**3GPP TSG-RAN WG2 Meeting #123bis *R2-230xxxx***

**Xiamen, China, October 09-13, 2023**

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **38.306** | **CR** | **-** | **rev** | **-** | **Current version:** | **17.4.0** |  |
|  | | | | | | | | |
| *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 | **X** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | [RAN2 lead features] UE capabilities for Rel-18 eRedCap WI | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Intel Corporation | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_redcap\_enh-Core | | | | |  | ***Date:*** | | | 2023-09-28 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Define the UE capabilities for Rel-18 eRedCap WI on RAN2 lead features. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Define the UE capabilities for Rel-18 eRedCap WI on RAN2 lead features.  *NOTE 1: TP in section 4.1.2 is added based on related RAN2#123 agreements and the latest RAN1 updates* *on the reduced peak data rate for Rel-18 eRedCap UEs sent in LS R1-2308610.*  *NOTE 2: For the email discussion, it is higlighted in pink, the TP associated to the following RAN2#123 agreement:*   * *A Rel-18 eRedCap UE (both FG 48-1 and FG 48-2) can also support all RAN2-centric Rel-17 RedCap UE capabilities in the same manner.*   + *Discuss during CR implementation how to capture this in TS 38.306: option 1) add in the field description of R18 eRedCap capability (i.e. supportOfEnhancedRedCap-r18) the following statement “all supportOfRedCap-r17 related capabilities specified in this specification remain applicable for Rel-18 RedCap UEs, unless indicated otherwise” or option 2) update the field description of the RAN2-centric Rel-17 RedCap UE capabilities to be applicable to (e)RedCap UEs* | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Rel-18 eRedCap WI is not complete | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.1, 4.1.2, 4.2.6, 4.2.21.2, 4.2.21.3, 4.2.21.4, 4.2.21.5, 4.2.x, 4.2.x.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **x** |  | Other core specifications | | | | TS/TR 38.331 CR ... | | |
| ***affected:*** | |  | **xx** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

1. ***Modified section***

## 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].

**eRedCap UE:** a UE with enhanced reduced capabilities as specified in clause 4.2.x.1.

**Fallback band combination:** A Uu band combination that would result from another Uu band combination (parent band combination) by releasing at least one SCell or uplink configuration of SCell, or SCG, or SUL. A PC5 band combination that would result from another PC5 band combination (parent band combination) by releasing at least one sidelink carrier. An intra-band non-contiguous band combination is not considered to be a fallback band combination of an intra-band contiguous band combination. A fallback band combination supports the same channel bandwidth(s) for each carrier as its parent band combination(s).

**Fallback per band feature set:** A feature set per band that has same or lower capabilities than the reported capabilities from the reported feature set per band for a given band.

**Fallback per CC feature set:** A feature set per CC that has same or lower capabilities than the capabilities of UE (e.g. supported MIMO layers, BW, modulation order) while keeping the numerology the same from the reported feature set per CC for a given carrier per band. The *supportedMinBandwidthDL*/*supportedMinBandwidthUL* defines the lower bound of the bandwidth supported by the UE.

**RedCap UE:** The UE with reduced capabilities as specified in clause 4.2.21.1.

**Switching SCell (sSCell):** The SCell configured with cross-carrier scheduling to PCell/PSCell.

1. ***Modified section***

### 4.1.2 Supported max data rate for DL/UL

For NR, the approximate data rate for a given number of aggregated carriers in a band or band combination is computed as follows.



Wherein

J is the number of aggregated component carriers in a band or band combination

Rmax = 948/1024

For the j-th CC,

 is the maximum number of supported layers given by *maxNumberMIMO-LayersPDSCH* for downlink and maximum of *maxNumberMIMO-LayersCB-PUSCH* and *maxNumberMIMO-LayersNonCB-PUSCH* for uplink.

 is the maximum supported modulation order given by *supportedModulationOrderDL* for downlink and *supportedModulationOrderUL* for uplink.

is the scaling factor given by *scalingFactor* or *scalingFactor-1024QAM-FR1* and can take the values 1, 0.8, 0.75, and 0.4.

 is the numerology (as defined in TS 38.211 [6])

 is the average OFDM symbol duration in a subframe for numerology , i.e. . Note that normal cyclic prefix is assumed.

 is the maximum RB allocation in bandwidth  with numerology , as defined in 5.3 TS 38.101-1 [2], 5.3 TS 38.101-2 [3], and 5.3 TS 38.101-5 [34], where  is the UE supported maximum bandwidth in the given band or band combination.

is the overhead and takes the following values

0.14, for frequency range FR1 for DL

0.18, for frequency range FR2 for DL

0.08, for frequency range FR1 for UL

0.10, for frequency range FR2 for UL

NOTE 1: Only one of the UL or SUL carriers (the one with the higher data rate) is counted for a cell operating SUL.

NOTE 2: For UL Tx switching between carriers, only the supported MIMO layer combination across carriers that results in the highest combined data rate is counted for the carriers in the supported maximum UL data rate.

The approximate maximum data rate can be computed as the maximum of the approximate data rates computed using the above formula for each of the supported band or band combinations. For the CCs where UE supports *pdsch-1024QAM-2MIMO-FR1-r17* for the concerned band, data rate shall be derived as maximum what UE would support if using 1024 QAM (when *mcs-Table-r17* or *mcs-TableDCI-1-2-r17* is configured) or 256 QAM.

