n78A | Rel. 15 |
| DL\_1C-3A-20A\_n78A \_UL\_1C\_n78A | Rel. 15 |
| DL\_1C-3A-20A\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1C-3A-20A\_n78A \_UL\_20A\_n78A | Rel. 15 |
| DL\_1C-3C-20A\_n78A \_UL\_3C\_n78A | Rel. 15 |
| DL\_1C-3C-20A\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3C-20A\_n78A \_UL\_3C\_n78A | Rel. 15 |
| DL\_1A-3C-20A\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3C-20A\_n78A \_UL\_20A\_n78A | Rel. 15 |
| DL\_1C-3C-38C\_n78A \_UL\_1C\_n78A | Rel. 15 |
| DL\_1C-3C-38A\_n78A \_UL\_3C\_n1A | Rel. 15 |
| DL\_1A-3A-38C\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3A-38C\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1A-3A-38C\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3A-38C\_n78A \_UL\_38C\_n78A | Rel. 15 |
| DL\_1A-3A-38C\_n78A \_UL\_38A\_n78A | Rel. 15 |
| DL\_1A-3C-38C\_n78A \_UL\_1A\_n78A | Rel. 15 |
| DL\_1A-3C-38C\_n78A \_UL\_3C\_n78A | Rel. 15 |
| DL\_1A-3C-38C\_n78A \_UL\_3A\_n78A | Rel. 15 |
| DL\_1A-3C-38C\_n78A \_UL\_38A\_n78A | Rel. 15 |
| DL\_1A-3C-38C\_n78A \_UL\_38C\_n78A | Rel. 15 |
| DL\_1A-3A-8A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257G\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257H\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257I\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257J\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257K\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257L\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3A-8A\_n257M\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257G\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257G\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257G\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257H\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257H\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257H\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257I\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257I\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257I\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257J\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257J\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257J\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257K\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257K\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257K\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257L\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257L\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257L\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257M\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257M\_UL\_3A\_n257A | Rel-15 |
| DL\_1A-3C-8A\_n257M\_UL\_8A\_n257A | Rel-15 |
| DC\_2A-30A-66A\_n5A | Rel-16 |
| DC\_2A-(n)5AA-66A | Rel-16 |
| DC\_2A-(n)5AA-30A | Rel-16 |
| DC\_(n)5AA-30A-66A | Rel-16 |
| DC\_2A-2A-30A-66A\_n5 | Rel-16 |
| DC\_2A-30A-66A-66A\_n5 | Rel-16 |
| DC\_2A-2A-(n)5AA-30A | Rel-16 |
| DC\_2A-2A-(n)5AA-66A | Rel-16 |
| DC\_2A-(n)5AA-66A-66A | Rel-16 |
| 4CC\_DL\_2A-5A-66A-n5A\_BCS0 | Rel-15 |
| 4CC\_DL\_2A-5A-66A-n66\_BCS0 | Rel-15 |
| 4CC\_DL\_2A-13A-66A-n66A\_BCS0 | Rel-15 |
| DL\_1A-3A-7A\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-3A-7A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_1A-3A-7A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_1A-3C-7A\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-3C-7A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_1A-3C-7A\_n5A\_UL\_3C\_n5A | Rel-15 |
| DL\_1A-3C-7A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_1A-3A-7C\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-3A-7C\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_1A-3A-7C\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_1A-3A-7C\_n5A\_UL\_7C\_n5A | Rel-15 |
| DL\_1A-3C-7C\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-3C-7C\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_1A-3C-7C\_n5A\_UL\_3C\_n5A | Rel-15 |
| DL\_1A-3C-7C\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_1A-3C-7C\_n5A\_UL\_7C\_n5A | Rel-15 |
| DL\_1A-3A-28A\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-3A-28A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_1A-3A-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_1A-3C-28A\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-3C-28A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_1A-3C-28A\_n5A\_UL\_3C\_n5A | Rel-15 |
| DL\_1A-3C-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_1A-7A-28A\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-7A-28A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_1A-7A-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_1A-7C-28A\_n5A\_UL\_1A\_n5A | Rel-15 |
| DL\_1A-7C-28A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_1A-7C-28A\_n5A\_UL\_7C\_n5A | Rel-15 |
| DL\_1A-7C-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_3A-7A-28A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_3A-7A-28A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_3A-7A-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_3C-7A-28A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_3C-7A-28A\_n5A\_UL\_3C\_n5A | Rel-15 |
| DL\_3C-7A-28A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_3C-7A-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_3A-7C-28A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_3A-7C-28A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_3A-7C-28A\_n5A\_UL\_7C\_n5A | Rel-15 |
| DL\_3A-7C-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_3C-7C-28A\_n5A\_UL\_3A\_n5A | Rel-15 |
| DL\_3C-7C-28A\_n5A\_UL\_3C\_n5A | Rel-15 |
| DL\_3C-7C-28A\_n5A\_UL\_7A\_n5A | Rel-15 |
| DL\_3C-7C-28A\_n5A\_UL\_7C\_n5A | Rel-15 |
| DL\_3C-7C-28A\_n5A\_UL\_28A\_n5A | Rel-15 |
| DL\_1A-3A-28A\_n28A\_UL\_1A\_n28A | Rel-15 |
| DL\_1A-3A-28A\_n28A\_UL\_3A\_n28A | Rel-15 |
| DL\_1A-3A-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_1A-3C-28A\_n28A\_UL\_1A\_n28A | Rel-15 |
| DL\_1A-3C-28A\_n28A\_UL\_3A\_n28A | Rel-15 |
| DL\_1A-3C-28A\_n28A\_UL\_3C\_n28A | Rel-15 |
| DL\_1A-3C-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_1A-7A-28A\_n28A\_UL\_1A\_n28A | Rel-15 |
| DL\_1A-7A-28A\_n28A\_UL\_7A\_n28A | Rel-15 |
| DL\_1A-7A-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_1A-7C-28A\_n28A\_UL\_1A\_n28A | Rel-15 |
| DL\_1A-7C-28A\_n28A\_UL\_7A\_n28A | Rel-15 |
| DL\_1A-7C-28A\_n28A\_UL\_7C\_n28A | Rel-15 |
| DL\_1A-7C-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_3A-7A-28A\_n28A\_UL\_3A\_n28A | Rel-15 |
| DL\_3A-7A-28A\_n28A\_UL\_7A\_n28A | Rel-15 |
| DL\_3A-7A-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_3C-7A-28A\_n28A\_UL\_3A\_n28A | Rel-15 |
| DL\_3C-7A-28A\_n28A\_UL\_3C\_n28A | Rel-15 |
| DL\_3C-7A-28A\_n28A\_UL\_7A\_n28A | Rel-15 |
| DL\_3C-7A-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_3A-7C-28A\_n28A\_UL\_3A\_n28A | Rel-15 |
| DL\_3A-7C-28A\_n28A\_UL\_7A\_n28A | Rel-15 |
| DL\_3A-7C-28A\_n28A\_UL\_7C\_n28A | Rel-15 |
| DL\_3A-7C-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DL\_3C-7C-28A\_n28A\_UL\_3A\_n28A | Rel-15 |
| DL\_3C-7C-28A\_n28A\_UL\_3C\_n28A | Rel-15 |
| DL\_3C-7C-28A\_n28A\_UL\_7A\_n28A | Rel-15 |
| DL\_3C-7C-28A\_n28A\_UL\_7C\_n28A | Rel-15 |
| DL\_3C-7C-28A\_n28A\_UL\_28A\_n28A | Rel-15 |
| DC\_2A-7A-7A-66A-66A\_n78A | Rel-15 |
| DC\_2A-7C-66A-66A\_n78A | Rel-15 |
| DC\_3C-7A-20A\_n78A | Rel-15 |
| DL\_1A-3A-21A\_n77(2A)\_UL\_3A\_n77A | Rel-15 |
| DL\_1A-21A-42A\_n77(2A)\_UL\_1A\_n77A | Rel-15 |
| DL\_19A-21A-42A\_n77(2A)\_UL\_19A\_n77A | Rel-15 |
| DL\_1A-3A-42D\_n77A\_UL\_1A\_n77A | Rel-15 |
| DL\_1A-3A-42D\_n78A\_UL\_1A\_n78A | Rel-15 |
| DL\_1A-3A-42D\_n79A\_UL\_1A\_n79A | Rel-15 |
| DL\_1A-3A-42A\_n257M\_UL\_1A\_n257M | Rel-15 |
| DL\_1A-3A-42C\_n257M\_UL\_1A\_n257M | Rel-15 |
| DL\_1A-3A-42D\_n257M\_UL\_1A\_n257M | Rel-15 |
| DL\_1A-3A-42D\_n77A\_UL\_3A\_n77A | Rel-15 |
| DL\_1A-3A-42D\_n78A\_UL\_3A\_n78A | Rel-15 |
| DL\_1A-3A-42D\_n79A\_UL\_3A\_n79A | Rel-15 |
| DL\_1A-3A-42D\_n257M\_UL\_3A\_n257M | Rel-15 |
| DL\_1A-21A-42C\_n77(2A)\_UL\_1A\_n77A | Rel-15 |
| DL\_19A-21A-42C\_n77(2A)\_UL\_19A\_n77A | Rel-15 |
| DL\_1A-8A-11A\_n77A\_UL\_1A\_n77A | Rel-15 |
| DL\_1A-8A-11A\_n77A\_UL\_8A\_n77A | Rel-15 |
| DL\_1A-8A-11A\_n77A\_UL\_11A\_n77A | Rel-15 |
| DL\_1A-8A-11A\_n78A\_UL\_1A\_n78A | Rel-15 |
| DL\_1A-8A-11A\_n78A\_UL\_8A\_n78A | Rel-15 |
| DL\_1A-8A-11A\_n78A\_UL\_11A\_n78A | Rel-15 |
| DL\_1A-8A-11A\_n257A\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-8A-11A\_n257A\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-8A-11A\_n257A\_UL\_11A\_n257A | Rel-15 |
| DL\_1A-8A-11A\_n257D\_UL\_1A\_n257A | Rel-15 |
| DL\_1A-8A-11A\_n257D\_UL\_8A\_n257A | Rel-15 |
| DL\_1A-8A-11A\_n257D\_UL\_11A\_n257A | Rel-15 |
| NOTE 1: Non-contiguous allocation is assumed for 42\_n77 and for 42\_n78 | |

Table 1-2: Release 16 EN-DC of 3 LTE band (3DL/1UL) and 1 NR band (1DL/1UL), new request format

