**3GPP TSG-RAN WG2 Meeting #130 R2-250xxxx**

**St. Julians, Malta, 19 - 23 May 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.306** | **CR** | **DraftCR** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Draft CR for Rel-19 NR NTN UE capabilities | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Apple | | | | | | | | | |
| ***Source to TSG:*** | RAN2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_NTN\_Ph3-Core | | | | |  | ***Date:*** | | | May 09, 2025 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Introduction of Rel-19 NR NTN UE capabilities. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding new Rel-19 NR NTN UE capabilities.  1) Introduction of MBS broadcast service intended serivice area  2) Introduction of ETWS geofencing | | | | | | | | |
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| ***Consequences if not approved:*** | | The Rel-19 NR NTN UE capabilities remain absent. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.1, 5.10 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 38.331 CR xxx | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | R2-2502512 | | | | | | | | |

5 Optional features without UE radio access capability parameters

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## 5.1 PWS features

| Definitions for feature |
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| **CMAS**  It is optional for UE to support CMAS reception as specified in TS 38.331 [9]. It is optional for a CMAS-capable UE to support Geofencing information (*warningAreaCoordinates*) as specified in TS 38.331 [9]. |
| **ETWS**  It is optional for UE to support ETWS reception as specified in TS 38.331 [9]. It is optional for an ETWS-capable UE to support Geofencing information (*warningAreaCoordinates*) as specified in TS 38.331 [9]. |
| **KPAS**  It is optional for UE to support Korean Public Alert System (KPAS) reception as specified in TS 38.331 [9]. KPAS uses the same AS mechanisms as defined for CMAS. Therefore a KPAS-capable UE shall support all behaviour that is included in TS 38.331 [9] and TS 38.304 [21] for a CMAS-capable UE. |
| **EU-Alert**  It is optional for UE to support EU-Alert reception as specified in TS 38.331 [9]. EU-Alert uses the same AS mechanisms as defined for CMAS. Therefore a EU-Alert-capable UE shall support all behaviour that is included in TS 38.331 [9] and TS 38.304 [21] for a CMAS-capable UE. |

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5.10 MBS features

| **Definitions for feature** |
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| **Broadcast reception**  It is optional for UE to support broadcast reception as specified in TS 38.331 [9]. A UE that supports the feature shall also support:  - Group-common PDCCH/PDSCH for broadcast with CRC scrambled by MCCH-RNTI;  - Group-common PDCCH/PDSCH for broadcast with CRC scrambled by G-RNTI(s) for MTCH;  - CFR configuration for broadcast;  - CORESET and common search space for broadcast;  - DCI format 4\_0 with CRC scrambled with G-RNTI/MCCH-RNTI for broadcast;  - Inter-slot TDM between unicast PDSCH and MCCH group-common PDSCH or MTCH group-common PDSCH, or between MCCH group-common PDSCH and MTCH group-common PDSCH, or among unicast PDSCH and MCCH group-common PDSCH and MTCH group-common PDSCH in different slots;  - MCCH change notification indication via DCI;  - RRC configured slot-level repetition up to 8 for MTCH;  - One G-RNTI per UE is supported for broadcast reception;  - Support of FDMed MCCH and PBCH;  - Support of up to 64QAM for FR1/FR2;  - 4 broadcast MRBs as the minimum number;  - PDCP 12 bits SN;  - ROHC with profiles 0x0000, 0x0001 and 0x0002;  - 4 ROHC context sessions;  - RLC UM with 6 bits SN;  - RLC UM with 12 bits SN;  - DRX with long DRX cycle for MBS broadcast as specified in TS 38.321 [8].  An (e)RedCap UE supporting Broadcast reception also supports CFR and MCCH configuration for (e)RedCap UE.  An NTN UE supporting Broadcast reception may optionally support the intended service area(s) associated with a broadcast service. |

# Annex: RAN2 capability UE feature list - NTN

### 8.2.x NR\_NTN\_Ph3-Core

Table 8.2.x-1: Layer-2 and Layer-3 feature list for NR\_NTN\_Ph3-Core

|  |  |  |  |  |  |  |  |  |  |  |
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| **Features** | **Index** | **Feature group** | **Components** | **Prerequisite feature groups** | **Field name in TS 38.331 [2]** | **Parent IE in TS 38.331 [2]** | **Need of FDD/TDD differentiation** | **Need of FR1/FR2 differentiation** | **Note** | **Mandatory/Optional** |
| x. NR\_NTN\_Ph3-Core | x-1 | Intended service area for MBS broadcast service | Indicates whether the UE supports intended service areas(s) associated with broadcast services via NTN. | 33-1 | n/a | n/a | n/a | n/a |  | Optional without capability signaling |
| x. NR\_NTN\_Ph3-Core | x-2 | ETWS geofencing | Indicates whether the UE supports geofencing for ETWS messages. | n/a | n/a | n/a | n/a | n/a |  | Optional without capability signaling |