**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 canbe 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. |
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| ***Summary of change:*** | Adding new Rel-19 NR NTN UE capabilities.1) Introduction of MBS broadcast service intended serivice area2) Introduction of ETWS geofencing |
|  |  |
| ***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

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **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 |