|  |  |
| --- | --- |
| **EN-DC configuration** | **UL configuration** |
| DC\_2A-12A-30A\_n260M | 2A\_n260M  12A\_n260M  30A\_n260M |
| DC\_2A-12A-66A\_n260M | 2A\_n260M  12A\_n260M  66A\_n260M |
| DC\_12A-30A-66A\_n260M | 12A\_n260M  30A\_n260M  66A\_n260M |
| DC\_2A-30A-66A\_n260M | 2A\_n260M  30A\_n260M  66A\_n260M |
| DC\_2A-29A-30A\_n260M | 2A\_n260M  30A\_n260M |
| DC\_2A-2A-12A-30A\_n260M | 2A\_n260M  12A\_n260M  30A\_260M |
| DC\_12A-30A-66A-66A\_n260M | 12A\_n260M  30A\_n260M  66A\_n260M |
| DC\_2A-12A-66A-66A\_n260M | 2A\_n260M  12A\_n260M  66A\_n260M |
| DC\_2A-2A-12A-66A\_n260M | 2A\_n260M  12A\_n260M  66A\_n260M |
| DC\_2A-5A-66A\_n5A | CA\_2A\_n5A  CA\_5A\_n5A  CA\_66A\_n5A |
| DC\_2A-5A-66A\_n66A | CA\_2A\_n66  CA\_5A\_n66  CA\_66A\_n66 |
| DC\_2A-13A-66A\_n66A | CA\_2A\_n66A  CA\_13A\_n66A  CA\_66A\_n66A |
| DC\_3A-7A-40A\_n1A | DC\_3A\_n1A DC\_7A\_n1A  DC\_40A\_n1A |
| DC\_1A-8A-42A\_n77A | DC\_1A\_n77A |
| DC\_1A-8A-42A\_n77A | DC\_8A\_n77A |
| DC\_1A-8A-42C\_n77A | DC\_1A\_n77A |
| DC\_1A-8A-42C\_n77A | DC\_8A\_n77A |
| DC\_3A-8A-42A\_n77A | DC\_3A\_n77A |
| DC\_3A-8A-42A\_n77A | DC\_8A\_n77A |
| DC\_3A-8A-42C\_n77A | DC\_3A\_n77A |
| DC\_3A-8A-42C\_n77A | DC\_8A\_n77A |
| DC\_3A-7A-8A\_n1A | DC\_3A\_n1A |
| DC\_3A-7A-8A\_n1A | DC\_7A\_n1A |
| DC\_3A-7A-8A\_n1A | DC\_8A\_n1A |
| DC\_2A-14A-30A\_n260M | DC\_2A\_n260M  DC\_14A\_n260M  DC\_30A\_n260M |
| DC\_2A-14A-66A\_n260M | DC\_2A\_n260M  DC\_14A\_n260M  DC\_66A\_n260M |
| DC\_14A-30A-66A\_n260M | DC\_14A\_n260M  DC\_30A\_n260M  DC\_66A\_n260M |
| DC\_2A-46D-66A\_n260M | DC\_2A\_n260M  DC\_46D\_n260M  DC\_66A\_n260M |
| DC\_2A-12A-30A\_n66A | DC\_2A\_n260M  DC\_12A\_n260M  DC\_30A\_n260M |
| DC\_2A-12A-66A\_n66A | DC\_2A\_n260M  DC\_12A\_n260M  DC\_66A\_n260M |
| DC\_12A-30A-66A\_n66A | DC\_12A\_n260M  DC\_30A\_n260M  DC\_66A\_n260M |
| DC\_12A-30A-66A\_n2A | DC\_12A\_n2A  DC\_30A\_n2A  DC\_66A\_n22A |
| DC\_2A-12A-30A\_n2A | DC\_2A\_n2A  DC\_12A\_n2A  DC\_30A\_n22A |
| DC\_2A-12A-66A\_n2A | DC\_2A\_n2A  DC\_12A\_n2A  DC\_66A\_n2A |
| DC\_14A-30A-66A-66A\_n260M | DC\_14A\_n260M  DC\_30A\_n260M  DC\_66A\_n260M |
| DC\_2A-14A-66A-66A\_n260M | DC\_2A\_n260M  DC\_14A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-12A-30A\_n66A | DC\_2A\_n66A  DC\_12A\_n66A  DC\_30A\_n66A |
| DC\_2A-2A-14A-66A\_n260M | DC\_2A\_n260M  DC\_14A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-12A-66A\_n66A | DC\_2A\_n66A  DC\_12A\_n66A  DC\_66A\_n66A |
| DC\_12A-30A-66A-66A\_n2A | DC\_12A\_n2A  DC\_30A\_n2A  DC\_66A\_n22A |
| DC\_2A-12A-66A-66A\_n2A | DC\_2A\_n2A  DC\_12A\_n2A  DC\_66A\_n2A |
| DC\_2A-7A-66A\_n5A | DC\_2A\_n5A  DC\_7A\_n5A  DC\_66A\_n5A |
| DC\_2A-7A-7A-66A\_n5A | DC\_2A\_n5A  DC\_7A\_n5A  DC\_66A\_n5A |
| DC\_2A-7C-66A\_n5A | DC\_2A\_n5A  DC\_7A\_n5A  DC\_66A\_n5A |
| DC\_2A-7A-66A-66A\_n5A | DC\_2A\_n5A  DC\_7A\_n5A  DC\_66A\_n5A |
| DC\_2A-7A-7A-66A-66A\_n5A | DC\_2A\_n5A  DC\_7A\_n5A  DC\_66A\_n5A |
| DC\_2A-7C-66A-66A\_n5A | DC\_2A\_n5A  DC\_7A\_n5A  DC\_66A\_n5A |
| DC\_2A-5A-7A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_7A\_n66A |
| DC\_2A-5A-7A-7A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_7A\_n66A |
| DC\_2A-5A-7C\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_7A\_n66A |
| DC\_2A-13A-7A\_n66A | DC\_2A\_n66A  DC\_13A\_n66A  DC\_7A\_n66A |
| DC\_2A-13A-7A-7A\_n66A | DC\_2A\_n66A  DC\_13A\_n66A  DC\_7A\_n66A |
| DC\_2A-13A-7C\_n66A | DC\_2A\_n66A  DC\_13A\_n66A  DC\_7A\_n66A |
| DC\_2A-7A-66A\_n66A | DC\_2A\_n66A  DC\_7A\_n66A  DC\_66A\_n66A |
| DC\_2A-7A-7A-66A\_n66A | DC\_2A\_n566A  DC\_7A\_n66A  DC\_66A\_n66A |
| DC\_2A-7C-66A\_n66A | DC\_2A\_n66A  DC\_7A\_n66A  DC\_66A\_n66A |
| DC\_2A-7A-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |
| DC\_2A-7A-7A-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |
| DC\_2A-7C-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |
| DC\_2A-7A-66A-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |
| DC\_2A-7A-7A-66A-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |
| DC\_2A-7C-66A-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |
| DC\_2A-48A-66A\_n71A | DC\_2A\_n71A  DC\_48A\_n71A  DC\_66A\_n71A |
| DC\_12A-48A-66A\_n71A | DC\_12A\_n71A  DC\_48A\_n71A  DC\_66A\_n71A |
| DC\_2A-12A-48A\_n71A | DC\_2A\_n71A  DC\_12A\_n71A  DC\_48A\_n71A |
| DC\_2A-12A-66A\_n71A | DC\_2A\_n71A  DC\_12A\_n71A  DC\_66A\_n71A |
| DC\_5A-48A-66A\_n71A | DC\_5A\_n71A  DC\_48A\_n71A  DC\_66A\_n71A |
| DC\_2A-5A-48A\_n71A | DC\_2A\_n71A  DC\_5A\_n71A  DC\_48A\_n71A |
| DC\_2A-5A-66A\_n71A | DC\_2A\_n71A  DC\_5A\_n71A  DC\_66A\_n71A |
| DC\_5A-12A-48A\_n71A | DC\_5A\_n71A  DC\_12A\_n71A  DC\_48A\_n71A |
| DC\_5A-12A-66A\_n71A | DC\_5A\_n71A  DC\_12A\_n71A  DC\_66A\_n71A |
| DC\_2A\_5A-12A\_n71A | DC\_2A\_n71A  DC\_5A\_n71A  DC\_12A\_n71A |
| DC\_2A-48A-66A\_n12A | DC\_2A\_n12A  DC\_48A\_n12A  DC\_66A\_n12A |
| DC\_12A-48A-66A\_n12A | DC\_(n)12AA  DC\_48A\_n12A  DC\_66A\_n12A |
| DC\_2A-12A-48A\_n12A | DC\_2A\_n12A  DC\_(n)12AA  DC\_48A\_n12A |
| DC\_2A-12A-66A\_n12A | DC\_2A\_n12A  DC\_(n)12AA  DC\_66A\_n12A |
| DC\_5A-48A-66A\_n12A | DC\_5A\_n12A  DC\_48A\_n12A  DC\_66A\_n12A |
| DC\_2A-5A-48A\_n12A | DC\_2A\_n12A  DC\_5A\_n12A  DC\_48A\_n12A |
| DC\_2A-5A-66A\_n12A | DC\_2A\_n12A  DC\_5A\_n12A  DC\_66A\_n12A |
| DC\_5A-12A-48A\_n12A | DC\_5A\_n12A  DC\_48A\_n12A  DC\_(n)12AA |
| DC\_5A-12A-66A\_n12A | DC\_5A\_n12A  DC\_(n)12AA  DC\_66A\_n12A |
| DC\_2A-5A-12A\_n12A | DC\_5A\_n12A  DC\_2A\_n12A  DC\_(n)12AA |
| DC\_2A-48A-66A\_n5A | DC\_2A\_n5A  DC\_48A\_n5A  DC\_66A\_n5A |
| DC\_12A-48A-66A\_n5A | DC\_12A\_n5A  DC\_48A\_n5A  DC\_66A\_n5A |
| DC\_2A-12A-48A\_n5A | DC\_2A\_n5A  DC\_12A\_n5A  DC\_48A\_n5A |
| DC\_2A-12A-66A\_n5A | DC\_2A\_n5A  DC\_12A\_n5A  DC\_66A\_n5A |
| DC\_2A-5A-48A\_n5A | DC\_2A\_n5A  DC\_(n)5AA  DC\_48A\_n5A |
| DC\_2A-5A-66A\_n5A | DC\_2A\_n5A  DC\_5A\_n5A  DC\_66A\_n5A |
| DC\_5A-12A-48A\_n5A | DC\_(n)5AA  DC\_12A\_n5A  DC\_48A\_n5A |
| DC\_5A-12A-66A\_n5A | DC\_(n)5AA  DC\_12A\_n5A  DC\_66A\_n5A |
| DC\_5A-2A-12A\_n5A | DC\_2A\_n5A  DC\_(n)5AA  DC\_12A\_n5A |
| DC\_1A-3A-7C\_n28A | DC\_7A\_n28A |
| DC\_1A-3C-7C\_n28A | DC\_7A\_n28A |
| DC\_2A-46A-66A\_n261A | DC\_2A\_n261A |
| DC\_2A-46A-66A\_n261A | DC\_66A\_n261A |
| DC\_2A-46C-66A\_n261A | DC\_2A\_n261A |
| DC\_2A-46C-66A\_n261A | DC\_66A\_n261A |
| DC\_2A-46D-66A\_n261A | DC\_2A\_n261A |
| DC\_2A-46D-66A\_n261A | DC\_66A\_n261A |
| DC\_2A-46A-66A\_n261(2A) | DC\_2A\_n261A |
| DC\_2A-46A-66A\_n261(2A) | DC\_66A\_n261A |
| DC\_2A-46C-66A\_n261(2A) | DC\_2A\_n261A |
| DC\_2A-46C-66A\_n261(2A) | DC\_66A\_n261A |
| DC\_2A-46D-66A\_n261(2A) | DC\_2A\_n261A |
| DC\_2A-46D-66A\_n261(2A) | DC\_66A\_n261A |
| DC\_2A-46E-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46D-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46C-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46A-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46E-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_2A-46D-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_2A-46C-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_2A-46A-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_3A-19A-42A\_n257G  DC\_3A-19A-42A\_n257H  DC\_3A-19A-42A\_n257I  DC\_3A-19A-42C\_n257G  DC\_3A-19A-42C\_n257H  DC\_3A-19A-42C\_n257I | DC\_3A\_n257A  DC\_3A\_n257G  DC\_3A\_n257H  DC\_3A\_n257I |
| DC\_19A-21A-42A\_n257G  DC\_19A-21A-42A\_n257H  DC\_19A-21A-42A\_n257I  DC\_19A-21A-42C\_n257G  DC\_19A-21A-42C\_n257H  DC\_19A-21A-42C\_n257I | DC\_21A\_n257A  DC\_21A\_n257G  DC\_21A\_n257H  DC\_21A\_n257I |
| DC\_2A-46E-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46D-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46C-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46A-48A\_n5A | DC\_2A\_n5A DC\_46A\_n5A DC\_48A\_n5A |
| DC\_2A-46E-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_2A-46D-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_2A-46C-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_2A-46A-48A\_n66A | DC\_2A\_n66A DC\_46A\_n66A DC\_48A\_n66A |
| DC\_3A-19A-42A\_n257G  DC\_3A-19A-42A\_n257H  DC\_3A-19A-42A\_n257I  DC\_3A-19A-42C\_n257G  DC\_3A-19A-42C\_n257H  DC\_3A-19A-42C\_n257I | DC\_3A\_n257A  DC\_3A\_n257G  DC\_3A\_n257H  DC\_3A\_n257I |
| DC\_19A-21A-42A\_n257G  DC\_19A-21A-42A\_n257H  DC\_19A-21A-42A\_n257I  DC\_19A-21A-42C\_n257G  DC\_19A-21A-42C\_n257H  DC\_19A-21A-42C\_n257I | DC\_21A\_n257A  DC\_21A\_n257G  DC\_21A\_n257H  DC\_21A\_n257I |
| DC\_3A-7A-20A\_n1A | DC\_3A\_n1A  DC\_7A\_n1A  DC\_20A\_n1A |
| DC\_3C-7A-20A\_n1A | DC\_3C\_n1A  DC\_7A\_n1A  DC\_20A\_n1A |
| DC\_3A-7A-28A\_n7A | DC\_3A\_n7A  DC\_7A\_n7A  DC\_28A\_n7A |
| DC\_1A-3A-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_7A\_n7A |
| DC\_1A-3A-28A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_28A\_n7A |
| DC\_1A-7A-28A\_n7A | DC\_1A\_n7A  DC\_7A\_n7A  DC\_28A\_n7A |
| DC\_3C-7A-28A\_n7A | DC\_3A\_n7A  DC\_3C\_n7A  DC\_7A\_n7A  DC\_28A\_n7A |
| DC\_1A-3C-28A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_28A\_n7A |
| DC\_1A-3C-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_7A\_n7A |
| DC\_1A-3A-3A-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_7A\_n7A |
| DC\_1A-3A-3A-28A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_28A\_n7A |
| DC\_3A-3A-7A-28A\_n7A | DC\_3A\_n7A  DC\_7A\_n7A  DC\_28A\_n7A |
| DC\_1A-1A-3A-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_7A\_n7A |
| DC\_1A-1A-3C-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_7A\_n7A |
| DC\_1A-1A-3A-28A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_28A\_n7A |
| DC\_1A-1A-7A-28A\_n7A | DC\_1A\_n7A  DC\_7A\_n7A  DC\_28A\_n7A |
| DC\_1A-1A-3C-28A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_28A\_n7A |
| DC\_1A-1A-3A-3A-28A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_28A\_n7A |
| DC\_1A-3A-28A\_n7B | DC\_1A\_n7A  DC\_1A\_n7B  DC\_3A\_n7A  DC\_3A\_n7B  DC\_28A\_n7A  DC\_28A\_n7B |
| DC\_1A-3C-28A\_n7B | DC\_1A\_n7A  DC\_1A\_n7B  DC\_3A\_n7A  DC\_3A\_n7B  DC\_28A\_n7A  DC\_28A\_n7B  DC\_3C\_n7A  DC\_3C\_n7B |
| DC\_1A-3A-3A-28A\_n7B | DC\_1A\_n7A  DC\_1A\_n7B  DC\_3A\_n7A  DC\_3A\_n7B  DC\_28A\_n7A  DC\_28A\_n7B |
| DC\_1A-1A-3A-28A\_n7B | DC\_1A\_n7A  DC\_1A\_n7B  DC\_3A\_n7A  DC\_3A\_n7B  DC\_28A\_n7A  DC\_28A\_n7B |
| DC\_1A-1A-3C-28A\_n7B | DC\_1A\_n7A  DC\_1A\_n7B  DC\_3A\_n7A  DC\_3A\_n7B  DC\_28A\_n7A  DC\_28A\_n7B  DC\_3C\_n7A  DC\_3C\_n7B |
| DC\_1A-1A-3A-3A-28A\_n7B | DC\_1A\_n7A  DC\_1A\_n7B  DC\_3A\_n7A  DC\_3A\_n7B  DC\_28A\_n7A  DC\_28A\_n7B |
| DC\_2A-13A-66A\_n260M | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260L | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260K | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(2A-2G) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(2H) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(6A) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260J | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(A-2G) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(3A-G) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(G-H) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(5A) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260I | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(2G) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(4A) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(2A-G) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(A-H) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260H | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(A-G) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(3A) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260G | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260(2A) | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n260A | DC\_2A\_n260A DC\_13A\_n260A DC\_66A\_n260A |
| DC\_2A-13A-66A\_n261M | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-G-I) | DC\_2A\_n261A DC\_13A\_n261A  DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(H-I) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261L | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-G-H) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(G-I) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(2H) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261K | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(2A-I) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(G-H) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261J | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(2A-H) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-2G) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-I) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(2G) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261I | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-H) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(2A-G) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261H | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-G) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(3A) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261G | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(2A) | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261A | DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-K) | New: DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(G-J) | New: DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(A-J) | New: DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(3A-G) | New: DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_2A-13A-66A\_n261(4A) | New: DC\_2A\_n261A DC\_13A\_n261A DC\_66A\_n261A |
| DC\_1A-3A-20A\_n38A | DC\_3A\_n38A |
| DC\_1A-3A-20A\_n38A | DC\_20A\_n38A |
| DC\_1A-20A-38A\_n78A | DC\_1A\_n78A |
| DC\_3A-20A-38A\_n78A | DC\_3A\_n78A |
| DC\_1A-7A-20A\_n3A | DC\_1A\_n3A |
| DC\_1A-7A-20A\_n3A | DC\_20A\_n3A |
| DC\_3C-7A-20A\_n1A | DC\_3A\_n1A |
| DC\_1A-3A-7C\_n28A | DC\_7A\_n28A |
| DC\_1A-3A-7C\_n78A | DC\_7A\_n78A |
| DC\_1A-3C-7C\_n28A | DC\_7A\_n28A |
| DC\_1A-3C-7C\_n78A | DC\_7A\_n78A |
| DC\_1A-3A-7A\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_7A\_n78A  DC\_1A\_n78(2A)  DC\_3A\_n78(2A)  DC\_7A\_n78(2A) |
| DC\_1A-3A-7C\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_7A\_n78A  DC\_7C\_n78A  DC\_1A\_n78(2A)  DC\_3A\_n78(2A)  DC\_7A\_n78(2A)  DC\_7C\_n78(2A) |
| DC\_1A-3C-7A\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_7A\_n78A  DC\_1A\_n78(2A)  DC\_3A\_n78(2A)  DC\_7A\_n78(2A) |
| DC\_1A-3C-7C\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_7A\_n78A  DC\_7C\_n78A  DC\_1A\_n78(2A)  DC\_3A\_n78(2A)  DC\_7A\_n78(2A)  DC\_7C\_n78(2A) |
| DC\_2A-29A-66A\_n260M | DC\_2A\_n260M  DC\_66A\_n260M |
| DC\_29A-30A-66A\_n260M | DC\_30A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-5A-30A\_n260M | DC\_2A\_n260M  DC\_5A\_n260M  DC\_30A\_n260M |
| DC\_5A-30A-66A-66A\_n260M | DC\_5A\_n260M  DC\_30A\_n260M  DC\_66A\_n260M |
| DC\_2A-5A-66A-66A\_n260M | DC\_2A\_n260M  DC\_5A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-5A-66A\_n260M | DC\_2A\_n260M  DC\_5A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-29A-30A\_n260M | DC\_2A\_n260M  DC\_30A\_n260M |
| DC\_2A-2A-12A-66A-66A\_n260M | DC\_2A\_n260M  DC\_12A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-5A-66A-66A\_n260M | DC\_2A\_n260M  DC\_5A\_n260M  DC\_66A\_n260M |
| DC\_2A-2A-14A-66A-66A\_n260M | DC\_2A\_n260M  DC\_14A\_n260M  DC\_66A\_n260M |
| DC\_2A-46D-66A\_n5A | DC\_2A\_n5A  DC\_46D\_n5A  DC\_66A\_n5A |
| DC\_2A-5A-30A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_30A\_n66A |
| DC\_2A-5A-66A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_66A\_n66A |
| DC\_5A-30A-66A\_n66A | DC\_5A\_n66A  DC\_30A\_n66A  DC\_66A\_n66A\_ |
| DC\_5A-30A-66A\_n2A | DC\_5A\_n2A  DC\_30A\_n2A  DC\_66A\_n2A |
| DC\_2A-5A-30A\_n2A | DC\_2A\_n2A  DC\_5A\_n2A  DC\_30A\_n2A |
| DC\_2A-5A-66A\_n2A | DC\_2A\_n2A  DC\_5A\_n2A  DC\_66A\_n2A |
| DC\_2A-2A-5A-30A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_30A\_n66A |
| DC\_2A-2A-5A-66A\_n66A | DC\_2A\_n66A  DC\_5A\_n66A  DC\_66A\_n66A |
| DC\_5A-30A-66A-66A\_n2A | DC\_5A\_n2A  DC\_30A\_n2A  DC\_66A\_n2A |
| DC\_2A-5A-66A-66A\_n2A | DC\_2a\_n2A  DC\_5A\_n2A  DC\_66A\_n2A |
| DC\_7A-13A-66A\_n66A | DC\_7A\_n66A  DC\_13A\_n66A  DC\_66A\_n66A |
| DC\_7C-13A-66A\_n66A | DC\_7A\_n66A  DC\_13A\_n66A  DC\_66A\_n66A |
| DC\_1A-7A-8A\_n78A | DC\_1A\_n78A  DC\_7A\_n78A  DC\_8A\_n78A |
| DC\_2A-7A-66A\_n38A | DC\_2A\_n38A  DC\_7A\_n38A  DC\_66A\_n38A |
| DC\_2A-66A-71A\_n38A | DC\_2A\_n38A  DC\_66A\_n38A  DC\_71A\_n38A |
| DC\_2A-2A-7A-66A\_n38A | DC\_2A\_n38A  DC\_7A\_n38A  DC\_66A\_n38A |
| DC\_2A-2A-66A-71A\_n38A | DC\_2A\_n38A  DC\_66A\_n38A  DC\_71A\_n38A |
| DC\_2A-7A-66A\_n71A | DC\_2A\_n71A  DC\_7A\_n71A  DC\_66A\_n71A |
| DC\_2A-66A-71A\_n66A | DC\_2A\_n66A  DC\_66A\_n66A  DC\_71A\_n66A |
| DC\_2A-66A-71A\_n78A | DC\_2A\_n78A  DC\_66A\_n78A  DC\_71A\_n78A |
| DC\_2A-2A-66A-71A\_n78A | DC\_2A\_n78A  DC\_66A\_n78A  DC\_71A\_n78A |
| DC\_1A-3A-20A\_n38A | DC\_3A\_n38A |
| DC\_1A-3A-20A\_n38A | DC\_20A\_n38A |
| DC\_1A-20A-38A\_n78A | DC\_1A\_n78A |
| DC\_3A-20A-38A\_n78A | DC\_3A\_n78A |
| DC\_1A-7A-20A\_n3A | DC\_1A\_n3A |
| DC\_1A-7A-20A\_n3A | DC\_20A\_n3A |
| DC\_3A-3A-7A-8A\_n1A | DC\_3A\_n1A |
| DC\_3A-3A-7A-8A\_n1A | DC\_7A\_n1A |
| DC\_3A-3A-7A-8A\_n1A | DC\_8A\_n1A |
| DC\_3A-7A-7A-8A\_n1A | DC\_3A\_n1A |
| DC\_3A-7A-7A-8A\_n1A | DC\_7A\_n1A |
| DC\_3A-7A-7A-8A\_n1A | DC\_8A\_n1A |
| DC\_3A-3A-7A-7A-8A\_n1A | DC\_3A\_n1A |
| DC\_3A-3A-7A-7A-8A\_n1A | DC\_7A\_n1A |
| DC\_3A-3A-7A-7A-8A\_n1A | DC\_8A\_n1A |
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| DC\_3A-3A-7A-8A\_n78A | DC\_7A\_n78A |
| DC\_3A-3A-7A-8A\_n78A | DC\_8A\_n78A |
| DC\_3A-7A-7A-8A\_n78A | DC\_3A\_n78A |
| DC\_3A-7A-7A-8A\_n78A | DC\_7A\_n78A |
| DC\_3A-7A-7A-8A\_n78A | DC\_8A\_n78A |
| DC\_3A-3A-7A-7A-8A\_n78A | DC\_3A\_n78A |
| DC\_3A-3A-7A-7A-8A\_n78A | DC\_7A\_n78A |
| DC\_3A-3A-7A-7A-8A\_n78A | DC\_8A\_n78A |
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| DC\_1A-3A-21A\_n257G DC\_1A-3A-21A\_n257H DC\_1A-3A-21A\_n257I | DC\_1A\_n257A DC\_1A\_n257G DC\_1A\_n257H DC\_1A\_n257I DC\_21A\_n257A DC\_21A\_n257G DC\_21A\_n257H DC\_21A\_n257I |
| DC\_1A-3A-42A\_n257G DC\_1A-3A-42A\_n257H DC\_1A-3A-42A\_n257I DC\_1A-3A-42C\_n257G DC\_1A-3A-42C\_n257H DC\_1A-3A-42C\_n257I DC\_1A-3A-42D\_n257G DC\_1A-3A-42D\_n257H DC\_1A-3A-42D\_n257I | DC\_42A\_n257A DC\_42A\_n257G DC\_42A\_n257H DC\_42A\_n257I |
| DC\_1A-19A-21A\_n257G DC\_1A-19A-21A\_n257H DC\_1A-19A-21A\_n257I | DC\_19A\_n257A DC\_19A\_n257G DC\_19A\_n257H DC\_19A\_n257I |
| DC\_1A-19A-42A\_n257G DC\_1A-19A-42A\_n257H DC\_1A-19A-42A\_n257I DC\_1A-19A-42C\_n257G DC\_1A-19A-42C\_n257H DC\_1A-19A-42C\_n257I | DC\_42A\_n257A DC\_42A\_n257G DC\_42A\_n257H DC\_42A\_n257I |
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| DC\_3A-41A-42C\_n257G  DC\_3A-41A-42C\_n257H  DC\_3A-41A-42C\_n257I | DC\_3A\_n257A  DC\_3A\_n257G  DC\_3A\_n257H  DC\_3A\_n257I  DC\_41A\_n257A  DC\_41A\_n257G  DC\_41A\_n257H  DC\_41A\_n257I  DC\_42A\_n257A  DC\_42A\_n257G  DC\_42A\_n257H  DC\_42A\_n257I |
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| DC\_3A-28A-41C\_n78A | DC\_3A\_n78A  DC\_28A\_n78A DC\_41A\_n78A |
| DC\_28A-41A-42A\_n78A | DC\_28A\_n78A  DC\_41A\_n78A DC\_42A\_n78A |
| DC\_28A-41A-42C\_n78A | DC\_28A\_n78A  DC\_41A\_n78A DC\_42A\_n78A |
| DC\_28A-41C-42A\_n78A | DC\_28A\_n78A  DC\_41A\_n78A DC\_42A\_n78A |
| DC\_28A-41C-42C\_n78A | DC\_28A\_n78A  DC\_41A\_n78A DC\_42A\_n78A |
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| DC\_3A-28A-41C\_n257A  DC\_3A-28A-41C\_n257G  DC\_3A-28A-41C\_n257H  DC\_3A-28A-41C\_n257I | DC\_3A\_n257A  DC\_3A\_n257G  DC\_3A\_n257H  DC\_3A\_n257I  DC\_28A\_n257A  DC\_28A\_n257G  DC\_28A\_n257H  DC\_28A\_n257I  DC\_41A\_n257A  DC\_41A\_n257G  DC\_41A\_n257H  DC\_41A\_n257I |
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| DC\_1A-8A-11A\_n257G | UL\_8A\_n257A |
| DC\_1A-8A-11A\_n257G | UL\_11A\_n257A |
| DC\_1A-8A-11A\_n257H | UL\_1A\_n257A |
| DC\_1A-8A-11A\_n257H | UL\_8A\_n257A |
| DC\_1A-8A-11A\_n257H | UL\_11A\_n257A |
| DC\_1A-8A-11A\_n257I | UL\_1A\_n257A |
| DC\_1A-8A-11A\_n257I | UL\_8A\_n257A |
| DC\_1A-8A-11A\_n257I | UL\_11A\_n257A |
| DC\_1A-28A-42A\_n257D | DC\_1A\_n257A |
| DC\_1A-28A-42A\_n257D | DC\_28A\_n257A |
| DC\_1A-28A-42A\_n257D | DC\_42A\_n257A |
| DC\_1A-28A-42A\_n257G | DC\_1A\_n257A |
| DC\_1A-28A-42A\_n257G | DC\_28A\_n257A |
| DC\_1A-28A-42A\_n257G | DC\_42A\_n257A |
| DC\_1A-28A-42A\_n257H | DC\_1A\_n257A |
| DC\_1A-28A-42A\_n257H | DC\_28A\_n257A |
| DC\_1A-28A-42A\_n257H | DC\_42A\_n257A |
| DC\_1A-28A-42A\_n257I | DC\_1A\_n257A |
| DC\_1A-28A-42A\_n257I | DC\_28A\_n257A |
| DC\_1A-28A-42A\_n257I | DC\_42A\_n257A |
| DC\_1A-28A-42C\_n257D | DC\_1A\_n257A |
| DC\_1A-28A-42C\_n257D | DC\_28A\_n257A |
| DC\_1A-28A-42C\_n257D | DC\_42A\_n257A |
| DC\_1A-28A-42C\_n257G | DC\_1A\_n257A |
| DC\_1A-28A-42C\_n257G | DC\_28A\_n257A |
| DC\_1A-28A-42C\_n257G | DC\_42A\_n257A |
| DC\_1A-28A-42C\_n257H | DC\_1A\_n257A |
| DC\_1A-28A-42C\_n257H | DC\_28A\_n257A |
| DC\_1A-28A-42C\_n257H | DC\_42A\_n257A |
| DC\_1A-28A-42C\_n257I | DC\_1A\_n257A |
| DC\_1A-28A-42C\_n257I | DC\_28A\_n257A |
| DC\_1A-28A-42C\_n257I | DC\_42A\_n257A |
| DC\_3A-28A-42A\_n257D | DC\_3A\_n257A |
| DC\_3A-28A-42A\_n257D | DC\_28A\_n257A |
| DC\_3A-28A-42A\_n257D | DC\_42A\_n257A |
| DC\_3A-28A-42A\_n257G | DC\_3A\_n257A |
| DC\_3A-28A-42A\_n257G | DC\_28A\_n257A |
| DC\_3A-28A-42A\_n257G | DC\_42A\_n257A |
| DC\_3A-28A-42A\_n257H | DC\_3A\_n257A |
| DC\_3A-28A-42A\_n257H | DC\_28A\_n257A |
| DC\_3A-28A-42A\_n257H | DC\_42A\_n257A |
| DC\_3A-28A-42A\_n257I | DC\_3A\_n257A |
| DC\_3A-28A-42A\_n257I | DC\_28A\_n257A |
| DC\_3A-28A-42A\_n257I | DC\_42A\_n257A |
| DC\_3A-28A-42C\_n257D | DC\_3A\_n257A |
| DC\_3A-28A-42C\_n257D | DC\_28A\_n257A |
| DC\_3A-28A-42C\_n257D | DC\_42A\_n257A |
| DC\_3A-28A-42C\_n257G | DC\_3A\_n257A |
| DC\_3A-28A-42C\_n257G | DC\_28A\_n257A |
| DC\_3A-28A-42C\_n257G | DC\_42A\_n257A |
| DC\_3A-28A-42C\_n257H | DC\_3A\_n257A |
| DC\_3A-28A-42C\_n257H | DC\_28A\_n257A |
| DC\_3A-28A-42C\_n257H | DC\_42A\_n257A |
| DC\_3A-28A-42C\_n257I | DC\_3A\_n257A |
| DC\_3A-28A-42C\_n257I | DC\_28A\_n257A |
| DC\_3A-28A-42C\_n257I | DC\_42A\_n257A |
| DC\_2A-46A-66A\_n71A | DC\_2A\_n71A |
| DC\_2A-46A-66A\_n71A | DC\_66A\_n71A |
| DC\_2A-46C-66A\_n71A | DC\_2A\_n71A |
| DC\_2A-46C-66A\_n71A | DC\_66A\_n71A |
| DC\_2A-46D-66A\_n71A | DC\_2A\_n71A |
| DC\_2A-46D-66A\_n71A | DC\_66A\_n71A |
| DC\_2A-46A-66A\_n41A | DC\_2A\_n41A |
| DC\_2A-46A-66A\_n41A | DC\_66A\_n41A |
| DC\_2A-46C-66A\_n41A | DC\_2A\_n41A |
| DC\_2A-46C-66A\_n41A | DC\_66A\_n41A |
| DC\_2A-46D-66A\_n41A | DC\_2A\_n41A |
| DC\_2A-46D-66A\_n41A | DC\_66A\_n41A |
| DC\_3C-7A-8A\_n1A | DC\_3C\_n1A  DC\_7A\_n1A  DC\_8A\_n1A |
| DC\_1A-3A-7A\_n8A | DC\_1A\_n8A DC\_3A\_n8A  DC\_7A\_n8A |
| DC\_1A-3A-20A\_n8A | DC\_1A\_n8A DC\_3A\_n8A  DC\_20A\_n8A |
| DC\_1A-7A-20A\_n8A | DC\_1A\_n8A  DC\_7A\_n8A  DC\_20A\_n8A |
| DC\_3A-7A-20A\_n8A | DC\_3A\_n8A  DC\_7A\_n8A  DC\_20A\_n8A |
| DC\_1A-7C-20A\_n3A | DC\_1A\_n3A |
|  | DC\_7A\_n3A |
|  | DC\_20A\_n3A |
|  | DC\_7C\_n3A |
| DC\_1A-3A-28A\_n40A | DC\_1A\_n40A  DC\_3A\_n40A  DC\_28A\_n40A |
| DC\_1A-8A-11A\_n3A | DC\_1A\_n3A |
| DC\_1A-8A-11A\_n3A | DC\_8A\_n3A |
| DC\_1A-8A-11A\_n3A | DC\_11A\_n3A |
| DC\_1A-8A-11A\_n28A | DC\_1A\_n28A |
| DC\_1A-8A-11A\_n28A | DC\_8A\_n28A |
| DC\_1A-8A-11A\_n28A | DC\_11A\_n28A |
| DC\_1A-8A-11A\_n77(2A) | UL\_1A\_n77A |
| DC\_1A-8A-11A\_n77(2A) | UL\_8A\_n77A |
| DC\_1A-8A-11A\_n77(2A) | UL\_11A\_n77A |
| CA\_2A-30A-66A\_n2A | CA\_2A\_n2A  CA\_30\_n2A  CA\_66A\_n2A |
| CA\_2A-30A-66A\_n66A | CA\_2A\_n66A  CA\_30\_n66A  CA\_66A\_n66A |
| CA\_2A-2A-30A-66A\_n260M | CA\_2A\_n260M  CA\_30\_n260M  CA\_66A\_n260M |
| CA\_2A-30A-66A-66A\_n260M | CA\_2A\_n260M  CA\_30\_n260M  CA\_66A\_n260M |
| CA\_2A-30A-66A-66A\_n2A | CA\_2A\_n2A  CA\_30\_n2A  CA\_66A\_n2A |
| CA\_2A-14A-66A\_n66A | CA\_2A\_n66A  CA\_14\_n66A  CA\_66A\_n66A |
| CA\_2A-14A-66A\_n2A | CA\_2A\_n2A  CA\_14\_n2A  CA\_66A\_n2A |
| CA\_2A-2A-14A-66A\_n66A | e  CA\_66A\_n66A |
| CA\_2A-14A-66A-66A\_n2A | CA\_2A\_n2A  CA\_14\_n2A  CA\_66A\_n2A |
| DC\_1A-3A-20A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_20A\_n7A |
| DC\_3A-7C-20A\_n1A | DC\_3A\_n1A |
|  | DC\_7A\_n1A |
|  | DC\_20A\_n1A |
|  | DC\_7C\_n1A |
| DC\_3C-7C-20A\_n1A | DC\_3A\_n1A |
|  | DC\_7A\_n1A |
|  | DC\_20A\_n1A |
|  | DC\_3C\_n1A |
|  | DC\_7C\_n1A |
| DC\_2A-5A-66A-n2A | DC\_5A-n2A |
| DC\_2A-5A-5A-66A-n2A | DC\_5A-n2A |
| DC\_2A-5A-5A-66A-66A-n2A | DC\_5A-n2A |
| DC\_2A-5A-66A-66A-n2A | DC\_5A-n2A |
| DC\_2A-5B-66A-n2A | DC\_5A-n2A |
| DC\_2A-5B-66A-66A-n2A | DC\_5A-n2A |
| DC\_2A-2A-5A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-2A-5A-66A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-5A-66A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-2A-5A-66A-66A-n66A | DC\_5A-n66A |
| DC\_2A-5A-66A-66A-n66A | DC\_5A-n66A |
| DC\_2A-5A-5A-66A-n66A | DC\_5A-n66A |
| DC\_2A-5A-5A-66A-66A-n66A | DC\_5A-n66A |
| DC\_2A-5B-66A-n66A | DC\_5A-n66A |
| DC\_2A-5B-66A-66A-n66A | DC\_5A-n66A |
| DC\_2A-13A-66A-n2A | DC\_13A-n2A |
| DC\_2A-13A-66A-66A-n2A | DC\_13A-n2A |
| DC\_2A-2A-13A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-2A-13A-66A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-13A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-13A-66A-66A-n5A | DC\_2A-n5A DC\_66A-n5A |
| DC\_2A-2A-13A-66A-66A-n66A | DC\_13A-n66A |
| DC\_2A-2A-13A-66A-n66A | DC\_13A-n66A |
| DC\_2A-13A-66A-66A-n66A | DC\_13A-n66A |
| DC\_2A-13A-66A-n48A | DC\_2A-n48A DC\_13A-n48A DC\_66A-n48A |
| DC\_2A-13A-66A-n48B | DC\_2A-n48A DC\_13A-n48A DC\_66A-n48A |
| DC\_2A-13A-66A-66A-n48A | DC\_2A-n48A DC\_13A-n48A DC\_66A-n48A |
| DC\_2A-13A-66A-66A-n48B | DC\_2A-n48A DC\_13A-n48A DC\_66A-n48A |
| DC\_2A-5A-66A-n261M | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261L | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261K | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261J | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261I | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261A | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A |
| DC\_2A-5A-66A-n261(H-I) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261(A-K) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261(G-J) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261(G-I) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261(2H) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261H DC\_5A-n261H DC\_66A-n261H |
| DC\_2A-5A-66A-n261(2A-I) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261(A-J) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261I DC\_5A-n261I DC\_66A-n261I |
| DC\_2A-5A-66A-n261(G-H) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261H DC\_5A-n261H DC\_66A-n261H |
| DC\_2A-5A-66A-n261(2A-H) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261H DC\_5A-n261H DC\_66A-n261H |
| DC\_2A-5A-66A-n261(3A-G) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261G DC\_5A-n261G DC\_66A-n261G |
| DC\_2A-5A-66A-n261(2G) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261G DC\_5A-n261G DC\_66A-n261G |
| DC\_2A-5A-66A-n261(A-H) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261H DC\_5A-n261H DC\_66A-n261H |
| DC\_2A-5A-66A-n261(2A-G) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261G DC\_5A-n261G DC\_66A-n261G |
| DC\_2A-5A-66A-n261(A-G) | DC\_2A-n261A DC\_5A-n261A DC\_66A-n261A DC\_2A-n261G DC\_5A-n261G DC\_66A-n261G |
| DC\_2A-13A-66A-n261I | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261J | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261K | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261L | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261M | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(H-I) | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(G-I) | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(2H) | DC\_2A-n261H DC\_13A-n261H DC\_66A-n261H |
| DC\_2A-13A-66A-n261(2A-I) | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(G-H) | DC\_2A-n261H DC\_13A-n261H DC\_66A-n261H |
| DC\_2A-13A-66A-n261(2A-H) | DC\_2A-n261H DC\_13A-n261H DC\_66A-n261H |
| DC\_2A-13A-66A-n261(2G) | DC\_2A-n261G DC\_13A-n261G DC\_66A-n261G |
| DC\_2A-13A-66A-n261(A-H) | DC\_2A-n261H DC\_13A-n261H DC\_66A-n261H |
| DC\_2A-13A-66A-n261(2A-G) | DC\_2A-n261G DC\_13A-n261G DC\_66A-n261G |
| DC\_2A-13A-66A-n261(A-G) | DC\_2A-n261G DC\_13A-n261G DC\_66A-n261G |
| DC\_2A-13A-66A-n261(A-K) | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(G-J) | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(A-J) | DC\_2A-n261I DC\_13A-n261I DC\_66A-n261I |
| DC\_2A-13A-66A-n261(3A-G) | DC\_2A-n261G DC\_13A-n261G DC\_66A-n261G |
| DC\_2A-13A-66A-n260I | DC\_2A-n260I DC\_13A-n260I DC\_66A-n260I |
| DC\_2A-13A-66A-n260J | DC\_2A-n260I DC\_13A-n260I DC\_66A-n260I |
| DC\_2A-13A-66A-n260K | DC\_2A-n260I DC\_13A-n260I DC\_66A-n260I |
| DC\_2A-13A-66A-n260L | DC\_2A-n260I DC\_13A-n260I DC\_66A-n260I |
| DC\_2A-13A-66A-n260M | DC\_2A-n260I DC\_13A-n260I DC\_66A-n260I |
| DC\_2A-5A-66A-n260I | DC\_2A-n260I DC\_5A-n260I DC\_66A-n260I |
| DC\_2A-5A-66A-n260J | DC\_2A-n260I DC\_5A-n260I DC\_66A-n260I |
| DC\_2A-5A-66A-n260K | DC\_2A-n260I DC\_5A-n260I DC\_66A-n260I |
| DC\_2A-5A-66A-n260L | DC\_2A-n260I DC\_5A-n260I DC\_66A-n260I |
| DC\_2A-5A-66A-n260M | DC\_2A-n260I DC\_5A-n260I DC\_66A-n260I |
| DC\_2A-5A-66A\_n48A | - |
| DC\_2A-5A-66A\_n48A | DC\_2A\_n48A |
| DC\_2A-5A-66A\_n48A | DC\_5A\_n48A |
| DC\_2A-5A-66A\_n48A | DC\_66A\_n48A |
| DC\_2A-5A-66A\_n48B | - |
| DC\_2A-5A-66A\_n48B | DC\_2A\_n48A |
| DC\_2A-5A-66A\_n48B | DC\_5A\_n48A |
| DC\_2A-5A-66A\_n48B | DC\_66A\_n48A |
| DC\_2A-5A-66A-66A\_n48A | - |
| DC\_2A-5A-66A-66A\_n48A | DC\_2A\_n48A |
| DC\_2A-5A-66A-66A\_n48A | DC\_5A\_n48A |
| DC\_2A-5A-66A-66A\_n48A | DC\_66A\_n48A |
| DC\_2A-5A-66A-66A\_n48B | - |
| DC\_2A-5A-66A-66A\_n48B | DC\_2A\_n48A |
| DC\_2A-5A-66A-66A\_n48B | DC\_5A\_n48A |
| DC\_2A-5A-66A-66A\_n48B | DC\_66A\_n48A |
| DC\_2A-13A-66B\_n66A | - |
| DC\_2A-13A-66B\_n66A | DC\_13A\_n66A |
| DC\_1A\_7A-28A\_n40A | DC\_1A\_n40A  DC\_7A\_n40A  DC\_28A\_n40A |
| DC\_1A\_3A-7A\_n40A | DC\_1A\_n40A  DC\_3A\_n40A  DC\_7A\_n40A |
| DC\_3A\_7A-28A\_n40A | DC\_3A\_n40A  DC\_7A\_n40A  DC\_28A\_n40A |
| DC\_1A-3A-8A\_n28A | DC\_1A\_n28A |
| DC\_1A-3A-8A\_n28A | DC\_3A\_n28A |
| DC\_1A-3A-8A\_n28A | DC\_8A\_n28A |
| DC\_1A-3A-8A\_n77(2A) | DC\_1A\_n77A |
| DC\_1A-3A-8A\_n77(2A) | DC\_3A\_n77A |
| DC\_1A-3A-8A\_n77(2A) | DC\_8A\_n77A |
| DC\_1A-8A-42A\_n28A | DC\_1A\_n28A |
| DC\_1A-8A-42A\_n28A | DC\_8A\_n28A |
| DC\_1A-8A-42A\_n28A | DC\_42A\_n28A |
| DC\_1A-8A-42C\_n28A | DC\_1A\_n28A |
| DC\_1A-8A-42C\_n28A | DC\_8A\_n28A |
| DC\_1A-8A-42C\_n28A | DC\_42A\_n28A  DC\_42C\_n28A |
| DC\_1A-8A-42A\_n77(2A) | DC\_1A\_n77A |
| DC\_1A-8A-42A\_n77(2A) | DC\_8A\_n77A |
| DC\_1A-8A-42C\_n77(2A) | DC\_1A\_n77A |
| DC\_1A-8A-42C\_n77(2A) | DC\_8A\_n77A |
| DC\_14A-30A-66A\_n66A | DC\_14A\_n66A  DC\_30A\_n66A  DC\_66A\_n66A |
| DC\_29A-30A-66A\_n66A | DC\_30A\_n66A  DC\_66A\_n66A |
| DC\_2A-14A-30A\_n66A | DC\_2A\_n66A  DC\_14A\_n66A  DC\_30A\_n66A |
| DC\_2A-14A-30A\_n2A | DC\_2A\_n2A  DC\_14A\_n2A  DC\_30A\_n2A |
| DC\_14A-30A-66A\_n2A | DC\_14A\_n2A  DC\_30A\_n2A  DC\_66A\_n2A |
| DC\_2A-14A-66A\_n30A | DC\_2A\_n30A  DC\_14A\_n30A  DC\_66A\_n30A |
| DC\_2A-2A-14A-30A\_n66A | DC\_2A\_n66A  DC\_14A\_n66A  DC\_30A\_n66A |
| DC\_2A-2A-14A-66A\_n30A | DC\_2A\_n30A  DC\_14A\_n30A  DC\_66A\_n30A |
| DC\_2A-14A-66A-66A\_n30A | DC\_2A\_n30A  DC\_14A\_n30A  DC\_66A\_n30A |
| DC\_2A-29A-66A\_n66A | DC\_2A\_n66A  DC\_66A\_n66A |
| DC\_29A-30A-66A\_n2A | DC\_30A\_n2A  DC\_66A\_n2A |
| DC\_2A-29A-30A\_n2A | DC\_2A\_n2A  DC\_30A\_n2A |
| DC\_2A-29A-66A\_n2A | DC\_2A\_n2A  DC\_66A\_n2A |
| DC\_29A-30A-66A-66A\_n2A | DC\_30A\_n2A  DC\_66A\_n2A |
| DC\_2A-29A-66A-66A\_n2A | DC\_2A\_n2A  DC\_66A\_n2A |
| DC\_2A-46E-66A\_n260M | DC\_2A\_n260M  DC\_66A\_n260M |
| DC\_2A-14A-66A\_n66A | DC\_2A\_n66A  DC\_14A\_n66A  DC\_66A\_n66A |
| 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 |
| DC\_1A-3A-41A\_n77(2A) | DC\_1A\_n77A  DC\_3A\_n77A  DC\_41A\_n77A |
| DC\_1A-3A-41C\_n77(2A) | DC\_1A\_n77A  DC\_3A\_n77A  DC\_41A\_n77A  DC\_41C\_n77A |
| DC\_1A-3A-41A\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_41A\_n78A |
| DC\_1A-3A-41C\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_41A\_n78A  DC\_41C\_n78A |
| DC\_1A-11A-18A\_n77A | DC\_1A\_n77A  DC\_11A\_n77A  DC\_18A\_n77A |
| DC\_1A-11A-18A\_n78A | DC\_1A\_n78A  DC\_11A\_n78A  DC\_18A\_n78A |
| DC\_1A-11A-18A\_n257I | DC\_1A\_n257I  DC\_11A\_n257I  DC\_18A\_n257I |
| DC\_1A-18A-41A\_n3A | DC\_18A\_n3A  DC\_41A\_n3A |
| DC\_1A-18A-41C\_n3A | DC\_18A\_n3A  DC\_41A\_n3A  DC\_41C\_n3A |
| DC\_1A-18A-41A\_n77A | DC\_18A\_n77A  DC\_41A\_n77A |
| DC\_1A-18A-41C\_n77A | DC\_18A\_n77A  DC\_41A\_n77A  DC\_41C\_n77A |
| DC\_1A-18A-41A\_n78A | DC\_18A\_n78A  DC\_41A\_n78A |
| DC\_1A-18A-41C\_n78A | DC\_18A\_n78A  DC\_41A\_n78A  DC\_41C\_n78A |
| DC\_1A-18A-41A\_n257A | DC\_18A\_n257A  DC\_41A\_n257A |
| DC\_1A-18A-41C\_n257A | DC\_18A\_n257A  DC\_41A\_n257A DC\_41C\_n257A |
| DC\_1A-18A-41A\_n257I | DC\_18A\_n257I DC\_41A\_n257I |
| DC\_1A-18A-41C\_n257I | DC\_18A\_n257I  DC\_41A\_n257I DC\_41C\_n257I |
| DC\_1A-7A-8A\_n3A | DC\_1A\_n3A  DC\_7A\_n3A  DC\_8A\_n3A |
| DC\_1A-20A\_(n)38AA | DC\_1A\_n38A  DC\_20A\_n38A |
| DC\_1A-3A-20A\_n41A | DC\_1A\_n41A  DC\_3A\_n41A  DC\_20A\_n41A |
| DC\_1A-3C-20A\_n41A | DC\_1A\_n41A  DC\_3A\_n41A  DC\_20A\_n41A |
| DC\_1A-3A-32A\_n78A | DC\_1A\_n78A  DC\_3A\_n78A |
| DC\_1A-3A-32A\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A |
| DC\_2A-46A-66A\_n41(2A) | DC\_2A\_n41A |
| DC\_2A-46A-66A\_n41(2A) | DC\_66A\_n41A |
| DC\_2A-46C-66A\_n41(2A) | DC\_2A\_n41A |
| DC\_2A-46C-66A\_n41(2A) | DC\_66A\_n41A |
| DC\_2A-46D-66A\_n41(2A) | DC\_2A\_n41A |
| DC\_2A-46D-66A\_n41(2A) | DC\_66A\_n41A |
| NOTE 1: Non-contiguous allocation is assumed for 42\_n77 and for 42\_n78 | |

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".

# 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 inter-band CA operation, for serving cell *c*.

ΔTIB,c Allowed maximum configured output power relaxation due to support for inter-band CA

FDL\_low The lowest frequency of the downlink operating band

FDL\_high The highest frequency of the downlink operating band

FUL\_low The lowest frequency of the uplink operating band

FUL\_high The highest frequency of the uplink operating band

## 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].

BS Base Station

CA Carrier Aggregation

CA\_nX-nY Inter-band CA of component carrier(s) in one sub-block within Band X and component carrier(s) in one sub-block within Band Y where X and Y are the applicable NR operating band

CC Component Carriers

DL DownLink

FDD Frequency Division Duplex

IMD Inter-modulation

MSD Maximum Sensitivity Deduction

NR New RAT

SCS Subcarrier spacing

TDD Time Division Duplex

UE User Equipment

UL UpLink

# 4 Background

The present document is a technical report for Dual Connectivity (EN-DC) of 3 LTE band (3DL/1UL) and 1 NR band (1DL/1UL) under Rel-16 time frame. It covers both the UE and BS side. The document is divided in two different parts:

- General part: this part covers BS and UE specific which is band combination independent.

- Specific band combination part: this part covers each band combination and its specific issues independently from each other (i.e. one subclause is defined per band combination)

The specific band combination parts are independent and therefore, the working speed also differs.

