**3GPP TSG-WG RAN4 Meeting #98-e *R4-2100326***

**Electronic meeting, 25th January – 5th February, 2021**

**Source:** Huawei, HiSilicon

**Title:** TP for TR 37.717-11-21: DC\_7A-40A\_n1A-n78A/DC\_7A-40C\_n1A-n78A

**Agenda Item:** 9.7.2

**Document for:** Approval

# Introduction

The WID for NR DC was updated in RAN #90e meeting[1]. This contribution provides a TP for TR 37.717-11-21 to finish the UE RF requirements for the band combination.

# References

[1] RP-202292, “New WID on DC of x bands (x=1,2,3,4) LTE inter-band CA (xDL/1UL) and 2 bands NR inter-band CA (2DL/1UL)”, LG Electronics

# Text Proposal

**<TP for TR 37.717-11-21>**

7.x DC\_7-40\_n1-n78

7.x.1 Operating bands for DC

**Table 7.x.1-1: DC band combination of LTE 2DL/1UL + NR 2DL/1UL**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **E-UTRA and NR DC Band** | **E-UTRA and NR Band** | **Uplink (UL) band** | | | **Downlink (DL) band** | | | **Duplex**  **mode** |
| **BS receive / UE transmit** | | | **BS transmit / UE receive** | | |
| **FUL\_low – FUL\_high** | | | **FDL\_low – FDL\_high** | | |
| DC\_7A-40A\_n1A-n78A  DC\_7A-40C\_n1A-n78A | n1 | 1920 MHz | – | 1980 MHz | 2110 MHz | – | 2170 MHz | FDD |
| 7 | 2500 MHz | – | 2570 MHz | 2620 MHz | – | 2690 MHz | FDD |
| 40 | 2300 MHz | – | 2400 MHz | 2300 MHz | – | 2400 MHz | TDD |
| n78 | 3300 MHz | – | 3800 MHz | 3300 MHz | – | 3800 MHz | TDD |

7.x.2 Channel bandwidths per operating band for DC

**Table 7.x.2-1: Supported bandwidths per DC band combination of LTE 2DL/1UL + NR 2DL/1UL**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **DC operating / channel bandwidth [MHz]** | | | | | | | | | | | | | | | | | |
| **E-UTRA and NR DC Configuration** | **UL Configuration** | **E-UTRA and NR Band** | **SCS (kHz)** | **5** | **10** | **15** | **20** | **25** | **30** | **40** | **50** | **60** | **70** | **80** | **90** | **100** | **Maximum aggregated bandwidth**  **[MHz]** |
| DC\_7A-40A\_n1A-n78A | DC\_7A\_n1A  DC\_7A\_n78A  DC\_40A\_n1A  DC\_40A\_n78A | 7 | 15 | Yes | Yes | Yes | Yes |  |  |  |  |  |  |  |  |  | 190 |
| 40 | 15 | Yes | Yes | Yes | Yes |  |  |  |  |  |  |  |  |  |
| n1 | 15 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| 30 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| 60 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| n78 | 15 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| 30 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 60 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| DC\_7A-40C\_n1A-n78A | DC\_7A\_n1A  DC\_7A\_n78A  DC\_40A\_n1A  DC\_40A\_n78A | 7 | 15 | Yes | Yes | Yes | Yes |  |  |  |  |  |  |  |  |  | 210 |
| 40 | See CA\_40C Bandwidth Combination Set 0 in Table 5.6A.1-1 | | | | | | | | | | | | | |
| n1 | 15 | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| 30 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| 60 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| n78 | 15 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes |  |  |  |  |  |
| 30 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| 60 |  | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |

7.x.3 Co-existence studies

Co-existence studies of DC\_7-40\_n1-n78 and protected bands are already covered in the constituent fall-back modes.

7.x.4 ∆TIB and ∆RIB values

The ΔTIB,c and ΔRIB,c values of DC\_7-40\_n1-n78 are given in the tables below reusing the values for DC\_1-7-40\_n78.

**Table 7.x.4-1: ΔTIB,c**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔTIB,c [dB]** |
| --- | --- | --- |
| DC\_7-40\_n1-n78 | n1 | 0.6 |
| 7 | 0.5 |
| 40 | 0.51 |
| n78 | 0.81 |
| NOTE 1: Only applicable for UE supporting inter-band carrier aggregation with uplink in one E-UTRA band and without simultaneous Rx/Tx. | | |
|  | | |

**Table 7.x.4-2: ΔRIB,c**

| **Inter-band DC Configuration** | **E-UTRA and NR Band** | **ΔRIB,c [dB]** |
| --- | --- | --- |
| DC\_7-40\_n1-n78 | n1 | 0.2 |
| 7 | 0 |
| 40 | 0.41 |
| n78 | 0.51 |
| NOTE 1: Only applicable for UE supporting inter-band carrier aggregation with uplink in one E-UTRA band and without simultaneous Rx/Tx. | | |
|  | | |

7.x.5 MSD

All MSD requirements for DC\_7-40\_n1-n78 are already covered by constituent fallback modes. No additional MSD requirement is needed.

**<End of TP >**