## 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 EN-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 mannter as specified in TS38.101-3.>

5.1 Inter-band EN-DC within FR1

## 5.1.1 DC\_1-3-18\_n77

### 5.1.1.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-18\_n77 | CA\_1-3-18 | n77 |  |

### 5.1.1.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-18A\_n77A | DC\_1A\_n77A  DC\_3A\_n77A  DC\_18A\_n77A | CA\_ 1A-3A-18A | n77 |

### 5.1.1.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18-n77 | 1 | 0.6 |
| 3 | 0.6 |
| 18 | 0.3 |
| n77 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-18-n77 | 1 | 0.2 |
| 3 | 0.2 |
| 18 | 0 |
| n77 | 0.5 |

## 5.1.2 DC\_1-3-18\_n78

### 5.1.2.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-18\_n78 | CA\_1-3-18 | n78 |  |

### 5.1.2.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-18A\_n78A | DC\_1A\_n78A  DC\_3A\_n78A  DC\_18A\_n78A | CA\_ 1A-3A-18A | n78 |

### 5.1.2.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18-n78 | 1 | 0.6 |
| 3 | 0.6 |
| 18 | 0.3 |
| n78 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-18-n78 | 1 | 0.2 |
| 3 | 0.2 |
| 18 | 0 |
| n78 | 0.5 |

## 5.1.3 DC\_1-3-18\_n79

### 5.1.3.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-18\_n79 | CA\_1-3-18 | n79 |  |

### 5.1.3.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-18A\_n79A | DC\_1A\_n79A  DC\_3A\_n79A  DC\_18A\_n79A | CA\_ 1A-3A-18A | n79 |

### 5.1.3.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-18-n79 | 1 | 0.3 |
| 3 | 0.3 |
| 18 | 0.3 |
| n79 | 0 |

Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-18-n79 | 1 | 0 |
| 3 | 0 |
| 18 | 0 |
| n79 | 0 |

## 5.1.4 DC\_1-3-41\_n77 and DC\_1-3-41\_n77(\*)

### 5.1.4.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-41\_n77 | CA\_1-3-41 | n77 |  |
| DC\_1-3-41\_n77(\*) | CA\_1-3-41 | n77 |  |

### 5.1.4.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-41A\_n77A | DC\_1A\_n77A  DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 1A-3A-41A | n77 |
| DC\_1A-3A-41C\_n77A | DC\_1A\_n77A  DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 1A-3A-41C | n77 |
| DC\_1A-3A-41A\_n77(2A) | DC\_1A\_n77A  DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 1A-3A-41A | CA\_n77(2A) |
| DC\_1A-3A-41C\_n77(2A) | DC\_1A\_n77A  DC\_3A\_n77A  DC\_41A\_n77A  DC\_41C\_n77A | CA\_ 1A-3A-41C | CA\_n77(2A) |

### 5.1.4.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41-n77 | 1 | 0.6 |
| 3 | 0.6 |
| 41 | 0.5 |
| n77 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-41-n77 | 1 | 0.2 |
| 3 | 0.2 |
| 41 | 0 |
| n77 | 0.5 |

## 5.1.5 DC\_1-3-41\_n78 and DC\_1-3-41\_n78(\*)

### 5.1.5.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-41\_n78 | CA\_1-3-41 | n78 |  |
| DC\_1-3-41\_n78(\*) | CA\_1-3-41 | n78 |  |

### 5.1.5.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-41A\_n78A | DC\_1A\_n78A  DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 1A-3A-41A | n78 |
| DC\_1A-3A-41C\_n78A | DC\_1A\_n78A  DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 1A-3A-41C | n78 |
| DC\_1A-3A-41A\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 1A-3A-41A | CA\_n78(2A) |
| DC\_1A-3A-41C\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A  DC\_41A\_n78A  DC\_41C\_n78A | CA\_ 1A-3A-41C | CA\_n78(2A) |

### 5.1.5.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41-n78 | 1 | 0.6 |
| 3 | 0.6 |
| 41 | 0.5 |
| n78 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-41-n78 | 1 | 0.2 |
| 3 | 0.2 |
| 41 | 0 |
| n78 | 0.5 |

## 5.1.6 DC\_1-3-41\_n79

### 5.1.6.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-41\_n79 | CA\_1-3-41 | n79 |  |

### 5.1.6.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-41A\_n79A | DC\_1A\_n79A  DC\_3A\_n79A  DC\_41A\_n79A | CA\_ 1A-3A-41A | n79 |
| DC\_1A-3A-41C\_n79A | DC\_1A\_n79A  DC\_3A\_n79A  DC\_41A\_n79A | CA\_ 1A-3A-41C | n79 |

### 5.1.6.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-41-n79 | 1 | 0.5 |
| 3 | 0.5 |
| 41 | 0.31/0.82 |
| n79 | 0 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-41-n79 | 1 | 0 |
| 3 | 0 |
| 41 | 01/0.52 |
| n79 | 0 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

## 5.1.7 DC\_3-41-42\_n77

### 5.1.7.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-41-42\_n77 | CA\_3-41-42 | n77 |  |

### 5.1.7.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-41A-42A\_n77A | DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 3A-41A-42A | n77 |
| DC\_3A-41C-42A\_n77A | DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 3A-41A-42A | n77 |
| DC\_3A-41A-42C\_n77A | DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 3A-41A-42A | n77 |
| DC\_3A-41C-42C\_n77A | DC\_3A\_n77A  DC\_41A\_n77A | CA\_ 3A-41A-42A | n77 |

### 5.1.7.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-41-42-n77 | 3 | 1 |
| 41 | 0.31/0.82 |
| 42 | 0.8 |
| n77 | 0.8 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-41-42-n77 | 3 | 0.5 |
| 41 | 01/0.52 |
| 42 | 0.5 |
| n77 | 0.5 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

## 5.1.8 DC\_3-41-42\_n78

### 5.1.8.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-41-42\_n78 | CA\_3-41-42 | n78 |  |

### 5.1.8.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-41A-42A\_n78A | DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 3A-41A-42A | n78 |
| DC\_3A-41C-42A\_n78A | DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 3A-41A-42A | n78 |
| DC\_3A-41A-42C\_n78A | DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 3A-41A-42A | n78 |
| DC\_3A-41C-42C\_n78A | DC\_3A\_n78A  DC\_41A\_n78A | CA\_ 3A-41A-42A | n78 |

### 5.1.8.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-41-42-n78 | 3 | 1 |
| 41 | 0.31/0.82 |
| 42 | 0.8 |
| n78 | 0.8 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-41-42-n78 | 3 | 0.5 |
| 41 | 01/0.52 |
| 42 | 0.5 |
| n78 | 0.5 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

## 5.1.9 DC\_3-41-42\_n79

### 5.1.9.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-41-42\_n79 | CA\_3-41-42 | n79 |  |

### 5.1.9.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-41A-42A\_n79A | DC\_3A\_n79A  DC\_41A\_n79A | CA\_ 3A-41A-42A | n79 |
| DC\_3A-41C-42A\_n79A | DC\_3A\_n79A  DC\_41A\_n79A | CA\_ 3A-41A-42A | n79 |
| DC\_3A-41A-42C\_n79A | DC\_3A\_n79A  DC\_41A\_n79A | CA\_ 3A-41A-42A | n79 |
| DC\_3A-41C-42C\_n79A | DC\_3A\_n79A  DC\_41A\_n79A | CA\_ 3A-41A-42A | n79 |

### 5.1.9.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-41-42-n79 | 3 | 1 |
| 41 | 0.31/0.82 |
| 42 | 0.8 |
| n79 | 0 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-41-42-n79 | 3 | 0.5 |
| 41 | 01/0.52 |
| 42 | 0.5 |
| n79 | 0 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

5.1.10 DC\_1-3-7\_n78

5.1.10.1 Operating bands for DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-7\_n78 | CA\_1-3-7 | n78 | DC\_3\_n78 |

5.1.10.2 Channel bandwidths per operating band for DC

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

| EN-DC configuration | Uplink EN-DC configuration | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-7C\_n78A | DC\_1A\_n78A DC\_3A\_n78A DC\_7A\_n78A DC\_7C\_n78A | CA\_ 1A-3A-7C | n78 |
| DC\_1A-3C-7C\_n78A | DC\_1A\_n78A DC\_3A\_n78A DC\_3C\_n78A DC\_7A\_n78A DC\_7C\_n78A | CA\_ 1A-3C-7C | n78 |
| DC\_1A-3A-7A\_n78(2A) | DC\_1A\_n78A DC\_3A\_n78A DC\_7A\_n78A | CA\_ 1A-3A-7A | n78(2A) |
| DC\_1A-3C-7A\_n78(2A) | DC\_1A\_n78A DC\_3A\_n78A DC\_3C\_n78A DC\_7A\_n78A | CA\_ 1A-3C-7A | n78(2A) |
| DC\_1A-3A-7C\_n78(2A) | DC\_1A\_n78A DC\_3A\_n78A DC\_7A\_n78A DC\_7C\_n78A | CA\_ 1A-3A-7C | n78(2A) |
| DC\_1A-3C-7C\_n78(2A) | DC\_1A\_n78A DC\_3A\_n78A DC\_3C\_n78A DC\_7A\_n78A DC\_7C\_n78A | CA\_ 1A-3C-7C | n78(2A) |

5.1.10.3 Co-existence studies

Co-existence was studied for DC\_1A-3A-7A\_n78A in Rel-15 and the results are captured in 37.863-03-01. No further studies are needed for DC\_1-3-7\_n78.

5.1.10.4 ∆TIB and ∆RIB values

For DC\_1-3-7\_n78 the ΔTIB,c and ΔRIB values are same as DC\_1A-3A-7A\_n78A given in the tables below.

**Table 5.1.10.4-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n78 | 1 | 0.7 |
| 3 | 0.7 |
| 7 | 0.7 |
| n78 | 0.8 |

**Table 5.1.10.4-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n78 | 1 | 0.3 |
| 3 | 0.3 |
| 7 | 0.3 |
| n78 | 0.5 |

5.1.10.5 REFSENS

No additional MSD requirements need to be defined for these dual connectivity configurations.

5.1.11 DC\_2A-66A-(n)71AA

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 | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-66\_(n)71 | CA\_2-66-71 | n71 | No1 |
| NOTE 1: For UE(s) supporting dynamic power sharing it is mandatory to do dual simultaneous UL. For UE(s) not supporting dynamic power sharing single UL is allowed. | | | |

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 configuration |
| --- | --- | --- | --- |
| DC\_2A-66A-(n)71AA | DC\_2A\_n71A  DC\_66A\_n71A | CA\_2A-66A\_71A | n71A |

5.1.11.3 ∆TIB and ∆RIB values

∆TIB and ∆RIB values for DC\_2\_66\_n71 are already specified in TS 38.101-3.

5.1.11.4 REFSENS requirements

REFSENS exceptions needed for DC\_2A-(n)71AA 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. Impact of contiguous intraband EN-DC operation on band 71 on REFSENS is already specified in Table 7.3B.2.1-1 of TS 38.101-3.

5.1.12 DC\_1-5-41\_n79

5.1.12.1 Operating bands for EN-DC

Table 5.1.12.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-5-41\_n79 | CA\_1-5-41 | n79 | No |

5.1.12.2 Configurations for EN-DC

Table 5.1.12.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-5A-41A\_n79A | DC\_1A\_n79A  DC\_5A\_n79A  DC\_41A\_n79A | CA\_1A-5A-41A | n79A |

5.1.12.3 ∆TIB and ∆RIB values

For DC\_1A-5A-41A\_n79A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.12.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-5-41\_n79 | 1 | 0.5 |
| 5 | 0.3 |
| 41 | 0.5 |
| n79 | 0 |

Table 5.1.12.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-5-41\_n79 | 1 | 0 |
| 5 | 0 |
| 41 | 0 |
| n79 | 0 |

5.1.12.4 REFSENS requirements

Co-existence study for DC\_1-5-41\_n79 was covered by the studies for the fallback modes of DC\_1-5\_n79, DC\_1-41\_n79 and DC\_5-41\_n79.

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

5.1.13 DC\_3-5-41\_n79

5.1.13.1 Operating bands for EN-DC

Table 5.1.13.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-5-41\_n79 | CA\_3-5-41 | n79 | No |

5.1.13.2 Configurations for EN-DC

Table 5.1.13.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-5A-41A\_n79A | DC\_3A\_n79A  DC\_5A\_n79A  DC\_41A\_n79A | CA\_3A-5A-41A | n79A |

5.1.13.3 ∆TIB and ∆RIB values

For DC\_3A-5A-41A\_n79A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.13.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-5-41\_n79 | 3 | 0.5 |
| 5 | 0.33 |
| 41 | 0.31 |
| 0.82 |
| n79 | 0 |
| NOTE 1: The requirement is specified for the frequency range of 2545-2690MHz.  NOTE 2: The requirement is specified for the frequency range of 2496-2545MHz.  NOTE 3: The values in the table reflect what can be achieved with the present state of the art technology. They shall be reconsidered when the state of the art technology progresses. | | |

Table 5.1.13.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-5-41\_n79 | 3 | 0 |
| 5 | 0 |
| 41 | 01 |
| 0.52 |
| n79 | 0 |
| NOTE 1: The requirement is specified for the frequency range of 2545-2690MHz.  NOTE 2: The requirement is specified for the frequency range of 2496-2545MHz. | | |

5.1.13.4 REFSENS requirements

Co-existence study for DC\_3-5-41\_n79 was covered by the studies for the fallback modes of DC\_3-5\_n79, DC\_3-41\_n79 and DC\_5-41\_n79.

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

5.1.14 DC\_1-3-5\_n79

5.1.14.1 Operating bands for EN-DC

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

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-5\_n79 | CA\_1-3-5 | n79 | No |

5.1.14.2 Configurations for EN-DC

Table 5.1.14.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-5A\_n79A | DC\_1A\_n79A  DC\_3A\_n79A  DC\_5A\_n79A | CA\_1A-3A-5A | n79A |

5.1.14.3 ∆TIB and ∆RIB values

For DC\_1A-3A-5A\_n79A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.14.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-5\_n79 | 1 | 0.3 |
| 3 | 0.3 |
| 5 | 0.3 |
| n79 | 0 |

Table 5.1.14.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-5\_n79 | 1 | 0 |
| 3 | 0 |
| 5 | 0 |
| n79 | 0 |

5.1.14.4 REFSENS requirements

Co-existence study for DC\_1-3-5\_n79 was covered by the studies for the fallback modes of DC\_1-3\_n79, DC\_1-5\_n79 and DC\_3-5\_n79.

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

## 5.1.15 DC\_1-18-42\_n78

### 5.1.15.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-42\_n78 | CA\_1-18-42 | n78 | no |

### 5.1.15.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-18A-42A\_n78A | DC\_1A\_n78A  DC\_18A\_n78A | CA\_ 1A-18A-42A | n78 |
| DC\_1A-18A-42C\_n78A | DC\_1A\_n78A  DC\_18A\_n78A | CA\_ 1A-18A-42C | n78 |

### 5.1.15.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-42\_n78 | 1 | 0.3 |
| 18 | 0.3 |
| 42 | 0.8 |
| n78 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-18-42\_n78 | 1 | 0 |
| 18 | 0 |
| 42 | 0.5 |
| n78 | 0.5 |

## 5.1.16 DC\_3-18-42\_n78

### 5.1.16.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-18-42\_n78 | CA\_3-18-42 | n78 |  |

### 5.1.16.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-18A-42A\_n78A | DC\_3A\_n78A  DC\_18A\_n78A | CA\_ 3A-18A-42A | n78 |
| DC\_3A-18A-42C\_n78A | DC\_3A\_n78A  DC\_18A\_n78A | CA\_ 3A-18A-42C | n78 |

### 5.1.16.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-18-42\_n78 | 3 | 0.3 |
| 18 | 0.3 |
| 42 | 0.8 |
| n78 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-18-42\_n78 | 3 | 0 |
| 18 | 0 |
| 42 | 0.5 |
| n78 | 0.5 |

## 5.1.17 DC\_1-8-20\_n78

5.1.17.1 Operating bands for DC\_1-8-20\_n78

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-8-20\_n781 | CA\_1-8-20 | n78 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.17.2 Configurations for DC\_1-8-20\_n78

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-8A-20A\_n78A | DC\_1A\_n78A  DC\_8A\_n78A  DC\_20A\_n78A | CA 1A-8A-20A | n78 |

5.1.17.3 Co-existence Studies

Co-existence studies of this 4DL/2UL DC configuration are already covered in the constituent fall-back modes. Therefore, no additional studies are needed.

5.1.17.4 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-20\_n78A | 1 | 0.3 |
| 8 | 0.6 |
| 20 | 0.6 |
| n78 | 0.8 |

Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-20\_n78A | 8 | 0.2 |
| n78 | 0.5 |

5.1.17.5 REFSENS requirements

REFSENS requirements of this 4DL/2UL DC configuration are already covered by constituent fall-back modes. Therefore, no additional REFSENS requirements are needed.

## 5.1.18 DC\_3-8-20\_n78

5.1.18.1 Operating bands for DC\_3-8-20\_n78

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-8-20\_n781 | CA\_1-8-20 | n78 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.18.2 Configurations for DC\_3-8-20\_n78

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-8A-20A\_n78A | DC\_3A\_n78A  DC\_8A\_n78A  DC\_20A\_n78A | CA 3A-8A-20A | n78 |

5.1.18.3 Co-existence Studies

Co-existence studies of this 4DL/2UL DC configuration are already covered in the constituent fall-back modes. Therefore, no additional studies are needed.

5.1.18.4 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-20\_n78A | 3 | 0.6 |
| 8 | 0.6 |
| 20 | 0.6 |
| n78 | 0.8 |

Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-20\_n78A | 3 | 0.2 |
| 8 | 0.2 |
| n78 | 0.5 |

5.1.18.5 REFSENS requirements

REFSENS requirements of this 4DL/2UL DC configuration are already covered by constituent fall-back modes. Therefore, no additional REFSENS requirements are needed.

## 5.1.19 DC\_3-18-42\_n79

### 5.1.19.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-18-42\_n79 | CA\_3-18-42 | n79 | No |

### 5.1.19.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-18A-42A\_n79A | DC\_3A\_n79A  DC\_18A\_n79A | CA\_ 3A-18A-42A | n79 |
| DC\_3A-18A-42C\_n79A | DC\_3A\_n79A  DC\_18A\_n79A | CA\_ 3A-18A-42C | n79 |

### 5.1.19.3 ∆TIB and ∆RIB values

The same values of DC\_3-19-42\_n79 can be applied.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-18-42\_n79 | 3 | 0.6 |
| 18 | 0.3 |
| 42 | 0.8 |
| n79 | 0 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-18-42\_n79 | 3 | 0.2 |
| 18 | 0 |
| 42 | 0.5 |
| n79 | 0 |

## 5.1.20 DC\_3-18-42\_n77

### 5.1.20.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-18-42\_n77 | CA\_3-18-42 | n77 | DC\_3\_n77 |

### 5.1.20.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-18A-42A\_n77A | DC\_3A\_n77A  DC\_18A\_n77A | CA\_ 3A-18A-42A | n77 |
| DC\_3A-18A-42C\_n77A | DC\_3A\_n77A  DC\_18A\_n77A | CA\_ 3A-18A-42C | n77 |

### 5.1.20.3 ∆TIB and ∆RIB values

The same values of DC\_3-18-42\_n78 can be applied.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-18-42\_n77 | 3 | 0.3 |
| 18 | 0.3 |
| 42 | 0.8 |
| n77 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-18-42\_n77 | 3 | 0 |
| 18 | 0 |
| 42 | 0.5 |
| n77 | 0.5 |

## 5.1.21 DC\_1-18-42\_n79

### 5.1.21.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-42\_n79 | CA\_1-18-42 | n79 | No |

### 5.1.21.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-18A-42A\_n79A | DC\_1A\_n79A  DC\_18A\_n79A | CA\_ 1A-18A-42A | n79 |
| DC\_1A-18A-42C\_n79A | DC\_1A\_n79A  DC\_18A\_n79A | CA\_ 1A-18A-42C | n79 |

### 5.1.21.3 ∆TIB and ∆RIB values

The same values of DC\_1-19-42\_n79 can be applied.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-42\_n79 | 1 | 0.3 |
| 18 | 0.3 |
| 42 | 0.8 |
| n79 | 0 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-18-42\_n79 | 1 | 0 |
| 18 | 0 |
| 42 | 0.5 |
| n79 | 0 |

## 5.1.22 DC\_1-18-42\_n77

### 5.1.22.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-42\_n77 | CA\_1-18-42 | n77 | DC\_1\_n77 |

### 5.1.22.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-18A-42A\_n77A | DC\_1A\_n77A  DC\_18A\_n77A | CA\_ 1A-18A-42A | n77 |
| DC\_1A-18A-42C\_n77A | DC\_1A\_n77A  DC\_18A\_n77A | CA\_ 1A-18A-42C | n77 |

### 5.1.22.3 ∆TIB and ∆RIB values

The same values of DC\_1-18-42\_n78 can be applied.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-42\_n77 | 1 | 0.3 |
| 18 | 0.3 |
| 42 | 0.8 |
| n77 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-18-42\_n77 | 1 | 0 |
| 18 | 0 |
| 42 | 0.5 |
| n77 | 0.5 |

## 5.1.23 DC\_1A-3C-28A\_n78A\_BCS0

### 5.1.23.1 Operating bands for DC

**Table 5.1.23.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-28\_n781 | CA\_1-3-28 | n78 | DC\_3\_n78 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

### 5.1.23.2 Configuration for DC

**Table 5.1.23.2-1: Inter-band EN-DC configurations of 1 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3C-28A\_n78A | DC\_1A\_n78A  DC\_3A\_n78A  DC\_28A\_n78A | CA\_1A-3C-28A | n78A |

### 5.1.23.3 ∆TIB and ∆RIB values

For DC\_1-3-28\_n78 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.23.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n78 | 1 | 0.6 |
| 3 | 0.6 |
| 28 | 0.6 |
| n78 | 0.8 |

**Table 5.1.23.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n78 | 1 | 0.2 |
| 3 | 0.2 |
| 28 | 0.2 |
| n78 | 0.5 |

5.1.23.4 REFSENS requirements

No further MSD are needed to be specified for DC\_1A-3C-28A\_n78A.

## 5.1.24 DC\_1A-7A-28A\_n78A\_BCS0 DC\_1A-7C-28A\_n78A\_BCS0

## 5.1.24.1 Operating bands for DC

**Table 5.1.24.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-28\_n781 | CA\_1-7-28 | n78 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.24.2 Configuration for DC

**Table 5.1.24.2-1: Inter-band EN-DC configurations of 1 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-7A-28A\_n78A  DC\_1A-7C-28A\_n78A | DC\_1A\_n78A  DC\_7A\_n78A  DC\_7C\_n78A  DC\_28A\_n78A | CA\_1A-7A-28A  CA\_1A-7C-28A | n78A |

5.1.24.3 ∆TIB and ∆RIB values

For DC\_1-7-28\_n78 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.24.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n78 | 1 | 0.6 |
| 7 | 0.6 |
| 28 | 0.6 |
| n78 | 0.8 |

**Table 5.1.24.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n78 | 1 | 0.2 |
| 7 | 0.2 |
| 28 | 0.2 |
| n78 | 0.5 |

5.1.24.4 REFSENS requirements

No further MSD are needed to be specified for DC\_1A-7A-28A\_n78A or DC\_1A-7C-28A\_n78A.

## 5.1.25 DC\_1A-3C-8A\_n78A

5.1.25.1 Operating bands for DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-8\_n78 | CA\_1-3-8 | N78 | DC\_3\_n78 |

5.1.25.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3C-8A\_n78A | DC\_1A\_n78A  DC\_3A\_n78A  DC\_8A\_n78A | CA\_1A-3C-8A | n78 |

### 5.1.25.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1A-3C-8A-n78A | 1 | 0.6 |
| 3 | 0.6 |
| 8 | 0.6 |
| n78 | 0.8 |

Table 7.3B.3.3.3-1: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1A-3C-8A-n78A | 1 | 0.2 |
| 3 | 0.2 |
| 8 | 0.2 |
| n78 | 0.5 |

## 5.1.26 DC\_3C-7A-28A\_n78A\_BCS0 DC\_3C-7C-28A\_n78A\_BCS0

## 5.1.26.1 Operating bands for DC

**Table 5.1.26.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-28\_n781 | CA\_3-7-28 | n78 | DC\_3\_n78 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.26.2 Configuration for DC

**Table 5.1.26.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3C-7A-28A\_n78A | DC\_3A\_n78A  DC\_7A\_n78A  DC\_28A\_n78A | CA\_3C-7A-28A | n78A |
| DC\_3C-7C-28A\_n78A | DC\_3A\_n78A  DC\_7A\_n78A  DC\_28A\_n78A | CA\_3C-7C-28A | n78A |

5.1.26.3 ∆TIB and ∆RIB values

For DC\_3-7-28\_n78 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.26.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n78 | 3 | 0.6 |
| 7 | 0.6 |
| 28 | 0.6 |
| n78 | 0.8 |

**Table 5.1.26.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n78 | 3 | 0.2 |
| 7 | 0.2 |
| 28 | 0.2 |
| n78 | 0.5 |

5.1.26.4 REFSENS requirements

No further MSD are needed to be specified for DC\_3C-7A-28A\_n78A, DC\_3C-7C-28A\_n78A.

## 5.1.27 DC\_1-3-8\_n77

5.1.27.1 Operating bands for EN-DC

Table 5.1.27.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-8\_n77 | CA\_1-3-8 | n77 | DC\_1\_n77  DC\_3\_n77 |

5.1.27.2 Configurations for EN-DC

Table 5.1.27.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-8A\_n77A | DC\_1A\_n77A  DC\_3A\_n77A  DC\_8A\_n77A | CA\_1A-3A-8A | n77A |

5.1.27.3 ∆TIB and ∆RIB values

For DC\_1A-3A-8A\_n77A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.27.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-8\_n77 | 1 | 0.6 |
| 3 | 0.6 |
| 8 | 0.6 |
| n77 | 0.8 |

Table 5.1.27.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-8\_n77 | 1 | 0.2 |
| 3 | 0.2 |
| 8 | 0.2 |
| n77 | 0.5 |

5.1.27.4 REFSENS requirements

Co-existence study for DC\_1-3-8\_n77 was covered by the studies for the fallback modes of DC\_1-3\_n77, DC\_1-8\_n77 and DC\_3-8\_n77.

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

## 5.1.28 DC\_1-3-8\_n79

5.1.28.1 Operating bands for EN-DC

Table 5.1.28.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-8\_n79 | CA\_1-3-8 | n79 |  |

5.1.28.2 Configurations for EN-DC

Table 5.1.28.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  Configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-8A\_n79A | DC\_1A\_n79A  DC\_3A\_n79A  DC\_8A\_n79A | CA\_1A-3A-8A | n79A |

5.1.28.3 ∆TIB and ∆RIB values

For DC\_1A-3A-8A\_n79A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.28.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-8\_n79 | 1 | 0.3 |
| 3 | 0.3 |
| 8 | 0.3 |
| n79 | 0 |

Table 5.1.28.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-8\_n79 | 1 | 0 |
| 3 | 0 |
| 8 | 0 |
| n79 | 0 |

5.1.28.4 REFSENS requirements

Co-existence study for DC\_1-3-8\_n79 was covered by the studies for the fallback modes of DC\_1-3\_n79, DC\_1-8\_n79 and DC\_3-8\_n79.

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

## 5.29 DC\_2A-30A-66A\_n5A, DC\_2A-2A-30A-66A\_n5A and DC\_2A-30A-66A-66A\_n5A

## 5.1.29.1 Operating bands for DC

Table 5.1.29.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-30-66\_n5 | CA\_2-30-66 | n5 | No |

5.1.29.2 Configuration for DC

Table 5.1.29.2-1: Inter-band EN-DC configurations (four bands)

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-30A-66A\_n5A | DC\_2A\_n5A  DC\_30A\_n5A  DC\_66A\_n5A | CA\_2A-30A-66A | n5A |
| DC\_2A-2A-30A-66A\_n5A | DC\_2A\_n5A  DC\_30A\_n5A  DC\_66A\_n5A | CA\_2A-2A-30A-66A | n5A |
| DC\_2A-30A-66A-66A\_n5A | DC\_2A\_n5A  DC\_30A\_n5A  DC\_66A\_n5A | CA\_2A-30A-66A-66A | n5A |

### 5.1.29.3 Coexistence studies

Based on co-existence studies of DC\_66A\_n5A in TR 37.863-01-01, the 2nd and 5th IMD of 66+n5 may fall into the band n5 downlink and Pcell REFSENS excpetions can be represented by the REFSENS expcetion already specified for DC\_66A-n5A.

Based on co-existence studies of DC\_30A\_n5A in TR 37.863-01-01, 5th IMD product of 30+n5 may fall into band 66 downlink.

Co-existence studies for DC\_2A\_n5A is also available in TR 37.863-01-01. For this 4th IMD product of 2+n5 may fall into band 66 downlink.

### 5.1.29.4 ∆TIB and ∆RIB values

The ΔTIB,c and ΔRIB,c values are derived from CA\_2-5-30-66 in TS 36.101.

Table 5.1.29.4-1: ΔTIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2A-30A-66A\_n5A,  DC\_2A-2A-30A-66A\_n5A,  DC\_2A-30A-66A-66A\_n5A | 2 | 0.5 |
| 30 | 0.3 |
| 66 | 0.5 |
| n5 | 0.3 |

Table 5.1.29.4-2: ΔRIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2A-30A-66A\_n5A,  DC\_2A-2A-30A-66A\_n5A,  DC\_2A-30A-66A-66A\_n5A | 2 | 0.4 |
| 30 | 0.5 |
| 66 | 0.4 |
| n5 | 0 |

### 5.1.29.5 Refsens requirements

No further refsens requirements are needed as this is covered by lower order combinations.

## 5.1.30 DC\_1A-3A-7A\_n5A\_BCS0 DC\_1A-3C-7A\_n5A\_BCS0 DC\_1A-3A-7C\_n5A\_BCS0 DC\_1A-3C-7C\_n5A\_BCS0

### 5.1.30.1 Operating bands for DC

**Table 5.1.30.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-7\_n51 | CA\_1-3-7 | n5 | DC\_3\_n5  DC\_7\_n5 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

### 5.1.30.2 Configuration for DC

**Table 5.1.30.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-7A\_n5A | DC\_1A\_n5A  DC\_3A\_n5A  DC\_7A\_n5A | CA\_1A-3A-7A | n5A |
| DC\_1A-3C-7A\_n5A | DC\_1A\_n5A  DC\_3A\_n5A  DC\_3C\_n5A  DC\_7A\_n5A | CA\_1A-3C-7A | n5A |
| DC\_1A-3A-7C\_n5A | DC\_1A\_n5A  DC\_3A\_n5A  DC\_7A\_n5A  DC\_7C\_n5A | CA\_1A-3A-7C | n5A |
| DC\_1A-3C-7C\_n5A | DC\_1A\_n5A  DC\_3A\_n5A  DC\_3C\_n5A  DC\_7A\_**n5**A  DC\_7C\_n5A | CA\_1A-3C-7C | n5A |

### 5.1.30.3 ∆TIB and ∆RIB values

For DC\_1-3-7\_n5 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.30.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n5 | 1 | 0.6 |
| 3 | 0.6 |
| 7 | 0.6 |
| n5 | 0.3 |

**Table 5.1.30.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n5 | 1 | 0 |
| 3 | 0 |
| 7 | 0 |
| n5 | 0 |

### 5.1.30.4 REFSENS requirements

No further MSD are needed to be specified for DC\_1A-3A-7A\_n5A, DC\_1A-3C-7A\_n5A, DC\_1A-3A-7C\_n5A and DC\_1A-3C-7C\_n5A.

## 5.1.31 DC\_1A-3A-28A\_n5A\_BCS0 DC\_1A-3C-28A\_n5A\_BCS0

### 5.1.31.1 Operating bands for DC

**Table 5.1.31.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-28\_n51 | CA\_1-3-28 | n5 | DC\_3\_n5 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

### 5.1.31.2 Configuration for DC

**Table 5.1.31.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-28A\_n5A | DC\_1A\_n5A  DC\_3A\_n5A  DC\_28A\_n5A | CA\_1A-3A-28A | n5A |
| DC\_1A-3C-28A\_n5A | DC\_1A\_n5A  DC\_3A\_n5A  DC\_3C\_n5A  DC\_28A\_n5A | CA\_1A-3C-28A | n5A |

### 5.1.31.3 ∆TIB and ∆RIB values

For DC\_1-3-28\_n5 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.31.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n5 | 1 | 0.3 |
| 3 | 0.3 |
| 28 | 0.6 |
| n5 | 0.6 |

**Table 5.1.31.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n5 | 1 | 0 |
| 3 | 0 |
| 28 | 0.2 |
| n5 | 0.2 |

### 5.1.31.4 REFSENS requirements

No further MSD are needed to be specified for DC\_1A-3A-28A\_n5A and DC\_1A-3C-28A\_n5A.

## 5.1.32 DC\_1A-7A-28A\_n5A\_BCS0 DC\_1A-7C-28A\_n5A\_BCS0

### 5.1.32.1 Operating bands for DC

**Table 5.1.32.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-28\_n51 | CA\_1-7-28 | n5 | DC\_7\_n5 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

### 5.1.32.2 Configuration for DC

**Table 5.1.32.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-7A-28A\_n5A | DC\_1A\_n5A  DC\_7A\_n5A  DC\_28A\_n5A | CA\_1A-7A-28A | n5A |
| DC\_1A-7C-28A\_n5A | DC\_1A\_n5A  DC\_7A\_n5A  DC\_7C\_n5A  DC\_28A\_n5A | CA\_1A-7C-28A | n5A |

### 5.1.32.3 ∆TIB and ∆RIB values

For DC\_1-7-28\_n5 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.32.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n5 | 1 | 0.3 |
| 7 | 0.3 |
| 28 | 0.6 |
| n5 | 0.6 |

**Table 5.1.32.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n5 | 1 | 0 |
| 7 | 0 |
| 28 | 0.2 |
| n5 | 0.2 |

### 5.1.32.4 REFSENS requirements

No further MSD are needed to be specified for DC\_1A-7A-28A\_n5A and DC\_1A-7C-28A\_n5A.

## 5.1.33 DC\_3A-7A-28A\_n5A\_BCS0 DC\_3C-7A-28A\_n5A\_BCS0 DC\_3A-7C-28A\_n5A\_BCS0 DC\_3C-7C-28A\_n5A\_BCS0

### 5.1.33.1 Operating bands for DC

**Table 5.1.33.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-28\_n51 | CA\_3-7-28 | n5 | DC\_3\_n5  DC\_7\_n5 |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

### 5.1.33.2 Configuration for DC

**Table 5.1.33.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-7A-28A\_n5A | DC\_3A\_n5A  DC\_7A\_n5A  DC\_28A\_n5A | CA\_3A-7A-28A | n5A |
| DC\_3C-7A-28A\_n5A | DC\_3A\_n5A  DC\_3C\_n5A  DC\_7A\_n5A  DC\_28A\_n5A | CA\_3C-7A-28A | n5A |
| DC\_3A-7C-28A\_n5A | DC\_3A\_n5A  DC\_7A\_n5A  DC\_7C\_n5A  DC\_28A\_n5A | CA\_3A-7C-28A | n5A |
| DC\_3C-7C-28A\_n5A | DC\_3A\_n5A  DC\_3C\_n5A  DC\_7A\_n5A  DC\_7C\_n5A  DC\_28A\_n5A | CA\_3C-7C-28A | n5A |

### 5.1.33.3 ∆TIB and ∆RIB values

For DC\_3-7-28\_n5 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.33.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n5 | 3 | 0.5 |
| 7 | 0.5 |
| 28 | 0.4 |
| n5 | 0.4 |

**Table 5.1.33.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n5 | 3 | 0 |
| 7 | 0 |
| 28 | 0 |
| n5 | 0 |

### 5.1.33.4 REFSENS requirements

No further MSD are needed to be specified for DC\_3A-7A-28A\_n5A, DC\_3C-7A-28A\_n5A, DC\_3A-7C-28A\_n5A and DC\_3C-7C-28A\_n5A.

## 5.1.34 DC\_1-8-11\_n77

### 5.1.34.1 Operating bands for EN-DC

Table 5.1.34.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-8-11\_n77 | CA\_1-8-11 | n77 | DC\_1\_n77 |

### 5.1.34.2 Configurations for EN-DC

Table 5.1.34.2-1: 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\_n77A | DC\_1A\_n77A  DC\_8A\_n77A  DC\_11A\_n77A | CA\_1A-8A-11A | n77A |

### 5.1.34.3 ∆TIB and ∆RIB values

For DC\_1A-8A-11A\_n77A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.34.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n77 | 1 | 0.6 |
| 8 | 0.6 |
| 11 | 0.4 |
| n77 | 0.8 |

Table 5.1.34.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n77 | 1 | 0.2 |
| 8 | 0.2 |
| 11 | 0 |
| n77 | 0.5 |

### 5.1.34.4 REFSENS requirements

Co-existence study for DC\_1-8-11\_n77 was covered by the studies for the fallback modes of DC\_1-8\_n77, DC\_1-11\_n77 and DC\_8-11\_n77.

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

## 5.1.35 DC\_1-8-11\_n78

### 5.1.35.1 Operating bands for EN-DC

Table 5.1.35.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-8-11\_n78 | CA\_1-8-11 | n78 | DC\_1\_n78 |

### 5.1.35.2 Configurations for EN-DC

Table 5.1.35.2-1: 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\_n78A | DC\_1A\_n78A  DC\_8A\_n78A  DC\_11A\_n78A | CA\_1A-8A-11A | n78A |

### 5.1.35.3 ∆TIB and ∆RIB values

For DC\_1A-8A-11A\_n77A, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.35.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n78 | 1 | 0.3 |
| 8 | 0.6 |
| 11 | 0.4 |
| n78 | 0.8 |

Table 5.1.35.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-11\_n78 | 1 | 0 |
| 8 | 0.2 |
| 11 | 0 |
| n78 | 0.5 |

### 5.1.35.4 REFSENS requirements

Co-existence study for DC\_1-8-11\_n78 was covered by the studies for the fallback modes of DC\_1-8\_n78, DC\_1-11\_n78 and DC\_8-11\_n78.

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

## 5.1.36 DC\_3-7-8\_n78, DC\_3-3-7-8\_n78, DC\_3-7-7-8\_n78, DC\_3-3-7-7-8\_n78

### 5.1.36.1 Operating bands for DC

**Table 5.1.36.1-1: Band combinations EN-DC (three bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-8\_n78 | CA\_3-7-8 | n78 | DC\_3\_n78 |
| DC\_3-3-7-8\_n78 | CA\_3-3-7-8 | n78 | DC\_3\_n78 |
| DC\_3-7-7-8\_n78 | CA\_3-7-7-8 | n78 | DC\_3\_n78 |
| DC\_3-3-7-7-8\_n78 | CA\_3-3-7-7-8 | n78 | DC\_3\_n78 |

### 5.1.36.2 Configuration for DC

**Table 5.1.36.2-1: Inter-band EN-DC configurations (three bands)**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-7A-8A\_n78A | DC\_3A\_n78A,  DC\_7A\_n78A,  DC\_8A\_n78A | CA\_3A-7A-8A | n78A |
| DC\_3A-3A-7A-8A\_n78A | DC\_3A\_n78A,  DC\_7A\_n78A,  DC\_8A\_n78A | CA\_3A-3A-7A-8A | n78A |
| DC\_3A-7A-7A-8A\_n78A | DC\_3A\_n78A,  DC\_7A\_n78A,  DC\_8A\_n78A | CA\_3A-7A-7A-8A | n78A |
| DC\_3A-3A-7A-7A-8A\_n78A | DC\_3A\_n78A,  DC\_7A\_n78A,  DC\_8A\_n78A | CA\_3A-3A-7A-7A-8A | n78A |

### 5.1.36.3 Co-existence Studies

Based on co-existence studies of DC\_3\_n78, DC\_7\_n78 and DC\_8\_n78, as captured in TR 37.716-11-11 and TR 37.863-01-01, own Rx impact on the 3rd band are the following:

- 2nd and 5th order IM generated by dual uplink of Band 7 and n78 may fall into Band 8

- 3rd and 4th order IM generated by dual uplink of Band 7 and n78 may fall into Band 3

- 2nd order IM generated by dual uplink of Band 8 and n78 may fall into Band 7

- 3rd order IM generated by dual uplink of Band 8 and n78 may fall into Band 3

However, those issues were already been covered by the constituent low order combinations, including DC\_3-7\_n78, DC\_3-8\_n78, DC\_7-8\_n78 combinations.

### 5.1.36.4 ∆TIB and ∆RIB values

For DC\_3-7-8\_n78, DC\_3-3-7-8\_n78, DC\_3-7-7-8\_n78 and DC\_3-3-7-7-8\_n78 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.36.4-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n78  DC\_3-3-7-8\_n78  DC\_3-7-7-8\_n78  DC\_3-3-7-7-8\_n78 | 3 | 0.6 |
| 7 | 0.6 |
| 8 | 0.6 |
| n78 | 0.8 |

**Table 5.1.36.4-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n78  DC\_3-3-7-8\_n78  DC\_3-7-7-8\_n78  DC\_3-3-7-7-8\_n78 | 3 | 0.2 |
| 7 | 0.2 |
| 8 | 0.2 |
| n78 | 0.5 |

### 5.1.36.5 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.37 DC\_2-7-66\_n66, DC\_2-7-7-66\_n66

### 5.1.37.1 Operating bands for DC

Table 5.1.37.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-7-66\_n66 | CA\_2-7-66 | n66 |  |
| DC\_2-7-7-66\_n66 | CA\_2-7-7-66 | n66 |  |

### 5.1.37.2 Configurations for DC

Table 5.1.37.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-7A-66A\_n66A  DC\_2A-7C-66A\_n66A  DC\_2A-7A-7A-66A\_n66A | DC\_2A\_n66A1  DC\_7A\_n66A  DC\_66A\_n66A2 | CA\_2A-7A-66A  CA\_2A-7C-66A  CA\_2A-7A-7A-66A | n66A |
| NOTE1: Single UL is allowed  NOTE2: Only single switched UL is supported | | | |

### 5.1.37.3 Coexistence study

Co-existence studies of this 4DL/2UL DC configuration are already covered in the constituent fall-back modes. Therefore, no additional studies are needed.

### 5.1.37.4 ∆TIB and ∆RIB values

DC\_2-7-66\_n66 and DC\_2-7-7-66\_n66 could reuse the ΔTIB,c and ΔRIB,c values of CA\_2A-7A-66A-66A as given in below tables.

Table 5.1.37.4-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n66  DC\_2-7-7-66\_n66 | 2 | 0.5 |
| 7 | 0.5 |
| 66 | 0.5 |
| n66 | 0.5 |

Table 5.1.37.4-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n66  DC\_2-7-7-66\_n66 | 2 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n66 | 0.5 |

### 5.1.37.5 REFSENS requirements

There is no additional requirement for this band combination.

## 5.1.38 DC\_2-7-66\_n78

### 5.1.38.1 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) |
| --- | --- |
| DC\_2A-7A-66A\_n78A  DC\_2A-7A-7A-66A\_n78A  DC\_2A-7C-66A\_n78A  DC\_2A-7A-66A-66A\_n78A  DC\_2A-7A-7A-66A-66A\_n78A  DC\_2A-7C-66A-66A\_n78A  DC\_2A-7A-66A\_n78(2A)  DC\_2A-7A-7A-66A\_n78(2A)  DC\_2A-7C-66A\_n78(2A)  DC\_2A-7A-66A-66A\_n78(2A)  DC\_2A-7A-7A-66A-66A\_n78(2A)  DC\_2A-7C-66A-66A\_n78(2A) | DC\_2A\_n78A  DC\_7A\_n78A  DC\_66A\_n78A |

### 5.1.38.2 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-66-n78 | 2 | 0.6 |
| 7 | 0.5 |
| 66 | 0.6 |
| n78 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-66-n78 | 2 | 0.3 |
| 7 | 0 |
| 66 | 0.3 |
| n78 | 0.5 |

## 5.1.39 DC\_2-7-13\_n66

### 5.1.39.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) |
| --- | --- |
| DC\_2A-7A-13A\_n66A  DC\_2A-7A-7A-13A\_n66A  DC\_2A-7C-13A\_n66A | DC\_2A\_n66A  DC\_7A\_n66A  DC\_13A\_n66A |

### 5.1.39.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-13-n66 | 2 | 0.5 |
| 7 | 0.5 |
| 13 | 0.3 |
| n66 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-13-n66 | 2 | 0.3 |
| 7 | 0.5 |
| 13 | 0 |
| n66 | 0.5 |

## 5.1.40 DC\_2A-12A-30A\_n66A\_BCS0 DC\_2A-2A-12A-30A\_n66A\_BCS0

### 5.1.40.1 Operating bands for DC

**Table 5.1.40.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12-30\_n66 | CA\_2-12-30 | n66 | DC\_2\_n66 |

### 5.1.40.2 Configuration for DC

**Table 5.1.40.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-12A-30A\_n66A | DC\_2A\_n66A  DC\_12A\_n66A  DC\_30A\_n66A | CA\_2A-12A-30A | n66A |
| DC\_2A-2A-12A-30A\_n66A | DC\_2A\_n66A  DC\_12A\_n66A  DC\_30A\_n66A | CA\_2A-2A-12A-30A | n66A |

### 5.1.40.3 ∆TIB and ∆RIB values

For DC\_2-12-30\_n66 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.40.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-30\_n66 | 2 | 0.5 |
| 12 | 0.8 |
| 30 | 0.3 |
| n66 | 0.5 |

**Table 5.1.40.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-12-30\_n66 | 2 | 0.4 |
| 12 | 0.5 |
| 30 | 0.5 |
| n66 | 0.4 |

### 5.1.40.4 REFSENS requirements

No further MSD are needed to be specified for DC\_2A-12A-30A\_n66A and DC\_2A-2A-12A-30A\_n66A.

## 5.1.41 DC\_12A-30A-66A\_n2A\_BCS0 DC\_12A-30A-66A-66A\_n2A\_BCS0

### 5.1.41.1 Operating bands for DC

**Table 5.1.41.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_12-30-66\_n2 | CA\_12-30-66 | n2 | DC\_66\_n2 |

### 5.1.41.2 Configuration for DC

**Table 5.1.41.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_12A-30A-66A\_n2A | DC\_12A\_n2A  DC\_30A\_n2A  DC\_66A\_n2A | CA\_12A-30A-66A | n2A |
| DC\_12A-30A-66A-66A\_n2A | DC\_12A\_n2A  DC\_30A\_n2A  DC\_66A\_n2A | CA\_12A-30A-66A-66A | n2A |

### 5.1.41.3 ∆TIB and ∆RIB values

For DC\_12-30-66\_n2 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.41.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_12-30-66\_n2 | 12 | 0.8 |
| 30 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.41.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_12-30-66\_n2 | 12 | 0.5 |
| 30 | 0.5 |
| 66 | 0.4 |
| n2 | 0.4 |

### 5.1.41.4 REFSENS requirements

No further MSD are needed to be specified for DC\_12A-30A-66A\_n2A and DC\_12A-30A66A-66A\_n2A.

## 5.1.42 2A-14A-30A\_n260M

### 5.1.42.1 Operating bands for DC

**Table 5.1.42.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-14-30\_n260 | CA\_2-14-30 | n260 | No |

### 5.1.42.2 Configuration for DC

**Table 5.1.42.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-14A-30A\_n260A  DC\_2A-14A-30A\_n260G  DC\_2A-14A-30A\_n260H  DC\_2A-14A-30A\_n260I  DC\_2A-14A-30A\_n260J  DC\_2A-14A-30A\_n260K  DC\_2A-14A-30A\_n260L  DC\_2A-14A-30A\_n260M | DC\_2A\_n260A DC\_2A\_n260G  DC\_2A\_n260H  DC\_2A\_n260I  DC\_2A\_n260J  DC\_2A\_n260K  DC\_2A\_n260L  DC\_2A\_n260M  DC\_14A\_n260A DC\_14A\_n260G  DC\_14A\_n260H  DC\_14A\_n260I  DC\_14A\_n260J  DC\_14A\_n260K  DC\_14A\_n260L  DC\_14A\_n260M  DC\_30A\_n260A DC\_30A\_n260G  DC\_30A\_n260H  DC\_30A\_n260I  DC\_30A\_n260J  DC\_30A\_n260K  DC\_30A\_n260L  DC\_30A\_n260M | CA\_2A-14A-30A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |

### 5.1.42.3 ∆TIB and ∆RIB values

For DC\_2-14-30\_n260 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.42.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-14-30\_n260 | 2 | 0.5 |
| 14 | 0.3 |
| 30 | 0.5 |
| n260 | 0 |

**Table 5.1.42.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-14-30\_n260 | 2 | 0.3 |
| 14 | 0 |
| 30 | 0.3 |
| n260 | 0 |

## 5.1.43 2A-14A-66A\_n260M

### 5.1.43.1 Operating bands for DC

**Table 5.1.43.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-14-66\_n260 | CA\_2-14-66 | n260 | No |
| DC\_2-2-14-66\_n260 | CA\_2-14-66 | n260 | No |
| DC\_2-14-66-66\_n260 | CA\_2-14-66 | n260 | No |

### 5.1.43.2 Configuration for DC

**Table 5.1.43.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-14A-66A\_n260A  DC\_2A-14A-66A\_n260G  DC\_2A-14A-66A\_n260H  DC\_2A-14A-66A\_n260I  DC\_2A-14A-66A\_n260J  DC\_2A-14A-66A\_n260K  DC\_2A-14A-66A\_n260L  DC\_2A-14A-66A\_n260M | DC\_2A\_n260A DC\_2A\_n260G  DC\_2A\_n260H  DC\_2A\_n260I  DC\_2A\_n260J  DC\_2A\_n260K  DC\_2A\_n260L  DC\_2A\_n260M  DC\_14A\_n260A DC\_14A\_n260G  DC\_14A\_n260H  DC\_14A\_n260I  DC\_14A\_n260J  DC\_14A\_n260K  DC\_14A\_n260L  DC\_14A\_n260M  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H  DC\_66A\_n260I  DC\_66A\_n260J  DC\_66A\_n260K  DC\_66A\_n260L  DC\_66A\_n260M | CA\_2A-14A-66A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-2A-14A-66A\_n260A  DC\_2A-2A-14A-66A\_n260G  DC\_2A-2A-14A-66A\_n260H  DC\_2A-2A-14A-66A\_n260I  DC\_2A-2A-14A-66A\_n260J  DC\_2A-2A-14A-66A\_n260K  DC\_2A-2A-14A-66A\_n260L  DC\_2A-2A-14A-66A\_n260M | DC\_2A\_n260A DC\_2A\_n260G  DC\_2A\_n260H  DC\_2A\_n260I  DC\_2A\_n260J  DC\_2A\_n260K  DC\_2A\_n260L  DC\_2A\_n260M  DC\_14A\_n260A DC\_14A\_n260G  DC\_14A\_n260H  DC\_14A\_n260I  DC\_14A\_n260J  DC\_14A\_n260K  DC\_14A\_n260L  DC\_14A\_n260M  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H  DC\_66A\_n260I  DC\_66A\_n260J  DC\_66A\_n260K  DC\_66A\_n260L  DC\_66A\_n260M | CA\_2A-2A-14A-66A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-14A-66A-66A\_n260A  DC\_2A-14A-66A-66A\_n260G  DC\_2A-14A-66A-66A\_n260H  DC\_2A-14A-66A-66A\_n260I  DC\_2A-14A-66A-66A\_n260J  DC\_2A-14A-66A-66A\_n260K  DC\_2A-14A-66A-66A\_n260L  DC\_2A-14A-66A-66A\_n260M | DC\_2A\_n260A DC\_2A\_n260G  DC\_2A\_n260H  DC\_2A\_n260I  DC\_2A\_n260J  DC\_2A\_n260K  DC\_2A\_n260L  DC\_2A\_n260M  DC\_14A\_n260A DC\_14A\_n260G  DC\_14A\_n260H  DC\_14A\_n260I  DC\_14A\_n260J  DC\_14A\_n260K  DC\_14A\_n260L  DC\_14A\_n260M  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H  DC\_66A\_n260I  DC\_66A\_n260J  DC\_66A\_n260K  DC\_66A\_n260L  DC\_66A\_n260M | CA\_2A-14A-66A-66A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |

### 5.1.43.3 ∆TIB and ∆RIB values

For DC\_2-14-66\_n260 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.43.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-14-66\_n260 | 2 | 0.5 |
| 14 | 0.3 |
| 66 | 0.5 |
| n260 | 0 |

**Table 5.1.43.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-14-66\_n260 | 2 | 0.3 |
| 14 | 0 |
| 66 | 0.3 |
| n260 | 0 |

## 5.1.44 14A-30A-66A\_n260M

### 5.1.44.1 Operating bands for DC

**Table 5.1.44.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_14-30-66\_n260 | CA\_14-30-66 | n260 | No |
| DC\_14-30-66-66\_n260 | CA\_14-30-66 | n260 | No |

### 5.1.44.2 Configuration for DC

**Table 5.1.44.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_14A-30A-66A\_n260A  DC\_14A-30A-66A\_n260G  DC\_14A-30A-66A\_n260H  DC\_14A-30A-66A\_n260I  DC\_14A-30A-66A\_n260J  DC\_14A-30A-66A\_n260K  DC\_14A-30A-66A\_n260L  DC\_14A-30A-66A\_n260M | DC\_14A\_n260A DC\_14A\_n260G  DC\_14A\_n260H  DC\_14A\_n260I  DC\_14A\_n260J  DC\_14A\_n260K  DC\_14A\_n260L  DC\_14A\_n260M  DC\_30A\_n260A DC\_30A\_n260G  DC\_30A\_n260H  DC\_30A\_n260I  DC\_30A\_n260J  DC\_30A\_n260K  DC\_30A\_n260L  DC\_30A\_n260M  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H  DC\_66A\_n260I  DC\_66A\_n260J  DC\_66A\_n260K  DC\_66A\_n260L  DC\_66A\_n260M | CA\_14A-30A-66A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_14A-30A-66A-66A\_n260A  DC\_14A-30A-66A-66A\_n260G  DC\_14A-30A-66A-66A\_n260H  DC\_14A-30A-66A-66A\_n260I  DC\_14A-30A-66A-66A\_n260J  DC\_14A-30A-66A-66A\_n260K  DC\_14A-30A-66A-66A\_n260L  DC\_14A-30A-66A-66A\_n260M | DC\_14A\_n260A DC\_14A\_n260G  DC\_14A\_n260H  DC\_14A\_n260I  DC\_14A\_n260J  DC\_14A\_n260K  DC\_14A\_n260L  DC\_14A\_n260M  DC\_30A\_n260A DC\_30A\_n260G  DC\_30A\_n260H  DC\_30A\_n260I  DC\_30A\_n260J  DC\_30A\_n260K  DC\_30A\_n260L  DC\_30A\_n260M  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H  DC\_66A\_n260I  DC\_66A\_n260J  DC\_66A\_n260K  DC\_66A\_n260L  DC\_66A\_n260M | CA\_14A-30A-66A-66A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |

### 5.1.44.3 ∆TIB and ∆RIB values

For DC\_14-30-66\_n260 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.44.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_14-30-66\_n260 | 14 | 0.3 |
| 30 | 0.3 |
| 66 | 0.5 |
| n260 | 0 |

**Table 5.1.44.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_14-30-66\_n260 | 14 | 0 |
| 30 | 0.5 |
| 66 | 0.4 |
| n260 | 0 |

## 5.1.45 DC\_2-13-66\_n66

### 5.1.45.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) |
| --- | --- |
| DC\_2A-13A-66A\_n66A | DC\_2A\_n66A  DC\_13A\_n66A  DC\_66A\_n66A4 |
| NOTE 4: Only single switched UL is supported | |

### 5.1.45.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66-n66 | 2 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-13-66-n66 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n66 | 0.3 |

## 5.1.46 DC\_7-13-66\_n66

5.1.46.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) |
| --- | --- |
| DC\_7A-13A-66A\_n66A  DC\_7C-13A-66A\_n66A | DC\_7A\_n66A  DC\_13A\_n66A  DC\_66A\_n66A4 |
| NOTE 4: Only single switched UL is supported | |

5.1.46.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_7-13-66-n66 | 7 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_7-13-66-n66 | 7 | 0.5 |
| 13 | 0 |
| 66 | 0.5 |
| n66 | 0.5 |

5.1.46 DC\_1-8-42\_n77

5.1.46.1 Operating bands for EN-DC

Table 5.1.46.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-8-42\_n77 | CA\_1-8-42 | n77 | DC\_1\_n77 |

5.1.46.2 Configurations for EN-DC

Table 5.1.46.2-1: 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\_n77A | DC\_1A\_n77A  DC\_8A\_n77A | CA\_1A-8A-42A | n77A |
| DC\_1A-8A-42C\_n77A | DC\_1A\_n77A  DC\_8A\_n77A | CA\_1A-8A-42C | n77A |

5.1.46.3 ∆TIB and ∆RIB values

For DC\_1-8-42\_n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.46.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-42\_n77 | 1 | 0.6 |
| 8 | 0.6 |
| 42 | 0.8 |
| n77 | 0.8 |

Table 5.1.46.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-8-42\_n77 | 1 | 0.2 |
| 8 | 0.2 |
| 42 | 0.5 |
| n77 | 0.5 |

5.1.46.4 REFSENS requirements

Co-existence study for DC\_1-8-42\_n77 was covered by the studies for the fallback modes of DC\_1-8\_n77, DC\_1-42\_n77 and DC\_8-42\_n77.

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

5.1.47 DC\_3-8-42\_n77

5.1.47.1 Operating bands for EN-DC

Table 5.1.47.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-8-42\_n77 | CA\_3-8-42 | n77 | DC\_3\_n77 |

5.1.47.2 Configurations for EN-DC

Table 5.1.47.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-8A-42A\_n77A | DC\_3A\_n77A  DC\_8A\_n77A | CA\_3A-8A-42A | n77A |
| DC\_3A-8A-42C\_n77A | DC\_3A\_n77A  DC\_8A\_n77A | CA\_3A-8A-42C | n77A |

5.1.47.3 ∆TIB and ∆RIB values

For DC\_3-8-42\_n77, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.47.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-42\_n77 | 3 | 0.6 |
| 8 | 0.6 |
| 42 | 0.8 |
| n77 | 0.8 |

Table 5.1.47.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-8-42\_n77 | 3 | 0.2 |
| 8 | 0.2 |
| 42 | 0.5 |
| n77 | 0.5 |

5.1.47.4 REFSENS requirements

Co-existence study for DC\_3-8-42\_n77 was covered by the studies for the fallback modes of DC\_3-8\_n77, DC\_3-42\_n77 and DC\_8-42\_n77.

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

## 5.1.48 DC\_3-7-8\_n1, DC\_3-3-7-8\_n1, DC\_3-7-7-8\_n1, DC\_3-3-7-7-8\_n1

### 5.1.48.1 Operating bands for DC

**Table 5.1.48.1-1: Band combinations EN-DC (three bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-8\_n1 | CA\_3-7-8 | n1 | DC\_3\_n1 |
| DC\_3-3-7-8\_n1 | CA\_3-3-7-8 | n1 | DC\_3\_n1 |
| DC\_3-7-7-8\_n1 | CA\_3-7-7-8 | n1 | DC\_3\_n1 |
| DC\_3-3-7-7-8\_n1 | CA\_3-3-7-7-8 | n1 | DC\_3\_n1 |

### 5.1.48.2 Configuration for DC

**Table 5.1.48.2-1: Inter-band EN-DC configurations (three bands)**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-7A-8A\_n1A | DC\_3A\_n1A, DC\_7A\_n1A,  DC\_8A\_n1A | CA\_3A-7A-8A | n1A |
| DC\_3C-7A-8A\_n1A | DC\_3C\_n1A, DC\_7A\_n1A, DC\_8A\_n1A | CA\_3C-7A-8A | n1A |
| DC\_3A-3A-7A-8A\_n1A | DC\_3A\_n1A, DC\_7A\_n1A,  DC\_8A\_n1A | CA\_3A-3A-7A-8A | n1A |
| DC\_3A-7A-7A-8A\_n1A | DC\_3A\_n1A, DC\_7A\_n1A,  DC\_8A\_n1A | CA\_3A-7A-7A-8A | n1A |
| DC\_3A-3A-7A-7A-8A\_n1A | DC\_3A\_n1A, DC\_7A\_n1A,  DC\_8A\_n1A | CA\_3A-3A-7A-7A-8A | n1A |

### 5.1.48.3 Co-existence Studies

Based on co-existence studies of DC\_3-7\_n1, DC\_3-8\_n1 and DC\_7-8\_n1, as captured in TR 37.716-21-11, own Rx impacts on the 3rd band are the following:

- 5th order IMD generated by dual uplink of Band 7 + Band n1 may fall into own Rx of band 8. However, based on the studies for DL CA\_1A-7A-8A paired with CA\_1A-7A in TR 36.714-00-02, the IMD5 is fairly small and the overlapped region is quite small portion, no MSD requirement is defined for this case.

### 5.1.48.4 ∆TIB and ∆RIB values

The ΔTIB,c and ΔRIB,c values are given based on the values of corresponding combination with LTE band 1.

**Table 5.1.48.4-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n1, DC\_3-3-7-8\_n1,  DC\_3-7-7-8\_n1, DC\_3-3-7-7-8\_n1 | 3 | 0.6 |
| 7 | 0.6 |
| 8 | 0.6 |
| n1 | 0.6 |

**Table 5.1.48.4-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n1, DC\_3-3-7-8\_n1,  DC\_3-7-7-8\_n1, DC\_3-3-7-7-8\_n1 | 3 | 0 |
| 7 | 0 |
| 8 | 0.2 |
| n1 | 0 |

5.1.48.5 REFSENS requirements

No additional MSD requirement is needed.

## 5.1.49 DC\_3-7-40\_n1

### 5.1.49.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-40\_n1 | CA\_3-7-40 | n1 |  |

### 5.1.49.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-7A-40A\_n1A | DC\_3A\_n1A  DC\_7A\_n1A  DC\_40A\_n1A | CA\_3A-7A-40A | n78 |

### 5.1.49.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-40\_n1 | 3 | 0.6 |
| 7 | 0.8 |
| 40 | 0.9 |
| n1 | 0.6 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-40\_n1 | 3 | 0 |
| 7 | 0.3 |
| 40 | 0.8 |
| n1 | 0 |

## 5.1.50 DC\_2-46-66\_n41

5.1.50.1 Operating bands for DC

Table 5.1.50.1-1: Band combinations EN-DC (three bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-46-66\_n41 | CA\_2-46-66 | n41 | No |

5.1.50.2 Configuration for DC

Table 5.1.50.2-1: Inter-band EN-DC configurations (three bands)

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** |
| --- | --- |
| DC\_2A-46A-66A\_n41A  DC\_2A-46C-66A\_n41A  DC\_2A-46D-66A\_n41A | DC\_2A\_n41A  DC\_66A\_n41A |

### 5.1.50.3 ∆TIB and ∆RIB values

The ΔTIB,c and ΔRIB,c values are derived from lower order combinations.

Table 5.1.50.3-1: ΔTIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-66\_n41 | 2 | 0.5 |
| 46 | 0 |
| 66 | 0.5 |
| n41 | 0.81 |
| 1.32 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

Table 5.1.50.3-2: ΔRIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-66\_n41 | 2 | 0.3 |
| 46 | 0 |
| 66 | 0.5 |
| n41 | 0.51 |
| 12 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

## 5.1.51 DC\_2-46-66\_n71

5.1.51.1 Operating bands for DC

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

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-46-66\_n71 | CA\_2-46-66 | n71 | No |

5.1.51.2 Configuration for DC

Table 5.1.51.2-1: Inter-band EN-DC configurations (three bands)

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** |
| --- | --- |
| DC\_2A-46A-66A\_n71A  DC\_2A-46C-66A\_n71A  DC\_2A-46D-66A\_n71A | DC\_2A\_n71A  DC\_66A\_n71A |

### 5.1.51.3 ∆TIB and ∆RIB values

The ΔTIB,c and ΔRIB,c values are derived from lower order combinations.

Table 5.1.51.4-1: ΔTIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-66\_n71 | 2 | 0 |
| 46 | 0 |
| 66 | 0.3 |
| n71 | 0.3 |

Table 5.1.51.4-2: ΔRIB,c

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-66\_n71 | 2 | 0 |
| 46 | 0 |
| 66 | 0 |
| n71 | 0 |

## 5.1.52 DC\_3-28-41\_n78

5.1.52.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-28-41\_n78 | CA\_3-28-41 | n78 | DC\_3\_n78 |

5.1.52.2 Configuration for EN-DC

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

| EN-DC  Configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-28A-41A\_n78A  DC\_3A-28A-41C\_n78A | DC\_3A\_n78A  DC\_28A\_n78A  DC\_41A\_n78A  DC\_41C\_n78A | CA\_ 3A-28A-41A  CA\_ 3A-28A-41C | n78A |

5.1.52.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-28-41\_n78 | 3 | 1 |
| 28 | 0.5 |
| 41 | 0.31/0.82 |
| n78 | 0.8 |
| 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 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-28-41\_n78 | 3 | 0.5 |
| 28 | 0.2 |
| 41 | 0.41/0.52 |
| n78 | 0.5 |
| 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. | | |

## 5.1.53 DC\_28-41-42\_n78

### 5.1.53.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_28-41-42\_n78 | CA\_28-41-42 | n78 | no |

### 5.1.53.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_28A-41A-42A\_n78A  DC\_28A-41C-42A\_n78A  DC\_28A-41A-42C\_n78A  DC\_28A-41C-42C\_n78A | DC\_28A\_n78A  DC\_41A\_n78A  DC\_41C\_n78A  DC\_42A\_n78A  DC\_42C\_n78A | CA\_ 28A-41A-42A  CA\_ 28A-41C-42A  CA\_ 28A-41A-42C  CA\_ 28A-41C-42C | n78A |

### 5.1.53.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_28-41-42\_n78 | 28 | 0.5 |
| 41 | 0.3 |
| 42 | 0.8 |
| n78 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_28-41-42\_n78 | 28 | 0.2 |
| 41 | 0.4 |
| 42 | 0.5 |
| n78 | 0.5 |

### 5.1.54 1-7-8\_n78

### 5.1.54.1 Operating bands for DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-8\_n781 | CA\_1-7-8 | n78 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

### 5.1.54.2 Configuration for DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-7A-8A\_n78A | DC\_1A\_n78A  DC\_7A\_n78A  DC\_8A\_n78A | CA\_1A-7A-8A | n78A |

### 5.1.54.3 ∆TIB and ∆RIB values

For DC\_1-7-8\_n78 the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-8\_n78 | 1 | 0.6 |
| 7 | 0.6 |
| 8 | 0.6 |
| n78 | 0.8 |

Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-8\_n78 | 1 | 0.2 |
| 7 | 0.2 |
| 8 | 0.2 |
| n78 | 0.5 |

### 5.1.54.4 REFSENS requirements

REFSENS requirements are already covered in 2DL/2UL and 3DL/2UL fall-back modes. No additional REFSENS requirement is required.

## 5.1.55 DC\_1-3-20\_n38

### 5.1.55.1 Operating bands for EN-DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-20\_n38 | CA\_1-3-20 | n38 | NO |

### 5.1.55.2 Configuration for EN-DC

Table 5.1.55.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-20A\_n38A | DC\_3A\_n38A  DC\_20A\_n38A | CA\_1A-3A-20A | n38 |

### 5.1.55.3 ∆TIB and ∆RIB values

Table 5.1.55.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20-n38 | 1 | 0.5 |
| 3 | 0.5 |
| 20 | 0.3 |
| n38 | 0.5 |

**Table 5.1.55.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20-n38 | 1 | 0 |
| 3 | 0 |
| 20 | 0 |
| n38 | 0 |

5.1.55.4 REFSENS requirements

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

## 5.1.56 DC\_1-7-20\_n3

### 5.1.56.1 Operating bands for EN-DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-20\_n3 | CA\_1-7-20 | n3 | DC\_1\_n3 |

### 5.1.56.2 Configuration for EN-DC

Table 5.1.56.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-7A-20A\_n3A | DC\_1A\_n3A  DC\_20A\_n3A | CA\_1A-7A-20A | n3 |

### 5.1.56.3 ∆TIB and ∆RIB values

Table 5.1.56.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-20\_n3 | 1 | 0.3 |
| 7 | 0.5 |
| 20 | 0.3 |
| n3 | 0.5 |

**Table 5.1.56.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-20\_n3 | 1 | 0 |
| 7 | 0 |
| 20 | 0 |
| n3 | 0 |

5.1.56.4 REFSENS requirements

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

5.2 Inter-band EN-DC including FR2

## 5.1.57 DC\_1-20-38\_n78

### 5.1.57.1 Operating bands for EN-DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-20-38\_n78 | CA\_1-20-38 | n78 | NO |

### 5.1.57.2 Configuration for EN-DC

Table 5.1.57.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-20A-38A\_n78A | DC\_1A\_n78A | CA\_1A-20A-38A | n78 |

### 5.1.57.3 ∆TIB and ∆RIB values

Table 5.1.57.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-20-38\_n78 | 1 | 0.3 |
| 20 | 0.6 |
| 38 | 0 |
| n78 | 0.8 |

**Table 5.1.57.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-20-38\_n78 | 1 | 0 |
| 20 | 0 |
| 38 | 0.4 |
| n78 | 0.5 |

5.1.57.4 REFSENS requirements

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

## 5.1.58 DC\_3-20-38\_n78

### 5.1.58.1 Operating bands for EN-DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-20-38\_n78 | CA\_3-20-38 | n78 | NO |

### 5.1.58.2 Configuration for EN-DC

Table 5.1.58.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-20A-38A\_n78A | DC\_3A\_n78A | CA\_3A-20A-38A | n78 |

### 5.1.58.3 ∆TIB and ∆RIB values

Table 5.1.58.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-20-38\_n78 | 3 | 0.6 |
| 20 | 0.6 |
| 38 | 0 |
| n78 | 0.8 |

**Table 5.1.58.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-20-38\_n78 | 3 | 0.2 |
| 20 | 0 |
| 38 | 0.4 |
| n78 | 0.5 |

5.1.58.4 REFSENS requirements

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

## 5.1.59 DC\_1-3-20-38\_n78

### 5.1.59.1 Operating bands for EN-DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-20-38\_n78 | CA\_1-3-20-38 | n78 | NO |

### 5.1.59.2 Configuration for EN-DC

Table 5.1.59.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-20A-38A\_n78A | DC\_3A\_n78A  DC\_20A\_n78A | CA\_1A-3A-20A-38A | n78 |

### 5.1.59.3 ∆TIB and ∆RIB values

Table 5.1.59.3-1: ΔTIB,c due to EN-DC(five bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20-38\_n78 | 1 | 0.3 |
| 3 | 0.6 |
| 20 | 0.6 |
| 38 | 0 |
| n78 | 0.8 |

**Table 5.1.59.3-1: ΔRIB,c due to EN-DC (five bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20-38\_n78 | 1 | 0 |
| 3 | 0.2 |
| 20 | 0 |
| 38 | 0.4 |
| n78 | 0.5 |

## 5.1.60 DC\_3-7-20\_n1

### 5.1.60.1 Operating bands for EN-DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-20\_n1 | CA\_3-7-20 | n1 |  |

### 5.1.60.2 Configuration for EN-DC

Table 5.1.60.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-7A-20A\_n1A | DC\_3A\_n1A  DC\_7A\_n1A  DC\_20A\_n1A | CA\_3A-7A-20A | n1 |
| DC\_3C-7A-20A\_n1A | DC\_3A\_n1A  DC\_3C\_n1A  DC\_7A\_n1A  DC\_20A\_n1A | CA\_3C-7A-20A | n1 |

### 5.1.60.3 ∆TIB and ∆RIB values

Table 5.1.60.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-20\_n1 | 3 | 0.6 |
| 7 | 0.6 |
| 20 | 0.3 |
| n1 | 0.6 |

**Table 5.1.60.4-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-20\_n1 | 3 | 0 |
| 7 | 0 |
| 20 | 0 |
| n1 | 0 |

5.1.61 DC\_2-12-30\_n2

5.1.61.1 Operating bands for DC

**Table 5.1.61.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-12-30\_n2 | CA\_2-12-30 | n2 | No |

5.1.61.2 Configuration for DC

**Table 5.1.61.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-12A-30A\_n2A | DC\_12A\_n2A  DC\_30A\_n2A | CA\_2A-12A-30A | n2A |

5.1.61.3 ∆TIB and ∆RIB values

For DC\_2-12-30\_n2, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-2-12-30 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-30\_n2, | 2 | 0.5 |
| 12 | 0.3 |
| 30 | 0.3 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-30\_n2, | 2 | 0.4 |
| 12 | 0 |
| 30 | 0.5 |
| n2 | 0.4 |

5.1.62 DC\_2-12-66\_n2

5.1.62.1 Operating bands for DC

**Table 5.1.62.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-12-66\_n2 | CA\_2-12-66 | n2 | No |

5.1.62.2 Configuration for DC

**Table 5.1.62.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-12A-66A\_n2A | DC\_12A\_n2A  DC\_66A\_n2A | CA\_2A-12A-66A | n2A |
| DC\_2A-12A-66A-66A\_n2A | DC\_12A\_n2A  DC\_66A\_n2A | CA\_2A-12A-66A-66A | n2A |

5.1.62.3 ∆TIB and ∆RIB values

For DC\_2-12-66\_n2, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-2-12-66 and CA\_2-2-12-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-66\_n2, | 2 | 0.5 |
| 12 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-66\_n2, | 2 | 0.3 |
| 12 | 0.5 |
| 66 | 0.3 |
| n2 | 0.3 |

## 5.1.63 DC\_1A-3A-28A\_n7A DC\_1A-3C-28A\_n7A DC\_1A-3A-3A-28A\_n7A DC\_1A-1A-3A-28A\_n7A DC\_1A-1A-3C-28A\_n7A DC\_1A-1A-3A-3A-28A\_n7A DC\_1A-3A-28A\_n7B DC\_1A-3C-28A\_n7B DC\_1A-3A-3A-28A\_n7B DC\_1A-1A-3A-28A\_n7B DC\_1A-1A-3C-28A\_n7B DC\_1A-1A-3A-3A-28A\_n7B

5.1.63.1 Operating bands for DC

**Table 5.1.63.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-28\_n7 | CA\_1-3-28 | n7 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.63.2 Configuration for DC

**Table 5.1.63.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-28A\_n7A  DC\_1A-3C-28A\_n7A  DC\_1A-3A-28A\_n7B  DC\_1A-3C-28A\_n7B | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_28A\_n7A | CA\_1A-3A-28A  CA\_1A-3C-28A | n7A  n7B |
| DC\_1A-3A-3A-28A\_n7A  DC\_1A-1A-3A-28A\_n7A  DC\_1A-1A-3C-28A\_n7A  DC\_1A-1A-3A-3A-28A\_n7A  DC\_1A-3A-3A-28A\_n7B  DC\_1A-1A-3A-28A\_n7B  DC\_1A-1A-3C-28A\_n7B  DC\_1A-1A-3A-3A-28A\_n7B | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_28A\_n7A | CA\_1A-3A-3A-28A  CA\_1A-1A-3A-28A  CA\_1A-1A-3C-28A  CA\_1A-1A-3A-3A-28A | n7A  n7B |

5.1.63.3 ∆TIB and ∆RIB values

For DC\_1-3-28\_n7 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.63.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n7 | 1 | 0.6 |
| 3 | 0.6 |
| 28 | 0.6 |
| n7 | 0.6 |

**Table 5.1.63.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n7 | 1 | 0 |
| 3 | 0 |
| 28 | 0.2 |
| n7 | 0 |

5.1.63.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.64 DC\_3A-7A-28A\_n7A DC\_3C-7A-28A\_n7A DC\_3A-3A-7A-28A\_n7A

5.1.64.1 Operating bands for DC

**Table 5.1.64.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-28\_n7 | CA\_3-7-28 | n7 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.64.2 Configuration for DC

**Table 5.1.64.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-7A-28A\_n7A DC\_3C-7A-28A\_n7A | DC\_3A\_n7A  DC\_3C\_n7A  DC\_7A\_n7A1  DC\_28A\_n7A | CA\_3A-7A-28A  CA\_3C-7A-28A | n7A |
| DC\_3A-3A-7A-28A\_n7A | DC\_3A\_n7A  DC\_7A\_n7A1  DC\_28A\_n7A | CA\_3A-3A-7A-28A | n7A |
| Note 1: Only single switched UL is supported | | | |

5.1.64.3 ∆TIB and ∆RIB values

For DC\_3-7-28\_n7 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.64.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n7 | 3 | 0.5 |
| 7 | 0.5 |
| 28 | 0.3 |
| n7 | 0.5 |

**Table 5.1.64.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n7 | 3 | 0 |
| 7 | 0 |
| 28 | 0 |
| n7 | 0 |

5.1.64.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.65 DC\_1A-3A-7A\_n7A DC\_1A-3C-7A\_n7A DC\_1A-3A-3A-7A\_n7A DC\_1A-1A-3A-7A\_n7A DC\_1A-1A-3C-7A\_n7A

5.1.65.1 Operating bands for DC

**Table 5.1.65.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-7\_n7 | CA\_1-3-7 | n7 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.65.2 Configuration for DC

**Table 5.1.65.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-7A\_n7A DC\_1A-3C-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_7A\_n7A1 | CA\_1A-3A-7A  CA\_1A-3C-7A | n7A |
| DC\_1A-1A-3A-7A\_n7A DC\_1A-1A-3C-7A\_n7A DC\_1A-3A-3A-7A\_n7A | DC\_1A\_n7A  DC\_3A\_n7A  DC\_3C\_n7A  DC\_7A\_n7A1 | CA\_1A-1A-3A-7A  CA\_1A-1A-3C-7A  CA\_1A-3A-3A-7A | n7A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.65.3 ∆TIB and ∆RIB values

For DC\_1-3-7\_n7 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.65.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n7 | 1 | 0.6 |
| 3 | 0.6 |
| 7 | 0.6 |
| n7 | 0.6 |

**Table 5.1.65.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n7 | 1 | 0 |
| 3 | 0 |
| 7 | 0 |
| n7 | 0 |

5.1.65.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.66 DC\_1A-7A-28A\_n7A DC\_1A-1A-7A-28A\_n7A

5.1.66.1 Operating bands for DC

**Table 5.1.66.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-28\_n7 | CA\_1-7-28 | n7 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.66.2 Configuration for DC

**Table 5.1.66.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-7A-28A\_n7A | DC\_1A\_n7A  DC\_7A\_n7A1  DC\_28A\_n7A | CA\_1A-7A-28A | n7A |
| DC\_1A-1A-7A-28A\_n7A | DC\_1A\_n7A  DC\_7A\_n7A1  DC\_28A\_n7A | CA\_1A-1A-7A-28A | n7A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.66.3 ∆TIB and ∆RIB values

For DC\_1-7-28\_n7 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.66.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n7 | 1 | 0.5 |
| 7 | 0.6 |
| 28 | 0.6 |
| n7 | 0.6 |

**Table 5.1.66.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n7 | 1 | 0 |
| 7 | 0 |
| 28 | 0.2 |
| n7 | 0 |

5.1.66.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.67 2A-12A-66A\_n66A 2A-2A-12A-66A\_n66A

5.1.67.1 Operating bands for DC

**Table 5.1.67.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12-66\_n66 | CA\_2-12-66 | n66 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.67.2 Configuration for DC

**Table 5.1.67.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-12A-66A\_n66A | DC\_2A\_n66A  DC\_12A\_n66A  DC\_66A\_n66A1 | CA\_2A-12A-66A | n66A |
| DC\_2A-2A-12A-66A\_n66A | DC\_2A\_n66A  DC\_12A\_n66A  DC\_66A\_n66A1 | CA\_2A-2A-12A-66A-n66A | n66A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.67.3 ∆TIB and ∆RIB values

For DC\_2-12-66\_n66 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.67.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-66\_n66 | 2 | 0.5 |
| 12 | 0.8 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.67.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-12-66\_n66 | 2 | 0.3 |
| 12 | 0.5 |
| 66 | 0.3 |
| n66 | 0.3 |

5.1.67.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.68 2A-30A-66A\_n66A

5.1.68.1 Operating bands for DC

**Table 5.1.68.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-30-66\_n66 | CA\_2-30-66 | n66 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.68.2 Configuration for DC

**Table 5.1.68.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-30A-66A\_n66A | DC\_2A\_n66A  DC\_30A\_n66A  DC\_66A\_n66A1 | CA\_2A-30A-66A | n66A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.68.3 ∆TIB and ∆RIB values

For DC\_2-30-66\_n66 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.68.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-30-66\_n66 | 2 | 0.5 |
| 30 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.68.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-30-66\_n66 | 2 | 0.4 |
| 30 | 0.5 |
| 66 | 0.4 |
| n66 | 0.4 |

5.1.68.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.69 12A-30A-66A\_n66A

5.1.69.1 Operating bands for DC

**Table 5.1.69.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_12-30-66\_n66 | CA\_12-30-66 | n66 | No |
| NOTE 1: Applicable for UE supporting inter-band carrier aggregation with mandatory simultaneous Rx/Tx capability | | | |

5.1.69.2 Configuration for DC

**Table 5.1.69.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_12A-30A-66A\_n66A | DC\_12A\_n66A  DC\_30A\_n66A  DC\_66A\_n66A1 | CA\_12A-30A-66A | n66A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.69.3 ∆TIB and ∆RIB values

For DC\_12-30-66\_n66 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.69.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_12-30-66\_n66 | 12 | 0.8 |
| 30 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.69.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_12-30-66\_n66 | 12 | 0.5 |
| 30 | 0.5 |
| 66 | 0.4 |
| n66 | 0.4 |

5.1.69.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.70 DC\_2-5-48\_n12

### 5.1.70.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5-48\_n12 | CA\_2-5-48 | n12 |  |

### 5.1.70.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-5A-48A\_n12A | DC\_2A\_n12A  DC\_5A\_n12A  DC\_48A\_n12A | CA\_2A-5A-48A | n12 |
|  | | | |

### 5.1.70.3 ∆TIB and ∆RIB values

Based on CA\_2-5-12 and CA\_2-48 following is proposed

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-48\_n12 | 2 | 0.6 |
| 5 | 0.8 |
| 48 | 0.8 |
| n12 | 0.4 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-48\_n12 | 2 | 0.2 |
| 5 | 0.5 |
| 48 | 0.5 |
| n12 | 0.3 |

## 5.1.71 DC\_2-5-66\_n12

### 5.1.71.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5-66\_n12 | CA\_2-5-66 | n12 |  |

### 5.1.71.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-5A-66A\_n12A | DC\_2A\_n12A  DC\_5A\_n12A  DC\_66A\_n12A | CA\_2A-5A-66A | n12 |
|  | | | |

### 5.1.71.3 ∆TIB and ∆RIB values

Based on CA\_2-5-12-66 following is proposed

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n12 | 2 | 0.3 |
| 5 | 0.5 |
| 66 | 0.5 |
| n12 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n12 | 2 | 0.2 |
| 5 | 0.5 |
| 66 | 0.5 |
| n12 | 0.3 |

## 5.1.72 DC\_2-12-48\_n5

### 5.1.72.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12-48\_n5 | CA\_2-12-48 | n5 |  |

### 5.1.72.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-12A-48A\_n5A | DC\_2A\_n5A  DC\_12A\_n5A  DC\_48A\_n5A | CA\_2A-12A-48A | n5 |
|  | | | |

### 5.1.72.3 ∆TIB and ∆RIB values

Based on CA\_2-5-12 and CA\_2-48 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-48\_n5 | 2 | 0.6 |
| 12 | 0.4 |
| 48 | 0.8 |
| n5 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-12-48\_n5 | 2 | 0.3 |
| 12 | 0.3 |
| 48 | 0.5 |
| n5 | 0.5 |

## 5.1.73 DC\_2-12-66\_n5

### 5.1.73.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12-66\_n5 | CA\_2-12-66 | n5 |  |

### 5.1.73.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-12A-66A\_n5A | DC\_2A\_n5A  DC\_12A\_n5A  DC\_66A\_n5A | CA\_2A-12A-66A | n5 |
|  | | | |

### 5.1.73.3 ∆TIB and ∆RIB values

Based on CA\_2-5-12-66 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12-66\_n5 | 2 | 0.5 |
| 12 | 0.8 |
| 66 | 0.5 |
| n5 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-12-66\_n5 | 2 | 0.3 |
| 12 | 0.5 |
| 66 | 0.5 |
| n5 | 0.3 |

## 5.1.74 DC\_2-48-66\_n5

### 5.1.74.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-48-66\_n5 | CA\_2-48-66 | n5 |  |

### 5.1.74.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-48A-66A\_n5A | DC\_2A\_n5A  DC\_48A\_n5A  DC\_66A\_n5A | CA\_2A-48A-66A | n5 |
|  | | | |

### 5.1.74.3 ∆TIB and ∆RIB values

Based on CA\_2-5-66 and CA\_2-48-66 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-48-66\_n5 | 2 | 0.6 |
| 48 | 0.8 |
| 66 | 0.6 |
| n5 | 0 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-48-66\_n5 | 2 | 0.3 |
| 48 | 0.5 |
| 66 | 0.3 |
| n5 | 0 |

## 5.1.75 DC\_5-48-66\_n12

### 5.1.75.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_5-48-66\_n12 | CA\_5-48-66 | n12 |  |

### 5.1.75.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_5A-48A-66A\_n12A | DC\_5A\_n12A  DC\_48A\_n12A  DC\_66A\_n12A | CA\_5A48A-66A | n12 |
|  | | | |

### 5.1.75.3 ∆TIB and ∆RIB values

Based on CA\_5-48-66 and CA\_5-12-48 following is proposed

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_5-48-66\_n12 | 5 | 0.8 |
| 48 | 0.8 |
| 66 | 0.6 |
| n12 | 0.4 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_5-48-66\_n12 | 5 | 0.5 |
| 48 | 0.5 |
| 66 | 0.2 |
| n12 | 0.3 |

## 5.1.76 DC\_12-48-66\_n5

### 5.1.76.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_12-48-66\_n5 | CA\_12-48-66 | n5 |  |

### 5.1.76.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_12A-48A-66A\_n5A | DC\_12A\_n5A  DC\_48A\_n5A  DC\_66A\_n5A | CA\_12A-48A-66A | n5 |
|  | | | |

### 5.1.76.3 ∆TIB and ∆RIB values

Based on CA\_5-12-66 and CA\_48-66 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_12-48-66\_n5 | 12 | 0.8 |
| 48 | 0.8 |
| 66 | 0.8 |
| n5 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_12-48-66\_n5 | 2 | 0.5 |
| 48 | 0.5 |
| 66 | 0.5 |
| n5 | 0 |

5.1.77 DC\_2-5-66\_n66

5.1.77.1 Operating bands for DC

**Table 5.1.77.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-5-66\_n66 | CA\_2-5-66 | n66 | No |

5.1.77.2 Configuration for DC

**Table 5.1.77.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-2A-5A-66A-66A\_n66A | DC\_5A\_n66A | CA\_2A-5A-66A | n66A |
| DC\_2A-5A-66A-66A\_n66A | DC\_5A\_n66A | CA\_2A-5A-5A-66A | n66A |
| DC\_2A-5A-5A-66A\_n66A | DC\_5A\_n66A | CA\_2A-5A-5A-66A-66A | n66A |
| DC\_2A-5A-5A-66A-66A\_n66A | DC\_5A\_n66A | CA\_2A-5A-66A-66A | n66A |
| DC\_2A-5B-66A\_n66A | DC\_5A\_n66A | CA\_2A-5B-66A | n66A |
| DC\_2A-5B-66A-66A\_n66A | DC\_5A\_n66A | CA\_2A-5B-66A-66A | n66A |

5.1.77.3 ∆TIB and ∆RIB values

For DC\_2-5-66\_n66, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-5-66, CA\_2-2-5-66, CA\_2-5-66-66, CA\_5-5-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n66 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n66 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.78 DC\_2-13-66\_n2

5.1.78.1 Operating bands for DC

**Table 5.1.78.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-13-66\_n2 | CA\_2-13-66 | n2 | No |

5.1.78.2 Configuration for DC

**Table 5.1.78.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-13A-66A\_n2A | DC\_13A\_n2A | CA\_2A-13A-66A | n2A |
| DC\_2A-13A-66A-66A\_n2A | DC\_13A\_n2A | CA\_2A-13A-66A-66A | n2A |

5.1.78.3 ∆TIB and ∆RIB values

For DC\_2-13-66\_n2, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-66, CA\_2-2-13-66, CA\_2-13-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n2 | 2 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n2 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.79 DC\_2-13-66\_n5

5.1.79.1 Operating bands for DC

**Table 5.1.79.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-13-66\_n5 | CA\_2-13-66 | n5 | No |

5.1.79.2 Configuration for DC

**Table 5.1.79.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-13A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-13A-66A | n5A |
| DC\_2A-2A-13A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-2A-13A-66A | n5A |
| DC\_2A-13A-66A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-13A-66A-66A | n5A |
| DC\_2A-2A-13A-66A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-2A-13A-66A-66A | n5A |

5.1.79.3 ∆TIB and ∆RIB values

For DC\_2-13-66\_n5, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-5, CA\_2-13, CA\_2-66, CA\_2-13-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n5 | 2 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n5 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n5 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n5 | 0 |

5.1.80 DC\_2-13-66\_n48

5.1.80.1 Operating bands for DC

**Table 5.1.80.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-13-66\_n48 | CA\_2-13-66 | n48 | No |

5.1.80.2 Configuration for DC

**Table 5.1.80.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-13A-66A\_n48A | DC\_2A\_n48A  DC\_13A\_n48A  DC\_66A\_n48A | CA\_2A-13A-66A | n48A |
| DC\_2A-13A-66A\_n48B | DC\_2A\_n48A  DC\_13A\_n48A  DC\_66A\_n48A | CA\_2A-13A-66A | n48A |
| DC\_2A-13A-66A-66A\_n48A | DC\_2A\_n48A  DC\_13A\_n48A  DC\_66A\_n48A | CA\_2A-13A-66A-66A | n48A |
| DC\_2A-13A-66A-66A\_n48B | DC\_2A\_n48A  DC\_13A\_n48A  DC\_66A\_n48A | CA\_2A-13A-66A-66A | n48A |

5.1.80.3 ∆TIB and ∆RIB values

For DC\_2-13-66\_n48, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-48, CA\_48-66, CA\_2-13, CA\_2-66, CA\_2-13-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n48 | 2 | 0.6 |
| 13 | 0.3 |
| 66 | 0.6 |
| n48 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n48 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n48 | 0.5 |

5.1.81 DC\_2-13-66\_n66

5.1.81.1 Operating bands for DC

**Table 5.1.81.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-13-66\_n66 | CA\_2-13-66 | n66 | No |

5.1.81.2 Configuration for DC

**Table 5.1.81.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-2A-13A-66A-66A\_n66A | DC\_13A\_n66A | CA\_2A-2A-13A-66A-66A | n66A |
| DC\_2A-2A-13A-66A\_n66A | DC\_13A\_n66A | CA\_2A-2A-13A-66A | n66A |
| DC\_2A-13A-66A-66A\_n66A | DC\_13A\_n66A | CA\_2A-13A-66A-66A | n66A |

5.1.81.3 ∆TIB and ∆RIB values

For DC\_2-13-66\_n66, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-66, CA\_2-2-13-66, CA\_2-13-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n66 | 2 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n66 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.82 DC\_2-46-48\_n5

5.1.82.1 Operating bands for DC

**Table 5.1.82.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-46-48\_n5 | CA\_2-46-48 | n5 | No |

5.1.82.2 Configuration for DC

**Table 5.1.82.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-46E-48A\_n5A | DC\_2A\_n5A  DC\_48A\_n5A | CA\_2A-46E-48A | n5A |
| DC\_2A-46D-48A\_n5A | DC\_2A\_n5A  DC\_48A\_n5A | CA\_2A-46D-48A | n5A |
| DC\_2A-46C-48A\_n5A | DC\_2A\_n5A  DC\_48A\_n5A | CA\_2A-46C-48A | n5A |
| DC\_2A-46A-48A\_n5A | DC\_2A\_n5A  DC\_48A\_n5A | CA\_2A-46A-48A | n5A |

5.1.82.3 ∆TIB and ∆RIB values

For DC\_2-46-48\_n5, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-5, CA\_5-46, CA\_5-48, CA\_2-46-48 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-48\_n5 | 2 | 0.6 |
| 46 | 0 |
| 48 | 0.8 |
| n5 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-48\_n5 | 2 | 0.2 |
| 46 | 0 |
| 48 | 0.5 |
| n5 | 0 |

5.1.83 DC\_2-46-48\_n66

5.1.83.1 Operating bands for DC

**Table 5.1.83.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-46-48\_n66 | CA\_2-46-48 | n66 | No |

5.1.83.2 Configuration for DC

**Table 5.1.83.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **Configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-46E-48A\_ n66A | DC\_2A\_ n66A  DC\_48A\_n66A | CA\_2A-46E-48A | n66A |
| DC\_2A-46D-48A\_ n66A | DC\_2A\_ n66A  DC\_48A\_n66A | CA\_2A-46D-48A | n66A |
| DC\_2A-46C-48A\_ n66A | DC\_2A\_ n66A  DC\_48A\_n66A | CA\_2A-46C-48A | n66A |
| DC\_2A-46A-48A\_ n66A | DC\_2A\_ n66A  DC\_48A\_n66A | CA\_2A-46A-48A | n66A |

5.1.83.3 ∆TIB and ∆RIB values

For DC\_2-46-48\_n66., the ΔTIB,c and ΔRIB,c values are derived from CA\_2-46-48-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-48\_n66 | 2 | 0.6 |
| 46 | 0 |
| 48 | 0.8 |
| n66 | 0.6 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-46-48\_n66 | 2 | 0.3 |
| 46 | 0 |
| 48 | 0.5 |
| n66 | 0.3 |

## 5.1.84 DC\_2A-7A-66A\_n38A DC\_2A-2A-7A-66A\_n38A

5.1.84.1 Operating bands for DC

**Table 5.1.84.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-7-66\_n381 | CA\_2-7-66 | n38 |  |
| NOTE 1: UL carrier shall be supported in Band 2 or band 66 only. Power imbalance between downlink carriers on Band 7 and Band 38 is assumed to be within [6dB]. | | | |

5.1.84.2 Configuration for DC

**Table 5.1.84.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-7A-66A\_n38A | 2A1  66A1 | CA\_2A-7A-66A | n38A |
| DC\_2A-2A-7A-66A\_n38A | 2A1  66A1 | CA\_2A-2A-7A-66A | n38A |
| NOTE 1: UL carrier shall be supported in Band 2 or band 66 only. Power imbalance between downlink carriers on Band 7 and Band 38 is assumed to be within [6dB]. | | | |

5.1.84.3 ∆TIB and ∆RIB values

For DC\_2-7-66\_n38 the ΔTIB,c and ΔRIB,c values are derived from CA\_2-4-7 and are given in the tables below.

**Table 5.1.84.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n38 DC\_2-2-7-66\_n38 | 2 | 0.5 |
| 66 | 0.5 |

**Table 5.1.84.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n38  DC\_2-2-7-66\_n38 | 2 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n38 | 0.5 |

5.1.84.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.85 DC\_2A-66A-71A\_n38A DC\_2A-2A-66A-71A\_n38A

5.1.85.1 Operating bands for DC

**Table 5.1.85.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-66-71\_n38 | CA\_2-66-71 | n38 | No |

5.1.85.2 Configuration for DC

**Table 5.1.85.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-66A-71A\_n38A | DC\_2A\_n38A  DC\_66A\_n38A  DC\_71A\_n38A | CA\_2A-66A-71A | n38A |
| DC\_2A-2A-66A-71A\_n38A | DC\_2A\_n38A  DC\_66A\_n38A  DC\_71A\_n38A | CA\_2A-2A-66A-71A | n38A |

5.1.85.3 ∆TIB and ∆RIB values

For DC\_2-66-71\_n38 the ΔTIB,c and ΔRIB,c values are derived from DC\_2-7-13\_n66 and are given in the tables below.

**Table 5.1.85.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-66-71\_n38 DC\_2-2-66-71\_n38 | 2 | 0.5 |
| 66 | 0.5 |
| 71 | 0.3 |
| n38 | 0.5 |

**Table 5.1.85.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-66-71\_n38  DC\_2-2-66-71\_n38 | 2 | 0.3 |
| 66 | 0.5 |
| 71 | 0 |
| n38 | 0.5 |

5.1.85.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.86 DC\_2A-7A-66A\_n71A

5.1.86.1 Operating bands for DC

**Table 5.1.86.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-7-66\_n71 | CA\_2-7-66 | n71 | No |

5.1.86.2 Configuration for DC

**Table 5.1.86.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-7A-66A\_n71A | DC\_2A\_n71A  DC\_7A\_n71A  DC\_66A\_n71A | CA\_2A-66A-71A | n71A |

5.1.86.3 ∆TIB and ∆RIB values

For DC\_2-7-66\_n71 the ΔTIB,c and ΔRIB,c values are derived from DC\_2-7-13\_n66 and are given in the tables below.

**Table 5.1.86.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n71 | 2 | 0.5 |
| 7 | 0.5 |
| 66 | 0.5 |
| n71 | 0.3 |

**Table 5.1.86.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-7-66\_n71 | 2 | 0.3 |
| 7 | 0.5 |
| 66 | 0.5 |
| n71 | 0 |

5.1.86.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.87 DC\_2A-66A-71A\_n66A

5.1.87.1 Operating bands for DC

**Table 5.1.87.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-66-71\_n66 | CA\_2-66-71 | n66 |  |

5.1.87.2 Configuration for DC

**Table 5.1.87.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-66A-71A\_n66A | DC\_2A\_n66A  DC\_66A\_n66A1  DC\_71A\_n66A | CA\_2A-66A-71A | n66A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.87.3 ∆TIB and ∆RIB values

For DC\_2-66-71\_n66 the ΔTIB,c and ΔRIB,c values are reused from DC\_2-66\_n71 and are given in the tables below.

**Table 5.1.87.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-66-71\_n66 | 2 | 0.5 |
| 66 | 0.5 |
| 71 | 0.3 |
| n66 | 0.5 |

**Table 5.1.87.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-66-71\_n66 | 2 | 0.3 |
| 66 | 0.3 |
| 71 | 0 |
| n66 | 0.3 |

5.1.87.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.88 DC\_2A-66A-71A\_n78A DC\_2A-2A-66A-71A\_n78A

5.1.88.1 Operating bands for DC

**Table 5.1.88.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-66-71\_n78 | CA\_2-66-71 | n78 | No |

5.1.88.2 Configuration for DC

**Table 5.1.88.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-66A-71A\_n78A | DC\_2A\_n78A  DC\_66A\_n78A  DC\_71A\_n78A | CA\_2A-66A-71A | n78A |
| DC\_2A-2A-66A-71A\_n78A | DC\_2A\_n78A  DC\_66A\_n78A  DC\_71A\_n78A | CA\_2A-2A-66A-71A | n78A |

5.1.88.3 ∆TIB and ∆RIB values

For DC\_2-66-71\_n78 the ΔTIB,c and ΔRIB,c values are derived from DC\_2-7-13\_n66 and are given in the tables below.

**Table 5.1.88.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-66-71\_n78 DC\_2-2-66-71\_n78 | 2 | 0.5 |
| 66 | 0.5 |
| 71 | 0.3 |
| n78 | 0.5 |

**Table 5.1.88.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-66-71\_n78 DC\_2-2-66-71\_n78 | 2 | 0.3 |
| 66 | 0.5 |
| 71 | 0 |
| n78 | 0.5 |

5.1.88.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.89 DC\_2A-48A-66A\_n71A

5.1.89.1 Operating bands for DC

**Table 5.1.89.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-48-66\_n71 | CA\_2-48-66 | n71 | No |

5.1.89.2 Configuration for DC

**Table 5.1.89.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-48A-66A\_n71A | DC\_2A\_n71A  DC\_48A\_n71A  DC\_66A\_n71A | CA\_2A-48A-66A | n71A |

5.1.89.3 ∆TIB and ∆RIB values

For DC\_2-48-66\_n71 the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-48-66 and are given in the tables below.

**Table 5.1.89.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-48-66\_n71 | 2 | 0.6 |
| 48 | 0.8 |
| 66 | 0.6 |
| n71 | 0.3 |

**Table 5.1.89.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-48-66\_n71 | 2 | 0.3 |
| 48 | 0.5 |
| 66 | 0.3 |
| n71 | 0 |

5.1.89.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.90 DC\_5A-48A-66A\_n71A

5.1.90.1 Operating bands for DC

**Table 5.1.90.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_5-48-66\_n71 | CA\_5-48-66 | n71 | No |

5.1.90.2 Configuration for DC

**Table 5.1.90.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_5A-48A-66A\_n71A | DC\_5A\_n71A  DC\_48A\_n71A  DC\_66A\_n71A | CA\_5A-66A-481A | n71A |

5.1.90.3 ∆TIB and ∆RIB values

For DC\_5-48-66\_n71 the ΔTIB,c and ΔRIB,c values are derived from DC\_5\_n71 and DC\_13-48\_n66 and are given in the tables below.

**Table 5.1.90.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_5-48-66\_n71 | 5 | 0.5 |
| 48 | 0.8 |
| 66 | 0.6 |
| n71 | 0.5 |

**Table 5.1.90.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_5-48-66\_n71 | 5 | 0 |
| 48 | 0.5 |
| 66 | 0.2 |
| n71 | 0 |

5.1.90.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.91 DC\_2A-5A-48A\_n71A

5.1.91.1 Operating bands for DC

**Table 5.1.91.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5-48\_n71 | CA\_2-5-48 | n71 | No |

5.1.91.2 Configuration for DC

**Table 5.1.91.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-5A-48A\_n71A | DC\_2A\_n71A  DC\_5A\_n71A  DC\_48A\_n71A | CA\_2A-5A-48A | n71A |

5.1.91.3 ∆TIB and ∆RIB values

For DC\_2-5-48\_n71 the ΔTIB,c and ΔRIB,c values are derived from DC\_5\_n71 and DC\_2\_n48 and are given in the tables below.

**Table 5.1.91.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-48\_n71 | 2 | 0.6 |
| 5 | 0.5 |
| 48 | 0.8 |
| n71 | 0.5 |

**Table 5.1.91.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-48\_n71 | 2 | 0.2 |
| 5 | 0 |
| 48 | 0.5 |
| n71 | 0 |

5.1.91.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.92 DC\_2A-5A-66A\_n71A

5.1.92.1 Operating bands for DC

**Table 5.1.92.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5-66\_n71 | CA\_2-5-66 | n71 | No |

5.1.92.2 Configuration for DC

**Table 5.1.92.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-5A-66A\_n71A | DC\_2A\_n71A  DC\_5A\_n71A  DC\_66A\_n71A | CA\_2A-5A-66A | n71A |

5.1.92.3 ∆TIB and ∆RIB values

For DC\_2-5-66\_n71 the ΔTIB,c and ΔRIB,c values are derived from DC\_5\_n71 and DC\_2\_n66 and are given in the tables below.

**Table 5.1.92.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n71 | 2 | 0.5 |
| 5 | 0.5 |
| 66 | 0.5 |
| n71 | 0.5 |

**Table 5.1.92.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n71 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n71 | 0 |

5.1.92.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.93 DC\_2A-48A-66A\_n12A

5.1.93.1 Operating bands for DC

**Table 5.1.93.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-48-66\_n12 | CA\_2-48-66 | n12 | No |

5.1.93.2 Configuration for DC

**Table 5.1.93.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-48A-66A\_n12A | DC\_2A\_n12A  DC\_48A\_n12A  DC\_66A\_n12A | CA\_2A-48A-66A | n12A |

5.1.93.3 ∆TIB and ∆RIB values

For DC\_2-48-66\_n12 the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-48-66 and are given in the tables below.

**Table 5.1.93.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-48-66\_n12 | 2 | 0.6 |
| 48 | 0.8 |
| 66 | 0.6 |
| n12 | 0.3 |

**Table 5.1.93.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-48-66\_n12 | 2 | 0.3 |
| 48 | 0.5 |
| 66 | 0.3 |
| n12 | 0 |

5.1.93.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.94 DC\_48A-66A-(n)12AA

5.1.94.1 Operating bands for DC

**Table 5.1.94.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_48-66-(n)12 | CA\_12-48-66 | n12 | No |

5.1.94.2 Configuration for DC

**Table 5.1.94.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_48A-66A-(n)12AA | DC\_(n)12AA1  DC\_48A\_n12A  DC\_66A\_n12A | CA\_12A-48A-66A | n12A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.94.3 ∆TIB and ∆RIB values

For DC\_48-66-(n)12 the ΔTIB,c and ΔRIB,c values are derived from CA\_13-48-66 and are given in the tables below.

**Table 5.1.94.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_48-66-(n)12 | 12 | 0.3 |
| 48 | 0.8 |
| 66 | 0.6 |
| n12 | 0.3 |

**Table 5.1.94.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_48-66-(n)12 | 12 | 0 |
| 48 | 0.5 |
| 66 | 0.2 |
| n12 | 0 |

5.1.94.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.95 DC\_2A-48A-(n)12AA

5.1.95.1 Operating bands for DC

**Table 5.1.95.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-48-(n)12 | CA\_2-12-48 | n12 | No |

5.1.95.2 Configuration for DC

**Table 5.1.95.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-48A-(n)12AA | DC\_2A\_n12A  DC\_(n)12AA1  DC\_48A\_n12A | CA\_2A-12A-48A | n12A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.95.3 ∆TIB and ∆RIB values

For DC\_2-48-(n)12 the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-48 and are given in the tables below.

**Table 5.1.95.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-48-(n)12 | 2 | 0.6 |
| 12 | 0.3 |
| 48 | 0.8 |
| n12 | 0.3 |

**Table 5.1.95.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-48-(n)12 | 2 | 0.2 |
| 12 | 0 |
| 48 | 0.5 |
| n12 | 0 |

5.1.95.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.96 DC\_2A-12A-66A\_n12AA

5.1.96.1 Operating bands for DC

**Table 5.1.96.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-66-(n)12 | CA\_2-12-66 | n12 | No |

5.1.96.2 Configuration for DC

**Table 5.1.96.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-66A-(n)12AA | DC\_2A\_n12A  DC\_(n)12AA1  DC\_66A\_n12A | CA\_2A-12A-66A | n12A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.96.3 ∆TIB and ∆RIB values

For DC\_2-66-(n)12 the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-66 and are given in the tables below.

**Table 5.1.96.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-66-(n)12 | 2 | 0.3 |
| 12 | 0 |
| 66 | 0.3 |
| n12 | 0 |

**Table 5.1.96.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-66-(n)12 | 2 | 0.2 |
| 12 | 0 |
| 66 | 0.5 |
| n12 | 0 |

5.1.96.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.97 DC\_1-3-20\_n41

### 5.1.97.1 Operating bands for EN-DC

Table 5.1.97.1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-20\_n41 | CA\_1-3-20 | n41 | DC\_20A\_n41A |

### 5.1.97.2 Configuration for EN-DC

Table 5.1.97.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-20A\_n41A  DC\_1A-3C-20A\_n41A | DC\_1A\_n41A  DC\_3A\_n41A  DC\_3C\_n41A  DC\_20A\_n41A | CA\_1A-3A-20A  CA\_1A-3C-20A | n41 |

### 5.1.97.3 ∆TIB and ∆RIB values

Table 5.1.97.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20-n41 | 1 | 0.5 |
| 3 | 0.5 |
| 20 | 0.3 |
| n41 | 0.81 |
| 1.32 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

**Table 5.1.97.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20-n41 | 1 | 0 |
| 3 | 0 |
| 20 | 0 |
| n41 | 01 |
| 0.52 |
| NOTE 1: The requirement is applied for UE transmitting on the frequency range of 2545-2690MHz.  NOTE 2: The requirement is applied for UE transmitting on the frequency range of 2496-2545MHz. | | |

5.1.97.4 REFSENS requirements

No additional MSD requirement is observed.

5.1.98 DC\_1-7-28\_n40

5.1.98.1 Operating bands for DC

**Table 5.1.98.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_1-7-28\_n40 | CA\_1-7-28 | n40 | No |

5.1.98.2 Configuration for DC

**Table 5.1.98.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_1A-7A-28A\_n40A | DC\_1A\_n40A  DC\_7A\_n40A  DC\_28A\_n40A | CA\_1A-7A-28A | n40A |

5.1.98.3 ∆TIB and ∆RIB values

For DC\_1-7-28\_n40, the ΔTIB,c and ΔRIB,c values are used from CA\_1-7-28-40 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n40 | 1 | 0.6 |
| 7 | 0.8 |
| 28 | 0.6 |
| n40 | 0.9 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-28\_n40 | 1 | 0 |
| 7 | 0.3 |
| 28 | 0.2 |
| n40 | 0.8 |

5.1.99 DC\_1-3-7\_n40

5.1.99.1 Operating bands for DC

**Table 5.1.99.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_1-3-7\_n40 | CA\_1-3-7 | n40 | No |

5.1.99.2 Configuration for DC

**Table 5.1.99.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_1A-3A-7A\_n40A | DC\_1A\_n40A  DC\_3A\_n40A  DC\_7A\_n40A | CA\_1A-3A-7A | n40A |

5.1.99.3 ∆TIB and ∆RIB values

For DC\_1-3-7\_n40, the ΔTIB,c and ΔRIB,c values are used from CA\_1-3-7-40 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n40 | 1 | 0.6 |
| 3 | 0.6 |
| 7 | 0.8 |
| n40 | 0.9 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n40 | 1 | 0 |
| 3 | 0 |
| 7 | 0.3 |
| n40 | 0.8 |

5.1.100 DC\_3-7-28\_n40

5.1.100.1 Operating bands for DC

**Table 5.1.100.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_3-7-28\_n40 | CA\_3-7-28 | n40 | No |

5.1.100.2 Configuration for DC

**Table 5.1.100.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_3A-7A-28A\_n40A | DC\_3A\_n40A  DC\_7A\_n40A  DC\_28A\_n40A | CA\_3A-7A-28A | n40A |

5.1.100.3 ∆TIB and ∆RIB values

For DC\_3-7-28\_n40, the ΔTIB,c and ΔRIB,c values are used from CA\_3-7-28-40 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n40 | 3 | 0.6 |
| 7 | 0.8 |
| 28 | 0.3 |
| n40 | 0.9 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-28\_n40 | 3 | 0 |
| 7 | 0.3 |
| 28 | 0 |
| n40 | 0.8 |

## 5.1.101 DC\_1A-3A-28A\_n40A

5.1.101.1 Operating bands for DC

**Table 5.1.101.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-28\_n40 | CA\_1-3-28 | n40 | No |

5.1.101.2 Configuration for DC

**Table 5.1.101.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-28A\_n40A | DC\_1A\_n40A DC\_3A\_n40A DC\_28A\_n40A | CA\_1A-3A-28A | n40A |

5.1.101.3 ∆TIB and ∆RIB values

For DC\_1-3-28\_n40 the ΔTIB,c and ΔRIB,c values are derived from CA\_1-3-28-40 and are given in the tables below.

**Table 5.1.101.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n40 | 1 | 0.5 |
| 3 | 0.5 |
| 28 | 0.6 |
| n40 | 0.5 |

**Table 5.1.101.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-28\_n40 | 1 | 0 |
| 3 | 0 |
| 28 | 0.2 |
| n40 | 0 |

5.1.101.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.102 DC\_2-5\_(n)12

### 5.1.102.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5\_(n)12 | CA\_2-5-12 | n12 |  |

### 5.1.102.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-5A\_(n)12AA | DC\_5A\_n12A  DC\_2A\_n12A  DC\_(n)12AA1 | CA\_2A-5A-12A | n12 |
| NOTE1: Only single switched UL is supported | | | |

### 5.1.102.3 ∆TIB and ∆RIB values

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5\_(n)12 | 2 | 0.3 |
| 5 | 0.8 |
| 12 | 0.4 |
| n12 | 0.4 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-5\_(n)12 | 2 | 0 |
| 5 | 0.5 |
| 12 | 0.3 |
| n12 | 0.3 |

## 5.1.103 DC\_2-12\_(n)5

### 5.1.103.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12\_(n)5 | CA\_2-5-12 | n5 |  |

### 5.1.103.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-12A\_(n)5AA | DC\_2A\_n5A  DC\_12A\_n5A  DC\_(n)5AA1 | CA\_2A-5A-12A | n5 |
| NOTE1: Only single switched UL is supported | | | |

### 5.1.103.3 ∆TIB and ∆RIB values

Based on CA\_2-5-12 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-12\_(n)5 | 2 | 0 |
| 5 | 0.5 |
| 12 | 0.3 |
| n5 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-12\_(n)5 | 2 | 0 |
| 5 | 0.5 |
| 12 | 0.5 |
| n5 | 0 |

## 5.1.104 DC\_2-48\_(n)5

### 5.1.104.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-48\_(n)5 | CA\_2-5-48 | n5 |  |

### 5.1.104.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-48A\_(n)5AA | DC\_2A\_n5A  DC\_48A\_n5A  DC\_(n)5AA1 | CA\_2A-5A-48A | n5 |
| NOTE 1: Only single switched UL is supported | | | |

### 5.1.104.3 ∆TIB and ∆RIB values

Based on CA\_2-48 and CA\_2-5 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-48\_(n)5 | 2 | 0.6 |
| 5 | 0.3 |
| 48 | 0.8 |
| n5 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-48\_(n)5 | 2 | 0.2 |
| 5 | 0 |
| 48 | 0.5 |
| n5 | 0 |

## 5.1.105 DC\_2-66\_(n)5

### 5.1.105.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-66\_(n)5 | CA\_2-5-66 | n5 |  |

### 5.1.105.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-66A\_(n)5AA | DC\_2A\_n5A  DC\_66A\_n5A  DC\_(n)5AA1 | CA\_2A-5A-66A | n5 |
| NOTE 1: Only single switched UL is supported | | | |

### 5.1.105.3 ∆TIB and ∆RIB values

Based on CA\_2-5-66 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-66\_(n)5 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n5 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-66\_(n)5 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n5 | 0 |

## 5.1.106 DC\_5-48\_(n)12

### 5.1.106.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_5-48\_(n)12 | CA\_5-12-48 | n12 |  |

### 5.1.106.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| C\_5A-48A\_(n)12AA | DC\_5A\_n12A  DC\_48A\_n12A  DC\_(n)12AA1 | CA\_5A-12A-48A | n12 |
| NOTE1: Only single switched UL is supported | | | |

### 5.1.106.3 ∆TIB and ∆RIB values

Based on CA\_5-12-48following is proposed

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_5-48\_(n)12 | 5 | 0.8 |
| 12 | 0.4 |
| 48 | 0.3 |
| n12 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_5-48\_(n)12 | 5 | 0.5 |
| 12 | 0.3 |
| 48 | 0 |
| n12 | 0.5 |

## 5.1.107 DC\_5-66\_(n)12

### 5.1.107.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_5-66\_(n)12 | CA\_5-12-66 | n12 |  |

### 5.1.107.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_5A-66A\_(n)12AA | DC\_5A\_n12A  DC\_66A\_n12A  DC\_(n)12AA1 | CA\_5A-12A-66A | n12 |
| NOTE1: Only single switched UL is supported | | | |

### 5.1.107.3 ∆TIB and ∆RIB values

Based on CA\_5-12-66 following is proposed

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_5-66\_(n)12 | 5 | 0.3 |
| 12 | 0.8 |
| 66 | 0.8 |
| n12 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_5-66\_(n)12 | 5 | 0 |
| 12 | 0.5 |
| 66 | 0.5 |
| n12 | 0.5 |

## 5.1.108 DC\_12-48\_(n)5

### 5.1.108.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_12-48\_(n)5 | CA\_5-12-48 | n5 |  |

### 5.1.108.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_12A-48A\_(n)5AA | DC\_12A\_n5A  DC\_48A\_n5A  DC\_(n)5AA1 | CA\_5A-12A-48A | n5 |
| NOTE1: Only single switched UL is supported | | | |

### 5.1.108.3 ∆TIB and ∆RIB values

Based on CA\_5-12-48 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_12-48\_(n)5 | 5 | 0.8 |
| 12 | 0.4 |
| 48 | 0.3 |
| n5 | 0.8 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_12-48\_(n)5 | 5 | 0.5 |
| 12 | 0.3 |
| 48 | 0 |
| n5 | 0.5 |

## 5.1.109 DC\_12-66\_(n)5

### 5.1.109.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_12-66\_(n)5 | CA\_5-12-66 | n5 |  |

### 5.1.109.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_12A-66A\_(n)5AA | DC\_12A\_n5A  DC\_66A\_n5A  DC\_(n)5AA1 | CA\_5A-12A-66A | n5 |
| NOTE1: Only single switched UL is supported | | | |

### 5.1.109.3 ∆TIB and ∆RIB values

Based on CA\_5-12-66 following values are proposed.

Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_12-66\_(n)5 | 5 | 0.3 |
| 12 | 0.8 |
| 66 | 0.8 |
| n5 | 0.3 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_12-66\_(n)5 | 5 | 0 |
| 12 | 0.5 |
| 66 | 0.5 |
| n5 | 0 |

## 5.1.110 DC\_1-11-18\_n77

5.1.110.1 Operating bands for DC

Table 5.1.110.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-11-18\_n77 | DC\_1-11-18 | n77 | Yes |

5.1.110.2 Configurations for DC

Table 5.1.110.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-11A-18A\_n77A | DC\_1A\_n77A  DC\_11A\_n77A  DC\_18A\_n77A | CA\_1A-11A-18A | n77 |

### 5.1.110.3 ∆TIB and ∆RIB values

Table 5.1.110.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-11-18\_n77 | 1 | 0.6 |
| 11 | 0.4 |
| 18 | 0.3 |
| n77 | 0.8 |

**Table 5.1.110.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-11-18\_n77 | 1 | 0.2 |
| 11 | 0 |
| 18 | 0 |
| n77 | 0.5 |

5.1.110.4 REFSENS requirements

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

## 5.1.111 DC\_1-11-18\_n78

5.1.111.1 Operating bands for DC

Table 5.1.111.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-11-18\_n78 | DC\_1-11-18 | n78 | No |

5.1.111.2 Configurations for DC

Table 5.1.111.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-11A-18A\_n78A | DC\_1A\_n78A  DC\_11A\_n78A  DC\_18A\_n78A | CA\_1A-11A-18A | n78 |

### 5.1.111.3 ∆TIB and ∆RIB values

Table 5.1.111.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-11-18\_n78 | 1 | 0.3 |
| 11 | 0.4 |
| 18 | 0.3 |
| n78 | 0.8 |

**Table 5.1.111.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-11-18\_n78 | 1 | 0 |
| 11 | 0 |
| 18 | 0 |
| n78 | 0.5 |

5.1.111.4 REFSENS requirements

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

## 5.1.112 DC\_1-18-41\_n3

5.1.112.1 Operating bands for DC

Table 5.1.112.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-41\_n3 | DC\_1-18-41 | n3 | Yes |

5.1.112.2 Configurations for DC

Table 5.1.112.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-18A-41A\_n3A  DC\_1A-18A-41C\_n3A | DC\_1A\_n3A  DC\_18A\_n3A  DC\_41A\_n3A  DC\_41C\_n3A | CA\_1A-18A-41A  CA\_1A-18A-41C | n3 |

### 5.1.112.3 ∆TIB and ∆RIB values

Table 5.1.112.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-41\_n3 | 1 | 0.5 |
| 18 | 0.3 |
| 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 5.1.112.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-41\_n3 | 1 | 0 |
| 18 | 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. | | |

5.1.112.4 REFSENS requirements

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

## 5.1.113 DC\_1-18-41\_n77

5.1.113.1 Operating bands for DC

Table 5.1.113.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-41\_n77 | CA\_1-18-41 | n77 | Yes |

5.1.113.2 Configurations for DC

Table 5.1.113.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-18A-41A\_n77A  DC\_1A-18A-41C\_n77A | DC\_1A\_n77A  DC\_18A\_n77A  DC\_41A\_n77A  DC\_41C\_n77A | CA\_1A-18A-41A  CA\_1A-18A-41C | n77 |

### 5.1.113.3 ∆TIB and ∆RIB values

Table 5.1.113.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-41\_n77 | 1 | 0.6 |
| 18 | 0.3 |
| 41 | 0.5 |
| n77 | 0.8 |

**Table 5.1.113.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-41\_n77 | 1 | 0.2 |
| 18 | 0 |
| 41 | 0 |
| n77 | 0.5 |

5.1.113.4 REFSENS requirements

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

## 5.1.114 DC\_1-18-41\_n78

5.1.114.1 Operating bands for DC

Table 5.1.114.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-41\_n78 | CA\_1-18-41 | n78 | No |

5.1.114.2 Configurations for DC

Table 5.1.114.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-18A-41A\_n78A  DC\_1A-18A-41C\_n78A | DC\_1A\_n78A  DC\_18A\_n78A  DC\_41A\_n78A  DC\_41C\_n78A | CA\_1A-18A-41A  CA\_1A-18A-41C | n78 |

### 5.1.114.3 ∆TIB and ∆RIB values

Table 5.1.114.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-41\_n78 | 1 | 0.5 |
| 18 | 0.3 |
| 41 | 0.5 |
| n78 | 0.8 |

**Table 5.1.114.3-1: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-18-41\_n78 | 1 | 0 |
| 18 | 0 |
| 41 | 0 |
| n78 | 0.5 |

5.1.114.4 REFSENS requirements

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

5.1.115 DC\_2-29-66\_n66

5.1.115.1 Operating bands for EN-DC

Table 5.1.115.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-29-66\_n66 | CA\_2-29-66 | n66 |  |

### 5.1.115.2 Configuration for DC

Table 5.1.115.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-29A-66A\_n66A | DC\_2A\_n66A  DC\_66A\_n66A1 | CA\_2A-29A-66A | n66 |
| NOTE 1: Only single switched UL is supported | | | |

5.1.115.3 ∆TIB and ∆RIB values

For DC\_2-29-66\_n66, the ΔTIB,c and ΔRIB,c values are reused from EN-DC combination DC\_2\_n66, and are given in the tables below.

**Table 5.1.115.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-29-66\_n66 | 2 | 0.5 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.115.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-29-66\_n66 | 2 | 0.3 |
| 66 | 0.3 |
| n66 | 0.3 |

5.1.115.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.116 DC\_29-30-66\_n66

5.1.116.1 Operating bands for EN-DC

Table 5.1.116.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_29-30-66\_n66 | CA\_29-30-66 | n66 |  |

### 5.1.116.2 Configuration for DC

Table 5.1.116.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_29A-30A-66A\_n66A | DC\_30A\_n66A  DC\_66A\_n66A1 | CA\_29A-30A-66A | n66 |
| NOTE 1: Only single switched UL is supported | | | |

5.1.116.3 ∆TIB and ∆RIB values

For DC\_29-30-66\_n66, the ΔTIB,c and ΔRIB,c values are reused from LTE combination CA\_30-66, and are given in the tables below.

**Table 5.1.116.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_29-30-66\_n66 | 30 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.116.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_29-30-66\_n66 | 30 | 0.5 |
| 66 | 0.3 |
| n66 | 0.3 |

5.1.116.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.117 DC\_29-30-66\_n2

5.1.117.1 Operating bands for EN-DC

Table 5.1.117.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_29-30-66\_n2 | CA\_29-30-66 | n2 |  |

### 5.1.117.2 Configuration for DC

Table 5.1.117.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_29A-30A-66A\_n2A | DC\_30A\_n2A  DC\_66A\_n2A | CA\_29A-30A-66A | n2 |
|  | | | |

5.1.117.3 ∆TIB and ∆RIB values

For DC\_29-30-66\_n2, the ΔTIB,c and ΔRIB,c values are reused from EN-DC combination DC\_30-66\_n2, and are given in the tables below.

**Table 5.1.117.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_29-30-66\_n2 | 30 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.117.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_29-30-66\_n2 | 30 | 0.5 |
| 66 | 0.4 |
| n2 | 0.4 |

5.1.117.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.118 DC\_2-29-30\_n2

5.1.118.1 Operating bands for EN-DC

Table 5.1.118.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-29-30\_n2 | CA\_2-29-30 | n2 |  |

### 5.1.118.2 Configuration for DC

Table 5.1.118.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-29A-30A\_n2A | DC\_2A\_n2A1  DC\_30A\_n2A | CA\_2-29A-30A | n2 |
| NOTE1: Only single switched UL is supported | | | |

5.1.118.3 ∆TIB and ∆RIB values

For DC\_2-29-30\_n2, the ΔTIB,c and ΔRIB,c values are reused from LTE combination CA\_2-30, and are given in the tables below.

**Table 5.1.118.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-29-30\_n2 | 2 | 0.5 |
| 30 | 0.3 |
| n2 | 0.5 |

**Table 5.1.118.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-29-30\_n2 | 2 | 0.4 |
| 30 | 0.5 |
| n2 | 0.4 |

5.1.118.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.119 DC\_2-29-30\_n2

5.1.119.1 Operating bands for EN-DC

Table 5.1.119.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-29-66\_n2 | CA\_2-29-66 | n2 |  |

### 5.1.119.2 Configuration for DC

Table 5.1.119.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2-29A-66A\_n2A | DC\_2A\_n2A1  DC\_66A\_n2A | CA\_2-29A-66A | n2 |
| NOTE1: Only single switched UL is supported | | | |

5.1.119.3 ∆TIB and ∆RIB values

For DC\_2-29-66\_n2, the ΔTIB,c and ΔRIB,c values are reused from LTE combination CA\_2-66, and are given in the tables below.

**Table 5.1.119.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-29-66\_n2 | 2 | 0.5 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.119.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-29-66\_n2 | 2 | 0.3 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.119.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.120 DC\_2-30-66\_n2

5.1.120.1 Operating bands for EN-DC

Table 5.1.120.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-30-66\_n2 | CA\_2-30-66 | n2 |  |

### 5.1.120.2 Configuration for DC

Table 5.1.120.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2-30A-66A\_n2A | DC\_2A\_n2A1  DC\_30A\_n2A  DC\_66A\_n2A | CA\_2-30A-66A | n2 |
| NOTE1: Only single switched UL is supported | | | |

5.1.120.3 ∆TIB and ∆RIB values

For DC\_2-30-66\_n2, the ΔTIB,c and ΔRIB,c values are reused from EN-DC combination DC\_30-66\_n2, and are given in the tables below.

**Table 5.1.120.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-30-66\_n2 | 2 | 0.5 |
| 30 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.120.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-30-66\_n2 | 2 | 0.4 |
| 30 | 0.5 |
| 66 | 0.4 |
| n2 | 0.4 |

5.1.120.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.121 DC\_29-30-66-66\_n2

5.1.121.1 Operating bands for EN-DC

Table 5.1.121.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_29-30-66-66\_n2 | CA\_29-30-66-66 | n2 |  |

### 5.1.121.2 Configuration for DC

Table 5.1.121.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_29A-30A-66A-66A\_n2A | DC\_30A\_n2A  DC\_66A\_n2A | CA\_29A-30A-66A-66A | n2 |
|  | | | |

5.1.121.3 ∆TIB and ∆RIB values

For DC\_29-30-66-66\_n2, the ΔTIB,c and ΔRIB,c values are reused from EN-DC combination DC\_30-66\_n2, and are given in the tables below.

**Table 5.1.121.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_29-30-66-66\_n2 | 30 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.121.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_29-30-66-66\_n2 | 30 | 0.5 |
| 66 | 0.4 |
| n2 | 0.4 |

5.1.121.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.122 DC\_2-29-66-66\_n2

5.1.122.1 Operating bands for EN-DC

Table 5.1.122.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-29-66-66\_n2 | CA\_2-29-66-66 | n2 |  |

### 5.1.122.2 Configuration for DC

Table 5.1.122.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-29A-66A-66A\_n2A | DC\_2A\_n2A1  DC\_66A\_n2A | CA\_2A-29A-66A-66A | n2 |
| NOTE 1: Only single switched UL is supported | | | |

5.1.122.3 ∆TIB and ∆RIB values

For DC\_2-29-66-66\_n2 the ΔTIB,c and ΔRIB,c values are reused from EN-DC combination DC\_2\_n66, and are given in the tables below.

**Table 5.1.122.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-29-66-66\_n2 | 2 | 0.5 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.122.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-29-66-66\_n2 | 2 | 0.3 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.122.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.123 DC\_2-30-66-66\_n2

5.1.123.1 Operating bands for EN-DC

Table 5.1.123.1-1: Band combinations EN-DC (three bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-30-66-66\_n2 | CA\_2-30-66-66 | n2 |  |

### 5.1.123.2 Configuration for DC

Table 5.1.123.2-1: Inter-band EN-DC configurations (three bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-30A-66A-66A\_n2A | DC\_2A\_n2A1  DC\_30A\_n2A  DC\_66A\_n2A | CA\_2A-30A-66A-66A | n2 |
| NOTE 1: Only single switched UL is supported | | | |

5.1.123.3 ∆TIB and ∆RIB values

For DC\_2-30-66-66\_n2 the ΔTIB,c and ΔRIB,c values are reused from EN-DC combination DC\_30-66\_n2, and are given in the tables below.

**Table 5.1.123.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-30-66-66\_n2 | 2 | 0.5 |
| 30 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.123.3-2: ΔRIB**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-30-66-66\_n2 | 2 | 0.4 |
| 30 | 0.5 |
| 66 | 0.4 |
| n2 | 0.4 |

5.1.123.4 REFSENS requirements

There is no additional REFSENS requirement for this band combination.

5.1.123 DC\_1-3-8\_n28

5.1.123.1 Operating bands for EN-DC

Table 5.1.123.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-8\_n28 | CA\_1-3-8 | n28 | No |

5.1.123.2 Configurations for EN-DC

Table 5.1.123.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-3A-8A\_n28A | DC\_1A\_n28A  DC\_3A\_n28A  DC\_8A\_n28A | CA\_1A-3A-8A | n28A |

5.1.123.3 ∆TIB and ∆RIB values

For DC\_1-3-8\_n28, the ΔTIB,c and ΔRIB,c values are given in the tables below.

Table 5.1.123.3-1: ΔTIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-8\_n28 | 1 | 0.3 |
| 3 | 0.3 |
| 8 | 0.6 |
| n28 | 0.6 |

Table 5.1.123.3-2: ΔRIB,c

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-8\_n28 | 1 | 0 |
| 3 | 0 |
| 8 | 0.2 |
| n28 | 0.2 |

5.1.123.4 REFSENS requirements

Co-existence study for DC\_1-3-8\_n28 was covered by the studies for the fallback modes of DC\_1-3\_n28, DC\_1-8\_n28 and DC\_3-8\_n28.

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

## 5.1.124 DC\_3-7-8\_n77

### 5.1.124.1 Operating bands for DC

**Table 5.1.124.1-1: Band combinations EN-DC (three bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-8\_n77 | CA\_3-7-8 | n77 | DC\_3\_n77 |

### 5.1.124.2 Configuration for DC

**Table 5.1.124.2-1: Inter-band EN-DC configurations (three bands)**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_3A-7A-8A\_n77A | DC\_3A\_n77A,  DC\_7A\_n77A,  DC\_8A\_n77A | CA\_3A-7A-8A | n77A |

### 5.1.124.3 Co-existence Studies

Based on co-existence studies of DC\_3\_n77, DC\_7\_n77 and DC\_8\_n77, as captured in TR 37.716-11-11 and TR 37.863-01-01, own Rx impact on the 3rd band are the following:

- 4th order IM generated by dual uplink of Band 3 and n77 may fall into Band 8

- 5th order IM generated by dual uplink of Band 3 and n77 may fall into Band 7

- 2nd and 5th order IM generated by dual uplink of Band 7 and n77 may fall into Band 8

- 3rd and 4th order IM generated by dual uplink of Band 7 and n77 may fall into Band 3

- 2nd order IM generated by dual uplink of Band 8 and n77 may fall into Band 7

- 3rd order IM generated by dual uplink of Band 8 and n77 may fall into Band 3

However, those issues were already been covered by the constituent low order combinations, including DC\_3-7\_n77, DC\_3-8\_n77, DC\_7-8\_n77 combinations.

### 5.1.124.4 ∆TIB and ∆RIB values

For DC\_3-7-8\_n77 the ΔTIB,c and ΔRIB,c values are given in the tables below.

**Table 5.1.124.4-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n77 | 3 | 0.6 |
| 7 | 0.6 |
| 8 | 0.6 |
| n77 | 0.8 |

**Table 5.1.124.4-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-8\_n77 | 3 | 0.2 |
| 7 | 0.2 |
| 8 | 0.2 |
| n77 | 0.5 |

### 5.1.124.5 REFSENS requirements

No additional MSD requirement is needed.

5.1.125 DC\_2-5-66\_n2

5.1.125.1 Operating bands for DC

**Table 5.1.125.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-5-66\_n2 | CA\_2-5-66 | n2 | Yes |

5.1.125.2 Configuration for DC

**Table 5.1.125.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-5A-66A\_n2A | DC\_2A\_n2A1  DC\_5A\_n2A  DC\_66A\_n2A | CA\_2A-5A-66A | n2A |
| DC\_2A-5A-5A-66A\_n2A | DC\_2A\_n2A1  DC\_5A\_n2A  DC\_66A\_n2A | CA\_2A-5A-5A-66A | n2A |
| DC\_2A-5A-5A-66A-66A\_n2A | DC\_2A\_n2A1  DC\_5A\_n2A  DC\_66A\_n2A | CA\_2A-5A-5A-66A-66A | n2A |
| DC\_2A-5A-66A-66A\_n2A | DC\_2A\_n2A1  DC\_5A\_n2A  DC\_66A\_n2A | CA\_2A-5A-66A-66A | n2A |
| DC\_2A-5B-66A\_n2A | DC\_2A\_n2A1  DC\_5A\_n2A  DC\_66A\_n2A | CA\_2A-5B-66A | n2A |
| DC\_2A-5B-66A-66A\_n2A | DC\_2A\_n2A1  DC\_5A\_n2A  DC\_66A\_n2A | CA\_2A-5B-66A-66A | n2A |
| NOTE1: Only single switched UL is supported | | | |

5.1.125.3 ∆TIB and ∆RIB values

For DC\_2-5-66\_n2, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-5-66, CA\_2-2-5-66, CA\_2-5-66-66, CA\_5-5-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n2 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n2 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.126 DC\_2-5-66\_n5

5.1.126.1 Operating bands for DC

**Table 5.1.126.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-5-66\_n5 | CA\_2-5-66 | n5 | No |

5.1.126.2 Configuration for DC

**Table 5.1.126.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-2A-5A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-2A-5A-66A | n5A |
| DC\_2A-2A-5A-66A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-2A-5A-66A-66A | n5A |
| DC\_2A-5A-66A-66A\_n5A | DC\_2A\_n5A  DC\_66A\_n5A | CA\_2A-5A-66A-66A | n5A |

5.1.126.3 ∆TIB and ∆RIB values

For DC\_2-5-66\_n5, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-5-66, CA\_2-2-5-66, CA\_2-5-66-66, CA\_5-5-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n5 | 2 | 0.5 |
| 5 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-5-66\_n5 | 2 | 0.3 |
| 5 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.127 DC\_2-13-66\_n2

5.1.127.1 Operating bands for DC

**Table 5.1.127.1-1: Band combinations EN-DC (four bands)**

| **EN-DC Band** | **E-UTRA Band** | **NR Band** | **Single UL allowed** |
| --- | --- | --- | --- |
| DC\_2-13-66\_n2 | CA\_2-13-66 | n2 | No |

5.1.127.2 Configuration for DC

**Table 5.1.127.2-1: Inter-band EN-DC configurations (four bands)**

| **EN-DC**  **configuration** | **Uplink EN-DC**  **configuration** | **E-UTRA configuration** | **NR configuration** |
| --- | --- | --- | --- |
| DC\_2A-13A-66A\_n2A | DC\_13A\_n2A | CA\_2A-13A-66A | n2A |
| DC\_2A-13A-66A-66A\_n2A | DC\_13A\_n2A | CA\_2A-13A-66A-66A | n2A |

5.1.127.3 ∆TIB and ∆RIB values

For DC\_2-13-66\_n2, the ΔTIB,c and ΔRIB,c values are derived from CA\_2-13-66, CA\_2-2-13-66, CA\_2-13-66-66 in TS 36.101.

**Table 6.2B.4.2.3.3-1: ΔTIB,c due to EN-DC(four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n2 | 2 | 0.5 |
| 13 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 7.3B.3.3.3-1: ΔRIB,c due to EN-DC (four bands)**

| E-UTRA and NR DC Configuration | E-UTRA and NR Band | ΔRIB,c [dB] |
| --- | --- | --- |
| DC\_2-13-66\_n2 | 2 | 0.3 |
| 13 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

## 5.1.128 DC\_2A-14A-66A\_n66A

5.1.128.1 Operating bands for DC

**Table 5.1.128.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-14-66\_n66 | CA\_2-14-66 | n66 |  |

5.1.128.2 Configuration for DC

**Table 5.1.128.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-14A-66A\_n66A  DC\_2A-2A-14A-66A\_n66A | DC\_2A\_n66A  DC\_14A\_n66A  DC\_66A\_n66A1 | CA\_2A-14A-66A  CA\_2A-2A-14A-66A | n66A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.128.3 ∆TIB and ∆RIB values

For DC\_2-14-66\_n66 the ΔTIB,c and ΔRIB,c values are reused from CA\_2-14-66 and are given in the tables below.

**Table 5.1.128.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-14-66\_n66 DC\_2-2-14-66\_n66 | 2 | 0.5 |
| 14 | 0.3 |
| 66 | 0.5 |
| n66 | 0.5 |

**Table 5.1.128.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-14-66\_n66 DC\_2-2-14-66\_n66 | 2 | 0.3 |
| 14 | 0 |
| 66 | 0.3 |
| n66 | 0.3 |

5.1.128.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.129 DC\_2A-14A-66A\_n2A

5.1.129.1 Operating bands for DC

**Table 5.1.129.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-14-66\_n2 | CA\_2-14-66 | n2 |  |

5.1.129.2 Configuration for DC

**Table 5.1.129.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-14A-66A\_n2A  DC\_2A-14A-66A-66A\_n2A | DC\_2A\_n2A1  DC\_14A\_n2A  DC\_66A\_n2A | CA\_2A-14A-66A  CA\_2A-14A-66A-66A | n2A |
| NOTE 1: Only single switched UL is supported | | | |

5.1.129.3 ∆TIB and ∆RIB values

For DC\_2-14-66\_n2 the ΔTIB,c and ΔRIB,c values are reused from CA\_2-14-66 and are given in the tables below.

**Table 5.1.129.3-1: ΔTIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_2-14-66\_n2 DC\_2-14-66-66\_n2 | 2 | 0.5 |
| 14 | 0.3 |
| 66 | 0.5 |
| n2 | 0.5 |

**Table 5.1.129.3-2: ΔRIB,c**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_2-14-66\_n2 DC\_2-14-66-66\_n2 | 2 | 0.3 |
| 14 | 0 |
| 66 | 0.3 |
| n2 | 0.3 |

5.1.129.4 REFSENS requirements

No further MSD are needed to be specified.

## 5.1.130 DC\_1-3-7\_n8

### 5.1.130.1 Operating bands for EN-DC

Table 5.1.130.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-7\_n8 | CA\_1-3-7 | n8 |  |

### 5.1.130.2 Configuration for EN-DC

Table 5.1.130.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-7A\_n8A | DC\_1A\_n8A  DC\_3A\_n8A  DC\_7A\_n8A | CA\_1A-3A-7A | n8 |

### 5.1.130.3 ∆TIB and ∆RIB values

Table 5.1.130.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n8 | 1 | 0.6 |
| 3 | 0.6 |
| 7 | 0.6 |
| n8 | 0.3 |

**Table 5.1.130.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-7\_n8 | 1 | 0 |
| 3 | 0 |
| 7 | 0 |
| n8 | 0 |

## 5.1.131 DC\_1-3-20\_n8

### 5.1.131.1 Operating bands for EN-DC

Table 5.1.131.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-20\_n8 | CA\_1-3-20 | n8 |  |

### 5.1.131.2 Configuration for EN-DC

Table 5.1.131.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-20A\_n8A | DC\_1A\_n8A  DC\_3A\_n8A  DC\_20A\_n8A | CA\_1A-3A-20A | n8 |

### 5.1.131.3 ∆TIB and ∆RIB values

Table 5.1.131.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-20\_n8 | 1 | 0.6 |
| 3 | 0.6 |
| 20 | 0.6 |
| n8 | 0.6 |

**Table 5.1.131.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-20\_n8 | 1 | 0 |
| 3 | 0 |
| 20 | 0 |
| n8 | 0 |

## 5.1.132 DC\_1-7-20\_n8

### 5.1.132.1 Operating bands for EN-DC

Table 5.1.132.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-20\_n8 | CA\_1-7-20 | n8 |  |

### 5.1.132.2 Configuration for EN-DC

Table 5.1.132.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-7A-20A\_n8A | DC\_1A\_n8A  DC\_7A\_n8A  DC\_20A\_n8A | CA\_1A-7A-20A | n8 |

### 5.1.132.3 ∆TIB and ∆RIB values

Table 5.1.132.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-20\_n8 | 1 | 0.6 |
| 7 | 0.6 |
| 20 | 0.6 |
| n8 | 0.6 |

**Table 5.1.132.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-20\_n8 | 1 | 0 |
| 7 | 0 |
| 20 | 0 |
| n8 | 0 |

## 5.1.133 DC\_3-7-20\_n8

### 5.1.133.1 Operating bands for EN-DC

Table 5.1.133.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-7-20\_n8 | CA\_3-7-20 | n8 |  |

### 5.1.133.2 Configuration for EN-DC

Table 5.1.133.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-7A-20A\_n8A | DC\_3A\_n8A  DC\_7A\_n8A  DC\_20A\_n8A | CA\_3A-7A-20A | n8 |

### 5.1.133.3 ∆TIB and ∆RIB values

Table 5.1.133.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_3-7-20\_n8 | 3 | 0.6 |
| 7 | 0.6 |
| 20 | 0.6 |
| n8 | 0.6 |

**Table 5.1.133.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_3-7-20\_n8 | 3 | 0 |
| 7 | 0 |
| 20 | 0 |
| n8 | 0 |

## 5.1.134 DC\_1-7-8\_n3

### 5.1.134.1 Operating bands for EN-DC

Table 5.1.134.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-7-8\_n3 | CA\_1-7-8 | n3 |  |

### 5.1.134.2 Configuration for EN-DC

Table 5.1.134.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-7A-8A\_n3A | DC\_1A\_n3A  DC\_7A\_n3A  DC\_8A\_n3A | CA\_1A-3A-7A | n3 |

### 5.1.134.3 ∆TIB and ∆RIB values

Table 5.1.134.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-7-8\_n3 | 1 | 0.6 |
| 7 | 0.6 |
| 8 | 0.3 |
| n3 | 0.6 |

**Table 5.1.134.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-7-8\_n3 | 1 | 0 |
| 7 | 0 |
| 8 | 0 |
| n3 | 0 |

## 5.1.135 DC\_1-20A\_(n)38

### 5.1.135.1 Operating bands for EN-DC

Table 5.1.135.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-20A\_(n)38 | CA\_1-20-38 | n38 |  |

### 5.1.135.2 Configuration for EN-DC

Table 5.1.135.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-20A\_(n)38AA | DC\_1A\_n38A  DC\_20A\_n38A | CA\_1A-20A-38A | n38 |

### 5.1.135.3 ∆TIB and ∆RIB values

Table 5.1.135.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-20A\_(n)38 | 1 | 0.5 |
| 20 | 0.3 |
| 38 | 0.5 |
| n38 | 0.5 |

**Table 5.1.135.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-20A\_(n)38 | 1 | 0 |
| 20 | 0 |
| 38 | 0 |
| n38 | 0 |

## 5.1.136 DC\_1-3-32\_n78

### 5.1.136.1 Operating bands for EN-DC

Table 5.1.136.1-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-32\_n78 | CA\_1-3-32 | n78 |  |

### 5.1.136.2 Configuration for EN-DC

Table 5.1.136.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-32A\_n78A  DC\_1A-3A-32A\_n78(2A) | DC\_1A\_n78A  DC\_3A\_n78A | CA\_1A-3A-7A | n78 |

### 5.1.136.3 ∆TIB and ∆RIB values

Table 5.1.136.3-1: ΔTIB,c due to EN-DC(four bands)

| Inter-band DC Configuration | E-UTRA and NR Band | ΔTIB,c [dB] |
| --- | --- | --- |
| DC\_1-3-32\_n78 | 1 | 0.6 |
| 3 | 0.6 |
| n78 | 0.8 |

**Table 5.1.136.3-2: ΔRIB,c due to EN-DC (four bands)**

| Inter-band DC Configuration | E-UTRA and NR Band | ΔRIB [dB] |
| --- | --- | --- |
| DC\_1-3-32\_n78 | 1 | 0 |
| 3 | 0 |
| 32 | 0 |
| n78 | 0.5 |

## 5.2.1 DC\_1-3-18\_n257

### 5.2.1.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-18\_n257 | CA\_1-3-18 | n257 |  |

### 5.2.1.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-18A\_n257A | DC\_1A\_n257A  DC\_3A\_n257A  DC\_18A\_n257A | CA\_1A-3A-18A | n257 |

## 5.2.2 DC\_1-3-41\_n257

### 5.2.2.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-41\_n257 | CA\_1-3-41 | n257 |  |

### 5.2.2.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-41A\_n257A | DC\_1A\_n257A  DC\_3A\_n257A  DC\_41A\_n257A | CA\_1A-3A-41A | n257 |
| DC\_1A-3A-41C\_n257A | DC\_1A\_n257A  DC\_3A\_n257A  DC\_41A\_n257A | CA\_1A-3A-41C | n257 |

## 5.2.3 DC\_3-41-42\_n257

### 5.2.3.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-41-42\_n257 | CA\_3-41-42 | n257 |  |

### 5.2.3.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-41A-42A\_n257A | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42A | n257 |
| DC\_3A-41C-42A\_n257A | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42A | n257 |
| DC\_3A-41A-42C\_n257A | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42A | n257 |
| DC\_3A-41C-42C\_n257A | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42A | n257 |

## 5.2.4 DC\_1A-3A-5A\_n257

### 5.2.4.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-5\_n257 | CA\_1-3-5 | n257 | No |

### 5.2.4.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-5A\_n257D  DC\_1A-3A-5A\_n257E  DC\_1A-3A-5A\_n257F  DC\_1A-3A-5A\_n257G  DC\_1A-3A-5A\_n257H  DC\_1A-3A-5A\_n257I  DC\_1A-3A-5A\_n257J  DC\_1A-3A-5A\_n257K  DC\_1A-3A-5A\_n257L  DC\_1A-3A-5A\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_5A\_n257A | CA\_1A-3A-5A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.5 DC\_1A-3A-7A\_n257

### 5.2.5.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-7\_n257 | CA\_1-3-7 | n257 | No |

### 5.2.5.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-7A\_n257D  DC\_1A-3A-7A\_n257E  DC\_1A-3A-7A\_n257F  DC\_1A-3A-7A\_n257G  DC\_1A-3A-7A\_n257H  DC\_1A-3A-7A\_n257I  DC\_1A-3A-7A\_n257J DC\_1A-3A-7A\_n257K  DC\_1A-3A-7A\_n257L  DC\_1A-3A-7A\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_7A\_n257A | CA\_1A-3A-7A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.6 DC\_1A-3A-7A-7A\_n257

### 5.2.6.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-7-7\_n257 | CA\_1-3-7-7 | n257 | No |

### 5.2.6.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-7A-7A\_n257D  DC\_1A-3A-7A-7A\_n257E  DC\_1A-3A-7A-7A\_n257F  DC\_1A-3A-7A-7A\_n257G  DC\_1A-3A-7A-7A\_n257H  DC\_1A-3A-7A-7A\_n257I  DC\_1A-3A-7A-7A\_n257J  DC\_1A-3A-7A-7A\_n257K  DC\_1A-3A-7A-7A\_n257L  DC\_1A-3A-7A-7A\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_7A\_n257A | CA\_1A-3A-7A-7A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.7 DC\_1A-5A-7A\_n257

### 5.2.7.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-5-7\_n257 | CA\_1-5-7 | n257 | No |

### 5.2.7.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-5A-7A\_n257D  DC\_1A-5A-7A\_n257E  DC\_1A-5A-7A\_n257F  DC\_1A-5A-7A\_n257G  DC\_1A-5A-7A\_n257H  DC\_1A-5A-7A\_n257I  DC\_1A-5A-7A\_n257J  DC\_1A-5A-7A\_n257K  DC\_1A-5A-7A\_n257L  DC\_1A-5A-7A\_n257M | DC\_1A\_n257A  DC\_5A\_n257A  DC\_7A\_n257A | CA\_1A-5A-7A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.8 DC\_1A-5A-7A-7A\_n257

### 5.2.8.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-5-7-7\_n257 | CA\_1-5-7-7 | n257 | No |

### 5.2.8.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-5A-7A-7A\_n257D  DC\_1A-5A-7A-7A\_n257E  DC\_1A-5A-7A-7A\_n257F  DC\_1A-5A-7A-7A\_n257G  DC\_1A-5A-7A-7A\_n257H  DC\_1A-5A-7A-7A\_n257I  DC\_1A-5A-7A-7A\_n257J  DC\_1A-5A-7A-7A\_n257K  DC\_1A-5A-7A-7A\_n257L  DC\_1A-5A-7A-7A\_n257M | DC\_1A\_n257A  DC\_5A\_n257A  DC\_7A\_n257A | CA\_1A-5A-7A-7A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.9 DC\_3A-5A-7A\_n257

### 5.2.9.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-5-7\_n257 | CA\_3-5-7 | n257 | No |

### 5.2.9.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-5A-7A\_n257D  DC\_3A-5A-7A\_n257E  DC\_3A-5A-7A\_n257F  DC\_3A-5A-7A\_n257G  DC\_3A-5A-7A\_n257H  DC\_3A-5A-7A\_n257I  DC\_3A-5A-7A\_n257J  DC\_3A-5A-7A\_n257K  DC\_3A-5A-7A\_n257L  DC\_3A-5A-7A\_n257M | DC\_3A\_n257A  DC\_5A\_n257A  DC\_7A\_n257A | CA\_3A-5A-7A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.10 DC\_3A-5A-7A-7A\_n257

### 5.2.10.1 Operating bands for DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-5-7-7\_n257 | CA\_3-5-7-7 | n257 | No |

### 5.2.10.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-5A-7A-7A\_n257D  DC\_3A-5A-7A-7A\_n257E  DC\_3A-5A-7A-7A\_n257F  DC\_3A-5A-7A-7A\_n257G  DC\_3A-5A-7A-7A\_n257H  DC\_3A-5A-7A-7A\_n257I  DC\_3A-5A-7A-7A\_n257J  DC\_3A-5A-7A-7A\_n257K  DC\_3A-5A-7A-7A\_n257L  DC\_3A-5A-7A-7A\_n257M | DC\_3A\_n257A  DC\_5A\_n257A  DC\_7A\_n257A | CA\_3A-5A-7A-7A | CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.11 DC\_1-18-42\_n257

### 5.2.11.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-42\_n257 | CA\_1-18-42 | n257 | no |

### 5.2.11.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-18A-42A\_n257A | DC\_1A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 1A-18A-42A | n257 |
| DC\_1A-18A-42A\_n257F | DC\_1A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 1A-18A-42A | n257 |
| DC\_1A-18A-42A\_n257M | DC\_1A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 1A-18A-42A | n257 |
| DC\_1A-18A-42C\_n257A | DC\_1A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 1A-18A-42C | n257 |
| DC\_1A-18A-42C\_n257F | DC\_1A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 1A-18A-42C | n257 |
| DC\_1A-18A-42C\_n257M | DC\_1A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 1A-18A-42C | n257 |

## 5.2.12 DC\_3-18-42\_n257

### 5.2.12.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-18-42\_n257 | CA\_3-18-42 | n257 |  |

### 5.2.12.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-18A-42A\_n257A | DC\_3A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 3A-18A-42A | n257 |
| DC\_3A-18A-42A\_n257F | DC\_3A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 3A-18A-42A | n257 |
| DC\_3A-18A-42A\_n257M | DC\_3A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 3A-18A-42A | n257 |
| DC\_3A-18A-42C\_n257A | DC\_3A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 3A-18A-42C | n257 |
| DC\_3A-18A-42C\_n257F | DC\_3A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 3A-18A-42C | n257 |
| DC\_3A-18A-42C\_n257M | DC\_3A\_n257A  DC\_18A\_n257A  DC\_42A\_n257A | CA\_ 3A-18A-42C | n257 |

## 5.2.13 DC\_1-3-41\_n257

### 5.2.13.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-41\_n257 | CA\_1-3-41 | n257 |  |

### 5.2.13.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-3A-41A\_n257F | DC\_1A\_n257A  DC\_3A\_n257A  DC\_41A\_n257A | CA\_1A-3A-41A | n257 |
| DC\_1A-3A-41A\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_41A\_n257A | CA\_1A-3A-41A | n257 |
| DC\_1A-3A-41C\_n257F | DC\_1A\_n257A  DC\_3A\_n257A  DC\_41A\_n257A | CA\_1A-3A-41C | n257 |
| DC\_1A-3A-41C\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_41A\_n257A | CA\_1A-3A-41C | n257 |

## 5.2.14 DC\_1-41-42\_n257

### 5.2.14.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-41-42\_n257 | CA\_1-41-42 | n257 |  |

### 5.2.14.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_1A-41A-42A\_n257F | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41A-42A | n257 |
| DC\_1A-41A-42A\_n257M | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41A-42A | n257 |
| DC\_1A-41C-42A\_n257F | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41C-42A | n257 |
| DC\_1A-41C-42A\_n257M | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41C-42A | n257 |
| DC\_1A-41A-42C\_n257F | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41A-42C | n257 |
| DC\_1A-41A-42C\_n257M | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41A-42C | n257 |
| DC\_1A-41C-42C\_n257F | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41C-42C | n257 |
| DC\_1A-41C-42C\_n257M | DC\_1A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 1A-41C-42C | n257 |

## 5.2.15 DC\_3-41-42\_n257

### 5.2.15.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-41-42\_n257 | CA\_3-41-42 | n257 |  |

### 5.2.15.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-41A-42A\_n257F | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42A | n257 |
| DC\_3A-41A-42A\_n257M | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42A | n257 |
| DC\_3A-41C-42A\_n257F | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41C-42A | n257 |
| DC\_3A-41C-42A\_n257M | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41C-42A | n257 |
| DC\_3A-41A-42C\_n257F | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42C | n257 |
| DC\_3A-41A-42C\_n257M | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41A-42C | n257 |
| DC\_3A-41C-42C\_n257F | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41C-42C | n257 |
| DC\_3A-41C-42C\_n257M | DC\_3A\_n257A  DC\_41A\_n257A  DC\_42A\_n257A | CA\_ 3A-41C-42C | n257 |

## 5.2.16 DC\_2A-12A-30A\_n260, DC\_2A-2A-12A-30A\_n260

5.2.16.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12-30\_n260 | CA\_2-12-30 | n260 |  |

### 5.2.16.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-12A-30A\_n260A  DC\_2A-12A-30A\_n260G  DC\_2A-12A-30A\_n260H  DC\_2A-12A-30A\_n260I  DC\_2A-12A-30A\_n260J  DC\_2A-12A-30A\_n260K  DC\_2A-12A-30A\_n260L  DC\_2A-12A-30A\_n260M | DC\_2A\_n260A  DC\_12A\_n260A  DC\_30A\_n260A | CA\_2A-12A-30A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-2A-12A-30A\_n260A | DC\_2A\_n260A  DC\_12A\_n260A  DC\_30A\_n260A | CA\_2A-2A-12A-30A | n260 |

## 5.2.17 DC\_2A-5A-30A\_n260, DC\_2A-2A-5A-30A\_n260

5.2.17.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5-30\_n260 | CA\_2-5-30 | n260 |  |

### 5.2.17.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-5A-30A\_n260  DC\_2A-5A-30A\_n260G  DC\_2A-5A-30A\_n260H  DC\_2A-5A-30A\_n260I  DC\_2A-5A-30A\_n260J  DC\_2A-5A-30A\_n260K  DC\_2A-5A-30A\_n260L  DC\_2A-5A-30A\_n260M | DC\_2A\_n260A  DC\_5A\_n260A  DC\_30A\_n260A | CA\_2A-5A-30A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-2A-5A-30A\_n260 | DC\_2A\_n260A  DC\_5A\_n260A  DC\_30A\_n260A | CA\_2A-2A-5A-30A | n260 |

## 5.2.18 DC\_2A-12A-66A\_n260, DC\_2A-2A-12A-66A\_n260, DC\_2A-12A-66A-66A\_n260

5.2.18.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-12-66\_n260 | CA\_2-12-66 | n260 |  |

### 5.2.18.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-12A-66A\_n260A  DC\_2A-12A-66A\_n260G  DC\_2A-12A-66A\_n260H  DC\_2A-12A-66A\_n260I  DC\_2A-12A-66A\_n260J  DC\_2A-12A-66A\_n260K  DC\_2A-12A-66A\_n260L  DC\_2A-12A-66A\_n260M | DC\_2A\_n260A  DC\_12A\_n260A  DC\_66A\_n260A | CA\_2A-12A-66A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-2A-12A-66A\_n260A | DC\_2A\_n260A  DC\_12A\_n260A  DC\_66A\_n260A | CA\_2A-2A-12A-66A | n260 |
| DC\_2A-12A-66A-66A\_n260A | DC\_2A\_n260A  DC\_12A\_n260A  DC\_66A\_n260A | CA\_2A-12A-66A-66A | n260 |

## 5.2.19 DC\_2A-5A-66A\_n260, DC\_2A-2A-5A-66A\_n260, DC\_2A-5A-66A-66A\_n260

5.2.19.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-5-66\_n260 | CA\_2-5-66 | n260 |  |

### 5.2.19.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-5A-66A\_n260A  DC\_2A-5A-66A\_n260G  DC\_2A-5A-66A\_n260H  DC\_2A-5A-66A\_n260I  DC\_2A-5A-66A\_n260J  DC\_2A-5A-66A\_n260K  DC\_2A-5A-66A\_n260L  DC\_2A-5A-66A\_n260M | DC\_2A\_n260A  DC\_5A\_n260A  DC\_66A\_n260A | CA\_2A-5A-66A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-2A-5A-66A\_n260A | DC\_2A\_n260A  DC\_5A\_n260A  DC\_66A\_n260A | CA\_2A-2A-5A-66A | n260 |
| DC\_2A-5A-66A-66A\_n260A | DC\_2A\_n260A  DC\_5A\_n260A  DC\_66A\_n260A | CA\_2A-5A-66A-66A | n260 |

5.2.20 DC\_5A-30A-66A\_n260, DC\_5A-30A-66A-66A\_n260

5.2.20.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_5-30-66\_n260 | CA\_5-30-66 | n260 |  |

### 5.2.20.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_5A-30A-66A \_n260A  DC\_5A-30A-66A n260G  DC\_5A-30A-66A n260H  DC\_5A-30A-66A n260I  DC\_5A-30A-66A n260J  DC\_5A-30A-66A n260K  DC\_5A-30A-66A n260L  DC\_5A-30A-66A n260M | DC\_5A\_n260A  DC\_30A\_n260A  DC\_66A\_n260A | CA\_5A-30A-66A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_5A-30A-66A-66A \_n260A | DC\_5A\_n260A  DC\_30A\_n260A  DC\_66A\_n260A | CA\_5A-30A-66A-66A | n260 |

5.2.21 DC\_2A-30A-66A\_n260

5.2.21.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-30-66\_n260 | CA\_2-30-66 | n260 |  |

### 5.2.21.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-30A-66A \_n260A  DC\_2A-30A-66A n260G  DC\_2A-30A-66A n260H  DC\_2A-30A-66A n260I  DC\_2A-30A-66A n260J  DC\_2A-30A-66A n260K  DC\_2A-30A-66A n260L  DC\_2A-30A-66A n260M | DC\_2A\_n260A  DC\_30A\_n260A  DC\_66A\_n260A | CA\_2A-30A-66A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-30A-66A-66A \_n260A | DC\_2A\_n260A  DC\_30A\_n260A  DC\_66A\_n260A | CA\_2A-30A-66A-66A | n260 |

5.2.22 DC\_2A-29A-30A\_n260, DC\_2A-2A-29A-30A\_n260

5.2.22.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-29-30\_n260 | CA\_2-29-30 | n260 |  |

### 5.2.22.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_2A-29A-30A\_n260A  DC\_2A-29A-30A\_n260G  DC\_2A-29A-30A\_n260H  DC\_2A-29A-30A\_n260I  DC\_2A-29A-30A\_n260J  DC\_2A-29A-30A\_n260K  DC\_2A-29A-30A\_n260L  DC\_2A-29A-30A\_n260M | DC\_2A\_n260A  DC\_30A\_n260A | CA\_2A-29A-30A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-2A-29A-30A\_n260A | DC\_2A\_n260A  DC\_30A\_n260A | CA\_2A-2A-29A-30A | n260 |

5.2.23 DC\_12A-30A-66A\_n260, DC\_12A-30A-66A-66A\_n260

5.2.23.1 Operating bands for EN-DC

Table 5.2B.5.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_12-30-66\_n260 | CA\_12-30-66 | n260 |  |

### 5.2.23.2 Configuration for DC

Table 5.5B.5.3-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_12A-30A-66A\_n260A  DC\_12A-30A-66A\_n260G  DC\_12A-30A-66A\_n260H  DC\_12A-30A-66A\_n260I  DC\_12A-30A-66A\_n260J  DC\_12A-30A-66A\_n260K  DC\_12A-30A-66A\_n260L  DC\_12A-30A-66A\_n260M | DC\_12A\_n260A  DC\_30A\_n260A  DC\_66A\_n260A | CA\_12A-30A-66A | n260  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_12A-30A-66A-66A \_n260A | DC\_12A\_n260A  DC\_30A\_n260A  DC\_66A\_n260A | CA\_12A-30A-66A-66A | n260 |

## 5.2.24 DC\_1A-3A-8A\_n257

### 5.2.24.1 Operating bands for DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-8\_n257 | CA\_1-3-8 | n257 | No |

### 5.2.24.2 Configuration for DC

Table 5.2B.X.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\_1A-3A-8A\_n257A  DC\_1A-3A-8A\_n257D  DC\_1A-3A-8A\_n257E  DC\_1A-3A-8A\_n257F  DC\_1A-3A-8A\_n257G  DC\_1A-3A-8A\_n257H  DC\_1A-3A-8A\_n257I  DC\_1A-3A-8A\_n257J  DC\_1A-3A-8A\_n257K  DC\_1A-3A-8A\_n257L  DC\_1A-3A-8A\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_8A\_n257A | CA\_1A-3A-8A | n257  CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

## 5.2.25 DC\_1A-3C-8A\_n257

### 5.2.25.1 Operating bands for DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-8\_n257 | CA\_1-3-8 | n257 | No |

### 5.2.25.2 Configuration for DC

Table 5.2B.X.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\_1A-3C-8A\_n257A  DC\_1A-3C-8A\_n257D  DC\_1A-3C-8A\_n257E  DC\_1A-3C-8A\_n257F  DC\_1A-3C-8A\_n257G  DC\_1A-3C-8A\_n257H  DC\_1A-3C-8A\_n257I  DC\_1A-3C-8A\_n257J  DC\_1A-3C-8A\_n257K  DC\_1A-3C-8A\_n257L  DC\_1A-3C-8A\_n257M | DC\_1A\_n257A  DC\_3A\_n257A  DC\_8A\_n257A | CA\_1A-3C-8A | n257  CA\_n257D  CA\_n257E  CA\_n257F  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

5.2.26 DC\_1-8-11\_n257

5.2.26.1 Operating bands for EN-DC

Table 5.2.26.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-8-11\_n257 | CA\_1-8-11 | n257 |  |

5.2.26.2 Configurations for EN-DC

Table 5.2.26.2-1: 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\_n257A | DC\_1A\_n257A  DC\_8A\_n257A  DC\_11A\_n257A | CA\_1A-8A-11A | n257A |
| DC\_1A-8A-11A\_n257D | DC\_1A\_n257A  DC\_8A\_n257A  DC\_11A\_n257A | CA\_1A-8A-11A | n257D |

5.2.26.4 REFSENS requirements

Co-existence study for DC\_1-8-11\_n257 was covered by the studies for the fallback modes of DC\_1-8\_n257, DC\_1-11\_n257 and DC\_8-11\_n257.

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

## 5.2.27 DC\_1-3-42\_n257

### 5.2.27.1 Operating bands for DC

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

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-3-42\_n257 | CA\_1-3-42 | n257 | No |

### 5.2.27.2 Configuration for DC

Table 5.2B.X.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\_1A-3A-42A\_n257A  DC\_1A-3A-42A\_n257G  DC\_1A-3A-42A\_n257H  DC\_1A-3A-42A\_n257I  DC\_1A-3A-42A\_n257J  DC\_1A-3A-42A\_n257K  DC\_1A-3A-42A\_n257L  DC\_1A-3A-42A\_n257M  DC\_1A-3A-42C\_n257A  DC\_1A-3A-42C\_n257G  DC\_1A-3A-42C\_n257H  DC\_1A-3A-42C\_n257I  DC\_1A-3A-42C\_n257J  DC\_1A-3A-42C\_n257K  DC\_1A-3A-42C\_n257L  DC\_1A-3A-42C\_n257M  DC\_1A-3A-42D\_n257A  DC\_1A-3A-42D\_n257G  DC\_1A-3A-42D\_n257H  DC\_1A-3A-42D\_n257I  DC\_1A-3A-42D\_n257J  DC\_1A-3A-42D\_n257K  DC\_1A-3A-42D\_n257L  DC\_1A-3A-42D\_n257M | DC\_1A\_n257A  DC\_1A\_n257G  DC\_1A\_n257H  DC\_1A\_n257I  DC\_1A\_n257J  DC\_1A\_n257K  DC\_1A\_n257L  DC\_1A\_n257M  DC\_3A\_n257A  DC\_3A\_n257G  DC\_3A\_n257H  DC\_3A\_n257I  DC\_3A\_n257J  DC\_3A\_n257K  DC\_3A\_n257L  DC\_3A\_n257M  DC\_42A-n257A  DC\_42A-n257G  DC\_42A-n257H  DC\_42A-n257I  DC\_42C-n257A  DC\_42C-n257G  DC\_42C-n257H  DC\_42C-n257I | CA\_1A-3A-42A  CA\_1A-3A-42C  CA\_1A-3A-42D | n257  CA\_n257G  CA\_n257H  CA\_n257I  CA\_n257J  CA\_n257K  CA\_n257L  CA\_n257M |

### 5.2.28.2 Configuration for DC

Table 5.2B.X.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-46A-66A\_n261A  DC\_2A-46C-66A\_n261A  DC\_2A-46D-66A\_n261A | DC\_2A\_n261A  DC\_66A\_n261A | CA\_2A-46A-66  CA\_2A-46C-66  CA\_2A-46D-66A | n261 |
| DC\_2A-46A-66A\_n261(2A)  DC\_2A-46C-66A\_n261(2A)  DC\_2A-46D-66A\_n261(2A) | DC\_2A\_n261A  DC\_66A\_n261A | CA\_2A-46A-66  CA\_2A-46C-66  CA\_2A-46D-66A | n261(2A) |

## 5.2.29 DC\_3-28-41\_n257

### 5.2.29.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_3-28-41\_n257 | CA\_3-28-41 | n257 | DC\_3\_n257 |

### 5.2.29.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_3A-28A-41A\_n257A  DC\_3A-28A-41A\_n257G  DC\_3A-28A-41A\_n257H  DC\_3A-28A-41A\_n257I  DC\_3A-28A-41C\_n257A  DC\_3A-28A-41C\_n257G  DC\_3A-28A-41C\_n257H  DC\_3A-28A-41C\_n257I | DC\_3A\_n257A  DC\_3A\_n257G  DC\_3A\_n257H  DC\_3A\_n257I  DC\_28A\_n257A  DC\_28A\_n257G DC\_28A\_n257H DC\_28A\_n257I DC\_41A\_n257A  DC\_41A\_n257G DC\_41A\_n257H DC\_41A\_n257I DC\_41C\_n257A  DC\_41C\_n257G  DC\_41C\_n257H  DC\_41C\_n257I | CA\_ 3A-28A-41A  CA\_ 3A-28A-41C | n257A  CA\_n257G  CA\_n257H  CA\_n257I |

## 5.2.30 DC\_28-41-42\_n257

### 5.2.30.1 Operating bands for EN-DC

Table 5.2B.4.3-1: Band combinations EN-DC (four bands)

| EN-DC band | E-UTRA CA band | NR band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_28-41-42\_n257 | CA\_28-41-42 | n257 | no |

### 5.2.30.2 Configuration for EN-DC

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

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA CA configuration | NR band |
| --- | --- | --- | --- |
| DC\_28A-41A-42A\_n257A  DC\_28A-41A-42A\_n257G  DC\_28A-41A-42A\_n257H  DC\_28A-41A-42A\_n257I  DC\_28A-41C-42A\_n257A  DC\_28A-41C-42A\_n257G  DC\_28A-41C-42A\_n257H  DC\_28A-41C-42A\_n257I  DC\_28A-41A-42C\_n257A  DC\_28A-41A-42C\_n257G  DC\_28A-41A-42C\_n257H  DC\_28A-41A-42C\_n257I  DC\_28A-41C-42C\_n257A  DC\_28A-41C-42C\_n257G  DC\_28A-41C-42C\_n257H  DC\_28A-41C-42C\_n257I | DC\_28A\_n257A  DC\_28A\_n257G  DC\_28A\_n257H  DC\_28A\_n257I  DC\_41A\_n257A  DC\_41A\_n257G  DC\_41A\_n257H  DC\_41A\_n257I  DC\_41C\_n257A  DC\_41C\_n257G  DC\_41C\_n257H  DC\_41C\_n257I  DC\_42A\_n257A  DC\_42A\_n257G DC\_42A\_n257H DC\_42A\_n257I DC\_42C\_n257A  DC\_42C\_n257G DC\_42C\_n257H DC\_42C\_n257I | CA\_ 28A-41A-42A  CA\_ 28A-41C-42A  CA\_ 28A-41A-42C  CA\_ 28A-41C-42C | n257A  CA\_n257G  CA\_n257H  CA\_n257I |

## 5.2.31 2A-13A-66A\_n260M

### 5.2.31.1 Operating bands for DC

**Table 5.2.31.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-13-66\_n260 | CA\_2-13-66 | n260 | No |

5.2.31.2 Configuration for DC

**Table 5.2.31.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-13A-66A\_n260A  DC\_2A-13A-66A\_n260G  DC\_2A-13A-66A\_n260H  DC\_2A-13A-66A\_n260I  DC\_2A-13A-66A\_n260J  DC\_2A-13A-66A\_n260K  DC\_2A-13A-66A\_n260L  DC\_2A-13A-66A\_n260M | DC\_2A\_n260A DC\_2A\_n260G  DC\_2A\_n260H  DC\_2A\_n260I  DC\_2A\_n260J  DC\_2A\_n260K  DC\_2A\_n260L  DC\_2A\_n260M  DC\_13A\_n260A DC\_13A\_n260G  DC\_13A\_n260H  DC\_13A\_n260I  DC\_13A\_n260J  DC\_13A\_n260K  DC\_13A\_n260L  DC\_13A\_n260M  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H  DC\_66A\_n260I  DC\_66A\_n260J  DC\_66A\_n260K  DC\_66A\_n260L  DC\_66A\_n260M | CA\_2A-13A-66A | n260A  CA\_n260G  CA\_n260H  CA\_n260I  CA\_n260J  CA\_n260K  CA\_n260L  CA\_n260M |
| DC\_2A-13A-66A\_n260(A-G) DC\_2A-13A-66A\_n260(A-H) DC\_2A-13A-66A\_n260(A-2G)  DC\_2A-13A-66A\_n260(2A)  DC\_2A-13A-66A\_n260(2A-G) DC\_2A-13A-66A\_n260(2A-2G) DC\_2A-13A-66A\_n260(3A)  DC\_2A-13A-66A\_n260(3A-G) DC\_2A-13A-66A\_n260(4A)  DC\_2A-13A-66A\_n260(5A)  DC\_2A-13A-66A\_n260(6A)  DC\_2A-13A-66A\_n260(G-H) DC\_2A-13A-66A\_n260(2G) DC\_2A-13A-66A\_n260(2H) | DC\_2A\_n260A DC\_2A\_n260G  DC\_2A\_n260H  DC\_13A\_n260A DC\_13A\_n260G  DC\_13A\_n260H  DC\_66A\_n260A DC\_66A\_n260G  DC\_66A\_n260H | CA\_2A-13A-66A | CA\_n260(A-G) CA\_n260(A-H) CA\_n260(A-2G)  CA\_n260(2A)  CA\_n260(2A-G) CA\_n260(2A-2G) CA\_n260(3A)  CA\_n260(3A-G) CA\_n260(4A)  CA\_n260(5A)  CA\_n260(6A) CA\_n260(G-H) CA\_n260(2G) CA\_n260(2H) |

## 5.2.32 2A-13A-66A\_n261M

### 5.2.32.1 Operating bands for DC

**Table 5.2.32.1-1: Band combinations EN-DC (four bands)**

| EN-DC band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_2-13-66\_n261 | CA\_2-13-66 | n261 | No |

### 5.2.32.2 Configuration for DC

**Table 5.2.32.2-1: Inter-band EN-DC configurations of 3 LTE band + 1 NR band**

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_2A-13A-66A\_n261A  DC\_2A-13A-66A\_n261G  DC\_2A-13A-66A\_n261H  DC\_2A-13A-66A\_n261I  DC\_2A-13A-66A\_n261J  DC\_2A-13A-66A\_n261K  DC\_2A-13A-66A\_n261L  DC\_2A-13A-66A\_n261M | DC\_2A\_n261A DC\_2A\_n261G  DC\_2A\_n261H  DC\_2A\_n261I  DC\_2A\_n261J  DC\_2A\_n261K  DC\_2A\_n261L  DC\_2A\_n261M  DC\_13A\_n261A DC\_13A\_n261G  DC\_13A\_n261H  DC\_13A\_n261I  DC\_13A\_n261J  DC\_13A\_n261K  DC\_13A\_n261L  DC\_13A\_n261M  DC\_66A\_n261A DC\_66A\_n261G  DC\_66A\_n261H  DC\_66A\_n261I  DC\_66A\_n261J  DC\_66A\_n261K  DC\_66A\_n261L  DC\_66A\_n261M | CA\_2A-13A-66A | n261A  CA\_n261G  CA\_n261H  CA\_n261I  CA\_n261J  CA\_n261K  CA\_n261L  CA\_n261M |
| DC\_2A-13A-66A-n261(A-G)  DC\_2A-13A-66A-n261(A-G-H)  DC\_2A-13A-66A-n261(A-G-I)  DC\_2A-13A-66A-n261(A-2G)  DC\_2A-13A-66A-n261(A-H)  DC\_2A-13A-66A-n261(A-I)  DC\_2A-13A-66A-n261(A-J)  DC\_2A-13A-66A-n261(A-K)  DC\_2A-13A-66A-n261(2A)  DC\_2A-13A-66A-n261(2A-G) DC\_2A-13A-66A-n261(2A-H)  DC\_2A-13A-66A-n261(2A-I)  DC\_2A-13A-66A-n261(3A)  DC\_2A-13A-66A-n261(3A-G)  DC\_2A-13A-66A-n261(4A)  DC\_2A-13A-66A-n261(G-H)  DC\_2A-13A-66A-n261(G-I)  DC\_2A-13A-66A-n261(G-J)  DC\_2A-13A-66A-n261(2G)  DC\_2A-13A-66A-n261(H-I)  DC\_2A-13A-66A-n261(2H) | DC\_2A\_n261A DC\_2A\_n261G  DC\_2A\_n261H  DC\_2A\_n261I  DC\_2A\_n261J  DC\_2A\_n261K  DC\_13A\_n261A DC\_13A\_n261G  DC\_13A\_n261H  DC\_13A\_n261I  DC\_13A\_n261J  DC\_13A\_n261K  DC\_66A\_n261A DC\_66A\_n261G  DC\_66A\_n261H  DC\_66A\_n261I  DC\_66A\_n261J  DC\_66A\_n261K | CA\_2A-13A-66A | CA\_n261(A-G)  CA\_n261(A-G-H)  CA\_n261(A-G-I)  CA\_n261(A-2G)  CA\_n261(A-H)  CA\_n261(A-I)  CA\_n261(A-J)  CA\_n261(A-K)  CA\_n261(2A)  CA\_n261(2A-G)  CA\_n261(2A-H)  CA\_n261(2A-I)  CA\_n261(3A)  CA\_n261(3A-G)  CA\_n261(4A)  CA\_n261(G-H)  CA\_n261(G-I)  CA\_n261(G-J)  CA\_n261(2G)  CA\_n261(H-I)  CA\_n261(2H) |

## 5.2.32 DC\_1-11-18\_n257

5.2.32.1 Operating bands for DC

Table 5.2.32.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-11-18\_n257 | DC\_1-11-18 | n257 | No |

5.2.32.2 Configurations for DC

Table 5.2.32.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-11A-18A\_n257A  DC\_1A-11A-18A\_n257G  DC\_1A-11A-18A\_n257H  DC\_1A-11A-18A\_n257I | DC\_1A\_n257A  DC\_1A\_n257G  DC\_1A\_n257H  DC\_1A\_n257I DC\_11A\_n257A  DC\_11A\_n257G  DC\_11A\_n257H  DC\_11A\_n257I  DC\_18A\_n257A  DC\_18A\_n257G  DC\_18A\_n257H  DC\_18A\_n257I | CA\_1A-11A-18A | n257  CA\_n257G  CA\_n257H  CA\_n257I |

## 5.2.33 DC\_1-18-41\_n257

5.2.33.1 Operating bands for DC

Table 5.2.33.1-1: Band combinations EN-DC (four bands)

| EN-DC Band | E-UTRA Band | NR Band | Single UL allowed |
| --- | --- | --- | --- |
| DC\_1-18-41\_n257 | DC\_1-18-41 | n257 | No |

5.2.33.2 Configurations for DC

Table 5.2.33.2-1: Inter-band EN-DC configurations (four bands)

| EN-DC  configuration | Uplink EN-DC  configuration  (NOTE 1) | E-UTRA configuration | NR configuration |
| --- | --- | --- | --- |
| DC\_1A-18A-41A\_n257A  DC\_1A-18A-41A\_n257G  DC\_1A-18A-41A\_n257H  DC\_1A-18A-41A\_n257I  DC\_1A-18A-41C\_n257A  DC\_1A-18A-41C\_n257G  DC\_1A-18A-41C\_n257H  DC\_1A-18A-41C\_n257I | DC\_1A\_n257A  DC\_1A\_n257G  DC\_1A\_n257H  DC\_1A\_n257I  DC\_18A\_n257A  DC\_18A\_n257G  DC\_18A\_n257H  DC\_18A\_n257I  DC\_41A\_n257A  DC\_41A\_n257G  DC\_41A\_n257H  DC\_41A\_n257I  DC\_41C\_n257A  DC\_41C\_n257G  DC\_41C\_n257H  DC\_41C\_n257I | CA\_1A-18A-41A  CA\_1A-18A-41C | n257  CA\_n257G  CA\_n257H  CA\_n257I |

# Annex A: Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
| 2018-08 | 3GPP RAN4 #88 | R4-1811504 |  |  |  | Initial TR skeleton | 0.0.1 |
| 2018-10 | 3GPP RAN4 #88bis | R4-1812780 |  |  |  | Implemented TP´s from RAN4 #88:  R4-1810110, “TP for TR 37.716-31-11: DC\_1-3-18\_n77”, KDDI Corporation  R4-1810112, “TP for TR 37.716-31-11: DC\_1-3-18\_n78”, KDDI Corporation  R4-1810114, “TP for TR 37.716-31-11: DC\_1-3-18\_n79”, KDDI Corporation  R4-1810120, “TP for TR 37.716-31-11: DC\_1-3-41\_n77”, KDDI Corporation  R4-1810121, “TP for TR 37.716-31-11: DC\_1-3-41\_n78”, KDDI Corporation  R4-1810122, “TP for TR 37.716-31-11: DC\_1-3-41\_n79”, KDDI Corporation  R4-1811427, “TP for TR 37.716-31-11: DC\_3-41-42\_n77”, KDDI Corporation  R4-1811428, “TP for TR 37.716-31-11: DC\_3-41-42\_n78”, KDDI Corporation  R4-1811429, “TP for TR 37.716-31-11: DC\_3-41-42\_n79”, KDDI Corporation  R4-1810398, “TP to 37.716-31-11, DC\_1A-3C-7C\_n78A, DC\_1A-3A-7C\_n78A”, Ericsson, BT  R4-1810118, “TP for TR 37.716-31-11: DC\_1-3-18\_n257”, KDDI Corporation  R4-1810124, “TP for TR 37.716-31-11: DC\_1-3-41\_n257”, KDDI Corporation  R4-1810136, “TP for TR 37.716-31-11: DC\_3-41-42\_n257”, KDDI Corporation | 0.1.0 |
| 2018-11 | 3GPP RAN4 #89 | R4-1815795 |  |  |  | Implemented TP´s from RAN4 #88BIS:  R4-1812783, “TP for 37.716-31-11 for updated scope from RAN #81”, Ericsson  R4-1813776, “TP to TR 37.716-31-11: Introduction of DC\_66A-(n)71AA and DC\_2A-(n)71AA”, Nokia, TMO US  R4-1812621, “TP for TR 37.716-31-11: DC band combination of Band 1, 5, 41 and n79”, China Telecom  R4-1812622, “TP for TR 37.716-31-11: DC band combination of Band 3, 5, 41 and n79”, China Telecom  R4-1812624, “TP for TR 37.716-31-11: DC band combination of Band 1, 3, 5 and n79”, China Telecom  R4-1812742, “TP for TR 37.716-31-11: DC\_1-18-42\_n78”, KDDI Corporation  R4-1812751, “TP for TR 37.716-31-11: DC\_3-18-42\_n78”, KDDI Corporation  R4-1812791, “TP for correction of Table 5.1.10.1 & 5.1.10.2 in TR 37.716-31-11”, Ericsson  R4-1813123, “TP for TR 37.716-31-11: DC\_1-8-20\_n78”, Vodafone España SA  R4-1813150, “TP for TR 37.716-31-11: DC\_3-8-20\_n78”, Vodafone España SA  R4-1813771, “TP for TR 37.716-31-11 DC\_LTE 3bands\_n257”, SK Telecom  R4-1812752, “TP for TR 37.716-31-11: DC\_1-18-42\_n257”, KDDI Corporation  R4-1812753, “TP for TR 37.716-31-11: DC\_3-18-42\_n257”, KDDI Corporation  R4-1812754, “TP for TR 37.716-31-11: DC\_1-3-41\_n257”, KDDI Corporation  R4-1812755, “TP for TR 37.716-31-11: DC\_1-41-42\_n257”, KDDI Corporation  R4-1812756, “TP for TR 37.716-31-11: DC\_3-41-42\_n257”, KDDI Corporation  R4-1812796, “TP for TR 37.716-31-11 for 2A-12A-30A\_n260, 2A-2A-12A-30A\_n260”, Ericsson, AT&T  R4-1812797, “TP for TR 37.716-31-11 for 2A-5A-30A\_n260, 2A-2A-5A-30A\_n260”, Ericsson, AT&T  R4-1812798, “TP for TR 37.716-31-11 for 2A-12A-66A\_n260, 2A-2A-12A-66A\_n260, 2A-12A-66A-66A\_n260”, Ericsson, AT&T  R4-1812799, “TP for TR 37.716-31-11 for 2A-5A-66A\_n260, 2A-2A-5A-66A\_n260, 2A-5A-66A-66A\_n260”, Ericsson, AT&T  R4-1812800, “TP for TR 37.716-31-11 for 5A-30A-66A\_n260, 5A-30A-66A-66A\_n260”, Ericsson, AT&T  R4-1812802, “TP for TR 37.716-31-11 for 2A-30A-66A\_n260”, Ericsson, AT&T  R4-1812803, “TP for TR 37.716-31-11 for 2A-29A-30A\_n260, 2A-2A-29A-30A\_n260”, Ericsson, AT&T  R4-1812807, “TP for TR 37.716-31-11 for 12A-30A-66A\_n260, 12A-30A-66A-66A\_n260”, Ericsson, AT&T | 0.2.0 |
| 2019-02 | 3GPP RAN4 #90 | R4-1901417 |  |  |  | Implemented TP´s from RAN4 #89:  R4-1814920, “TP for TR 37.716-31-11: DC\_3-18-42\_n79”, KDDI Corporation  R4-1814926, “TP for TR 37.716-31-11: DC\_3-18-42\_n77”, KDDI Corporation  R4-1814931, “TP for TR 37.716-31-11: DC\_1-18-42\_n79”, KDDI Corporation  R4-1814934, “TP for TR 37.716-31-11: DC\_1-18-42\_n77”, KDDI Corporation  R4-1815818, “TP for 37.716-31-11 for 1A-3C-28A\_n78”, Ericsson, Telstra  R4-1815819, “TP for 37.716-31-11 for 1A-7A-28A\_n78, 1A-7C-28A\_n78”, Ericsson, Telstra  R4-1815813, “TP for 37.716-31-11 for EN-DC combinations with n260”. Ericsson, AT&T  R4-1816173, “TP for TR 37.716-21-11: DC\_1A-3C-8A\_n78A”, KT Corp. | 0.3.0 |
| 2019-04 | 3GPP RAN4 #90bis | R4-1904403 |  |  |  | Implemented TP´s from RAN4 #90:  R4-1901420, “TP for 37.716-31-11 for updated scope from RAN #82”, Ericsson  R4-1901423, “TP for TR 37.716-31-11 for symbols and abbreviations”, Ericsson  R4-1901459, “TP for 37.716-31-11 for 3C-7A-28A\_n78 and 3C-7C-28A\_n78”, Ericsson, Telstra  R4-1900719, “TP for TR 37.716-31-11 for 1A+3A+8A+n257(A,D-F) and 1A+3C+8A+n257(A,D-F)”, KT Corp. | 0.4.0 |
| 2019-05 | 3GPP RAN4 #91 | R4-1906735 |  |  |  | Implemented TP´s from RAN4 #90bis:  R4-1904405, “TP for 37.716-31-11 for updated scope from RAN #83”, Ericsson  R4-1902969, “TP for TR 37.716-31-11: EN-DC\_1-3-8\_n77”, SoftBank Corp  R4-1902970, “TP for TR 37.716-31-11: EN-DC\_1-3-8\_n79”, SoftBank Corp.  R4-1904881, “TP for TR 37.716-31-11 DC\_2A-30A-66A\_n5A”, Nokia, Nokia Shanghai Bell  R4-1904449, “TP for TR 37.716-31-11 to include DC\_1-3-7\_n5”, Ericsson, Telstra  R4-1904450, “TP for TR 37.716-31-11 to include DC\_1-3-28\_n5”, Ericsson, Telstra  R4-1904451, “TP for TR 37.716-31-11 to include DC\_1-7-28\_n5”, Ericsson, Telstra  R4-1904452, “TP for TR 37.716-31-11 to include DC\_3-7-28\_n5”, Ericsson, Telstra | 0.5.0 |
| 2019-08 | 3GPP RAN4 #92 | R4-1909785 |  |  |  | Implemented TP´s from RAN4 #91:  R4-1905789, “TP for TR 37.716-31-11: EN-DC\_1-8-11\_n77”, SoftBank Corp.  R4-1905790, “TP for TR 37.716-31-11: EN-DC\_1-8-11\_n78”, SoftBank Corp.  R4-1906331, “TP for TR 37.716-31-11 UE requirements for DC\_3-7-8\_n78”, CHTTL  R4-1905791, “TP for TR 37.716-31-11: EN-DC\_1-8-11\_n257”, SoftBank Corp.  R4-1906201, “TP for DC\_1-3-42\_n257 for TR 37.716-31-11.doc”, NTT DOCOMO, INC. | 0.6.0 |
| 2019-10 | 3GPP RAN4 #92bis | R4-1912235 |  |  |  | Implemented TP´s from RAN4 #92:  R4-1910205, “TP for TR 37.716-31-11 for updated scope from RAN #84”, Ericsson  R4-1908103, “TP for TR 37.716-31-11: DC\_2-7-66\_n66 and DC\_2-7-7-66\_n66”, Samsung, Bell Mobility, TELUS,Nokia  R4-1909187, “TP for TR 37.716-31-11: DC\_2-7-66\_n78”, Huawei, HiSilicon  R4-1909188, “TP for TR 37.716-31-11: DC\_2-7-13\_n66”, Huawei, HiSilicon  R4-1909815, “TP for TR 37.716-31-11 to include 2A-12A-30A\_n66A and 2A-2A-12A-30A\_n66A”, Ericsson, AT&T  R4-1909816, “TP for TR 37.716-31-11 to include 12A-30A-66A\_n2A and 12A-30A-66A-66A\_n2A”, Ericsson, AT&T  R4-1909821, “TP for TR 37.716-31-11 to include 2A-14A-30A\_n260M”, Ericsson, AT&T  R4-1909822, “TP for TR 37.716-31-11 to include 2A-14A-66A\_n260M, 2A-14A-66A-66A\_n260M, 2A-2A-14A-66A\_n260M”, Ericsson, AT&T  R4-1909823, “TP for TR 37.716-31-11 to include 14A-30A-66A\_n260M, 14A-30A-66A-66A\_n260M”, Ericsson, AT&T | 0.7.0 |
| 2019-11 | 3GPP RAN4 #93 | R4-1914683 |  |  |  | Implemented TP´s from RAN4 #92bis:  R4-1912237, “TP for TR 37.716-31-11 for updated scope from RAN #85”, Ericsson  R4-1910877, “TP for TR 37.716-31-11: DC\_2-7-66\_n78”, Huawei, HiSilicon  R4-1912572, “TP for TR 37.716-31-11: DC\_2-13-66\_n66“, Huawei, HiSilicon  R4-1912573, “TP for TR 37.716-31-11: DC\_7-13-66\_n66”, Huawei, HiSilicon  R4-1911151, “TP for TR 37.716-31-11: EN-DC\_1-8-42\_n77”, SoftBank Corp.  R4-1911154, “TP for TR 37.716-31-11: EN-DC\_3-8-42\_n77”, SoftBank Corp.  R4-1911270, “TP for TR 37.716-31-11: UE requirements for DC\_3-7-8\_n1, DC\_3-3-7-8\_n1, DC\_3-7-7-8\_n1, DC\_3-3-7-7-8\_n1”, CHTTL  R4-1911480, “TP for TR 37.716-31-11: DC\_3-7-40\_n1”, Huawei, HiSilicon  R4-1911481, “updated TP for TR 37.716-31-11: DC\_1-3-7\_n78 to add DC\_1A-3C-7C\_n78(A)”, Huawei, HiSilicon  R4-1911607, “TP for 37.716-31-11 to introduce DC\_2A-46-66\_n41”, Nokia, Nokia Shanghai Bell, T-Mobile USA  R4-1911608, “TP for 37.716-31-11 to introduce DC\_2A-46-66\_n71”, Nokia, Nokia Shanghai Bell, T-Mobile USA  R4-1911657, “TP for TR 37.716-31-11 DC\_3-28-41\_n78”, KDDI  R4-1911659, “TP for TR 37.716-31-11 DC\_28-41-42\_n78”, KDDI  R4-1911797, “TP for TR 37.716-31-11: DC\_1A-7A-8A\_n78A”, Vodafone Ireland Plc  R4-1912570, “TP to TR 37.716-31-11: addition of DC\_2+46+66\_n261”, Nokia, TMO US  R4-1911656, “TP for TR 37.716-31-11 DC\_1-3-42\_n257”, KDDI  R4-1911658, “TP for TR 37.716-31-11 DC\_3-28-41\_n257”, KDDI  R4-1911660, “TP for TR 37.716-31-11 DC\_28-41-42\_n257”, KDDI  R4-1911713, “TP for DC\_1-3-42\_n257 for TR 37.716-31-11”, NTT DOCOMO, INC.  R4-1912262, “TP for TR 37.716-31-11 to include DC\_2-13-66-n260”, Ericsson, Verizon  R4-1912263, “TP for TR 37.716-31-11 to include DC\_2-13-66-n261”, Ericsson, Verizo | 0.8.0 |
| 2020-02 | 3GPP RAN4 #94 | R4-2001503 |  |  |  | Implemented TP´s from RAN4 #93:  [R4-1914691](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914691.zip). “TP for TR 37 716-31-11 to to remove ?TIB and ?RIB values for FR2 combinations”, Ericsson  [R4-1913613](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1913613.zip), “TP for TR37.716-31-11\_ DC\_1A-3A-20A\_n38A”, ZTE Corporation  [R4-1913614](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1913614.zip), “TP for TR37.716-31-11\_ DC\_1A-7A-20A\_n3A”, ZTE Corporation  [R4-1913615](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1913615.zip), “TP for TR37.716-31-11\_ DC\_1A-20A-38A\_n78A”, ZTE Corporation  [R4-1913616](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1913616.zip), “TP for TR37.716-31-11\_ DC\_3A-20A-38A\_n78A”, ZTE Corporation  [R4-1913617](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1913617.zip), “TP for TR37.716-41-11\_ DC\_1A-3A-20A-38A\_n78A”, ZTE Corporation  [R4-1913878](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1913878.zip), “TP for TR 37.716-31-11: UE requirements for DC\_3-3-7-8\_n78, DC\_3-7-7-8\_n78, DC\_3-3-7-7-8\_n78”, CHTTL  [R4-1914308](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914308.zip), “updated TP for TR 37.716-31-11: DC\_1-3-7\_n78 to add DC\_1A-3A-7A\_n78(2A), DC\_1A-3C-7A\_n78(2A), DC\_1A-3A-7C\_n78(2A)”, Huawei, HiSilicon, BT plc  [R4-1914309](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914309.zip), “TP for TR 37.716-31-11: DC\_3A-7A-20A\_n1A and DC\_3C-7A-20A\_n1A”, Huawei, HiSilicon  [R4-1914329](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914329.zip), “TP for 37.716-31-11 to introduce DC\_2-12-30\_n2”, Nokia, AT&T  [R4-1914330](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914330.zip), “TP for 37.716-31-11 to introduce DC\_2-12-66\_n2”, Nokia, AT&T  [R4-1914703](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914703.zip), “TP for TR 37 716-31-11 to include DC\_1-3-28\_n7”, Ericsson, Telstra  [R4-1914709](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914709.zip), “TP for TR 37 716-31-11 to include DC\_3-7-28\_n7”, Ericsson, Telstra  [R4-1914710](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914710.zip), “TP for TR 37 716-31-11 to include DC\_1-3-7\_n7”, Ericsson, Telstra  [R4-1914711](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914711.zip), “TP for TR 37 716-31-11 to include DC\_1-7-28\_n7”, Ericsson, Telstra  [R4-1914714](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914714.zip), “TP for TR 37 716-31-11 to include DC\_2-12-66\_n66”, Ericsson, AT&T  [R4-1914715](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914715.zip), “TP for TR 37 716-31-11 to include DC\_2-30-66\_n66”, Ericsson, AT&T  [R4-1914716](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914716.zip), “TP for TR 37 716-31-11 to include DC\_12-30-66\_n66”, Ericsson, AT&T  [R4-1914022](file:///D:\RAN4\TSGRAN4_93\Docs\R4-1914022.zip), “TP for TR 37.716-31-11 DC\_28-41-42\_n257”, KDDI | 0.9.0 |
| 2020-04 | 3GPP RAN4 #94 bis | R4-2004577 |  |  |  | Implemented TP´s from RAN4 #94:  R4-2001507, “TP for TR 37.716-31-11 for updated scope from RAN #86”, Ericsson  R4-2000543, “TP to TR 37.716-31-11: Addition of DC\_2A-5A-48A\_n12A”, Nokia, US Cellular  R4-2000544, “TP to TR 37.716-31-11: Addition of DC\_ 2A-5A-66A\_n12A”, Nokia, US Cellular  R4-2000546, “TP to TR 37.716-31-11: Addition of DC\_2A-12A-48A\_n5A”, Nokia, US Cellular  R4-2000547, “TP to TR 37.716-31-11: Addition of DC\_2A-12A-66A\_n5A”, Nokia, US Cellular  R4-2000549, “TP to TR 37.716-31-11: Addition of DC\_2A-48A-66A\_n5A”, Nokia, US Cellular  R4-2000552, “TP to TR 37.716-31-11: Addition of DC\_5A-48A-66A\_n12A”, Nokia, US Cellular  R4-2000555, “TP to TR 37.716-31-11: Addition of DC\_12A-48A-66A\_n5A”, Nokia, US Cellular  R4-2000845, “TP for TR 37.716-31-11: DC\_3C-7A-8A\_n1A”, Huawei, HiSilicon  R4-2001291, “TP for 37.716-31-11 to introduce DC\_2-5-66\_n66”, Nokia, Verizon  R4-2001292, “TP for 37.716-31-11 to introduce DC\_2-13-66\_n2”, Nokia, Verizon  R4-2001293, “TP for 37.716-31-11 to introduce DC\_2-13-66\_n5”, Nokia, Verizon  R4-2001294, “TP for 37.716-31-11 to introduce DC\_2-13-66\_n48”, Nokia, Verizon  R4-2001295, “TP for 37.716-31-11 to introduce DC\_2-13-66\_n66”, Nokia, Verizon  R4-2001296, “TP for 37.716-31-11 to introduce DC\_2-46-48\_n5”, Nokia, Verizon  R4-2001297, “TP for 37.716-31-11 to introduce DC\_2-46-48\_n66”, Nokia, Verizon  R4-2001542, “TP for TR 37 716-31-11 to include DC\_2-7-66\_n38”, Ericsson, Rogers  R4-2001543, “TP for TR 37 716-31-11 to include DC\_2-66-71\_n38”, Ericsson, Rogers  R4-2001544, “TP for TR 37 716-31-11 to include DC\_2-7-66\_n71”, Ericsson, Rogers  R4-2001545, “TP for TR 37 716-31-11 to include DC\_2-66-71\_n66”, Ericsson, Rogers  R4-2001546, “TP for TR 37 716-31-11 to include DC\_2-66-71\_n78”, Ericsson, Rogers  R4-2001984, “TP for TR 37 716-31-11 to include DC\_2A-48A-66A\_n71A”, Ericsson, US Cellular  R4-2001988, “TP for TR 37 716-31-11 to include DC\_5A-48A-66A\_n71A”, Ericsson, US Cellular  R4-2001989, “TP for TR 37 716-31-11 to include DC\_2A-5A-48A\_n71A”, Ericsson, US Cellular  R4-2001990, “TP for TR 37 716-31-11 to include DC\_2A-5A-66A\_n71A”, Ericsson, US Cellular  R4-2001994, “TP for TR 37 716-31-11 to include DC\_2A-48A-66A\_n12A”, Ericsson, US Cellular  R4-2001995, “TP for TR 37 716-31-11 to include DC\_48A-66A-(n)12AA”, Ericsson, US Cellular  R4-2001996, “TP for TR 37 716-31-11 to include DC\_2A-48A-(n)12AA”, Ericsson, US Cellular  R4-2001997, “TP for TR 37 716-31-11 to include DC\_2A-66A-(n)12AA”, Ericsson, US Cellular | 0.10.0 |
| 2020-05 | 3GPP RAN4 #94 bis | R4-2005868 |  |  |  | Implemented TP´s from RAN4 #94bis:  R4-2004580, “TP for TR 37.716-31-11 for updated scope from RAN #87”, Ericsson  R4-2005135, “TP for TR 37.716-31-11: DC\_1-3-41\_n77-n77”, Samsung, KDDI  R4-2005136, “TP for TR 37.716-31-11: DC\_1-3-41\_n78-n78”, Samsung, KDDI  R4-2003584, “TP to TR 37.716-31-11 DC\_1A-3A-20A\_n41A”, Huawei, HiSilicon  R4-2004133, “Updated TP for TR 37.716-31-11: to add UL configuration DC\_7C\_n78A for DC\_1A-7C-28A\_n78A”, Huawei, HiSilicon  R4-2004223, “TP for 37.716-31-11 to introduce DC\_1-7-28\_n40”, Nokia, Nokia Shanghai Bell  R4-2004224, “TP for 37.716-31-11 to introduce DC\_1-3-7\_n40”, Nokia, Nokia Shanghai Bell  R4-2004225, “TP for 37.716-31-11 to introduce DC\_3-7-28\_n40”, Nokia, Nokia Shanghai Bell  R4-2004613, “TP for TR 37.716-31-11 to include DC\_1A-3A-28A\_n40A”, Ericsson  R4-2005010, “TP to TR 37.716-31-11: Addition of DC\_2A-5A\_(n)12AA”, Nokia, US Cellular  R4-2005011, “TP to TR 37.716-31-11: Addition of DC\_2A-12A\_(n)5AA”, Nokia, US Cellular  R4-2005012, “TP to TR 37.716-31-11: Addition of DC\_2A-48A\_(n)5AA”, Nokia, US Cellular  R4-2005013, “TP to TR 37.716-31-11: Addition of DC\_2A-66A\_(n)5AA”, Nokia, US Cellular  R4-2005014, “TP to TR 37.716-31-11: Addition of DC\_5A-48A\_(n)12AA”, Nokia, US Cellular  R4-2005015, “TP to TR 37.716-31-11: Addition of DC\_5A-66A\_(n)12AA”, Nokia, US Cellular  R4-2005016, “TP to TR 37.716-31-11: Addition of DC\_12A-48A\_(n)5AA”, Nokia, US Cellular  R4-2005017, “TP to TR 37.716-31-11: Addition of DC\_12A-66A\_(n)5AA”, Nokia, US Cellular | 0.11.0 |
| 2020-06 | 3GPP RAN4 #95 | R4-2006046 |  |  |  | Implemented TP´s from RAN4 #95:  R4-2008336, “TP for TR 37.716-31-11 DC\_1-11-18\_n77”, Samsung, KDDI  R4-2006419, “TP for TR 37.716-31-11 DC\_1-11-18\_n78”, Samsung, KDDI  R4-2008338, “TP for TR 37.716-31-11 DC\_1-18-41\_n3”, Samsung, KDDI  R4-2008339, “TP for TR 37.716-31-11 DC\_1-18-41\_n77”, Samsung, KDDI  R4-2006423, “TP for TR 37.716-31-11 DC\_1-18-41\_n78”, Samsung, KDDI  R4-2006500, “TP for TR 37.716-31-11:DC\_2A-29A-66A\_n66A”, Nokia  R4-2006501, “TP for TR 37.716-31-11:DC\_29A-30A-66A\_n66A”, Nokia  R4-2006502, “TP for TR 37.716-31-11:DC\_29A-30A-66A\_n2A”, Nokia  R4-2006503, “TP for TR 37.716-31-11:DC\_2A-29A-30A\_n2A”, Nokia  R4-2006504, “TP for TR 37.716-31-11:DC\_2A-29A-66A\_n2A”, Nokia  R4-2006505, “TP for TR 37.716-31-11:DC\_2A-30A-66A\_n2A”, Nokia  R4-2006506, “TP for TR 37.716-31-11:DC\_29A-30A-66A-66A\_n2A”, Nokia  R4-2006507, “TP for TR 37.716-31-11:DC\_2A-29A-66A-66A\_n2A”, Nokia  R4-2006508, “TP for TR 37.716-31-11:DC\_2A-30A-66A-66A\_n2A”, Nokia  R4-2006676, ” TP for TR 37.716-31-11: EN-DC\_1-3-8\_n28”, SoftBank Corp.  R4-2006831, “TP for TR 37.716-31-11: UE requirements for DC\_3A-7A-8A\_n77A”, CHTTL  R4-2006935. “TP to TR 37.716-31-11 DC\_1A-3C-20A\_n41A”, Huawei, HiSilicon  R4-2007171, “TP for 37.716-31-11 to introduce DC\_2-5-66\_n2”, Nokia, Verizon  R4-2007172, “TP for 37.716-31-11 to introduce DC\_2-5-66\_n5”, Nokia, Verizon  R4-2007173, “TP for 37.716-31-11 to introduce DC\_2-13-66\_n2”, Nokia, Verizon  R4-2007621, “TP for TR 37.716-31-11 to include 2-14-66\_n66”, Ericsson, AT&T  R4-2007622, “TP for TR 37.716-31-11 to include 2-14-66\_n2”, Ericsson, AT&T  R4-2008347, “TP for TR 37.716-31-11: DC\_1A-3A-7A\_n8A”, Huawei, HiSilicon  R4-2008020, “TP for TR 37.716-31-11: DC\_1A-3A-20A\_n8A”, Huawei, HiSilicon  R4-2008021, “TP for TR 37.716-31-11: DC\_1A-7A-20A\_n8A”, Huawei, HiSilicon  R4-2008022, “TP for TR 37.716-31-11: DC\_3A-7A-20A\_n8A”, Huawei, HiSilicon  R4-2008348, “TP for TR 37.716-31-11: DC\_1A-7A-8A\_n3A”, Huawei, HiSilicon  R4-2008024, “TP for TR 37.716-31-11: DC\_1A-20A\_(n)38AA”, Huawei, HiSilicon  R4-2008025, “TP for TR 37.716-31-11: DC\_1A-3A-32A\_n78A\DC\_1A-3A-32A\_n78(2A)”, Huawei, HiSilicon, CKH IOD UK  R4-2006420, “TP for TR 37.716-31-11 DC\_1-11-18\_n257”, Samsung, KDDI  R4-2006424, “TP for TR 37.716-31-11 DC\_1-18-41\_n257”, Samsung, KDDI | 0.12.0 |