For single carrier NR SA operation, the UE shall support a data rate for the carrier that is no smaller than the data rate computed using the above formula, with and component is:

* no smaller than 4 except for a UE supporting *enhRedCap-r18*.
* 3.2 if UE supports *enhRedCap-r18* but does not support *notReducedBB-BW-r18.*
* 0.75 if and UE supports *enhRedCap-r18* and *notReducedBB-BW-r18*.
* 0.8 if and UE supports *enhRedCap-r18* and *notReducedBB-BW-r18*.

NOTE 3: As an example, the value 4 in the component above can correspond to , and .

For EUTRA in case of MR-DC, the approximate data rate for a given number of aggregated carriers in a band or band combination is computed as follows.

Data rate (in Mbps) = 

wherein

J is the number of aggregated EUTRA component carriers in MR-DC band combination

is the total maximum number of DL-SCH transport block bits received or the total maximum number of UL-SCH transport block bits transmitted, within a 1ms TTI for j-th CC, as derived from TS36.213 [19] based on the UE supported maximum MIMO layers for the j-th CC, and based on the maximum modulation order for the j-th CC and number of PRBs based on the bandwidth of the j-th CC according to indicated UE capabilities.

The approximate maximum data rate can be computed as the maximum of the approximate data rates computed using the above formula for each of the supported band or band combinations.

For MR-DC, the approximate maximum data rate is computed as the sum of the approximate maximum data rates from NR and EUTRA.

1. ***Modified section***

## 4.2 UE Capability Parameters

*\*\*\* OMITTED TEXT \*\*\**

### 4.2.6 MAC parameters

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Definitions for parameters | Per | M | FDD-TDD DIFF | FR1-FR2 DIFF |
| ***autonomousTransmission-r16***  Indicates whether the UE supports autonomous transmission of the MAC PDU generated for a deprioritized configured uplink grant as specified in TS 38.321 [8]. A UE supporting this feature shall also support *lch-priorityBasedPrioritization-r16*. | UE | No | No | No |
| ***directMCG-SCellActivation-r16, directMCG-SCellActivation-r17***  Indicates whether the UE supports direct NR MCG SCell activation, as specified in TS 38.321 [8], upon SCell addition, upon reconfiguration with sync of the MCG, as specified in TS 38.331 [9]. | UE | No | No | Yes (Incl FR2-2 DIFF) |
| ***directMCG-SCellActivationResume-r16, directMCG-SCellActivationResume-r17***  Indicates whether the UE supports direct NR MCG SCell activation, as specified in TS 38.321 [8], upon reception of an *RRCResume* message, as specified in TS 38.331 [9]. | UE | No | No | Yes (Incl FR2-2 DIFF) |
| ***directSCG-SCellActivation-r16, directSCG-SCellActivation-r17***  Indicates whether the UE supports direct NR SCG SCell activation, as specified in TS 38.321 [8], upon SCell addition and upon reconfiguration with sync of the SCG, both performed via an *RRCReconfiguration* message received via SRB3 or contained in an *RRC(Connection)Reconfiguration* message received via SRB1, as specified in TS 38.331 [9] and TS 36.331 [17].  A UE indicating support of *directSCG-SCellActivation-r16* shall indicate support of EN-DC or support of NGEN-DC as specified in TS 36.331 [17] or support of NR-DC as specified in TS 38.331 [9]. | UE | No | No | Yes (Incl FR2-2 DIFF) |
| ***directSCG-SCellActivationResume-r16, directSCG-SCellActivationResume-r17***  Indicates whether the UE supports direct NR SCG SCell activation, as specified in TS 38.321 [8]:  - upon reception of an *RRCReconfiguration* included in an *RRCConnectionResume* message, as specified in TS 38.331 [9] and TS 36.331 [17], if the UE indicates support of EN-DC or NGEN-DC, and support of *resumeWithSCG-Config-r16* as specified in TS 36.331 [17],  - upon reception of an *RRCReconfiguration* included in an *RRCResume* message, as specified in TS 38.331 [9], if the UE indicates support of NR-DC and of *resumeWithSCG-Config-r16* as specified in TS 38.331 [9].  A UE indicating support of *directSCG-SCellActivationResume-r16* shall indicate support of EN-DC or NGEN-DC and support of *resumeWithSCG-Config-r16* as specified in TS 36.331 [17] or indicate support of NR-DC and of *resumeWithSCG-Config-r16* as specified in TS 38.331 [9]. | UE | No | No | Yes (Incl FR2-2 DIFF) |
| ***drx-Adaptation-r16, drx-Adaptation-r17***  Indicates whether the UE supports DRX adaptation comprised of the following functional components:  - Configured *ps-Offset* for the detection of DCI format 2\_6 with CRC scrambling by *ps*-RNTI and reported *MinTimeGap* before the start of *drx-onDurationTimer* of Long DRX  - Indication of UE whether or not to start *drx-onDurationTimer* for the next Long DRX cycle by detection of DCI format 2\_6  - Configured UE wakeup or not when DCI format 2\_6 is not detected at all monitoring occasions outside Active Time  - Configured periodic CSI report apart from L1-RSRP (*ps-TransmitOtherPeriodicCSI*) when impacted by DCI format 2\_6 that *drx-onDurationTimer* does not start for the next Long DRX cycle  - Configured periodic L1-RSRP report (*ps-TransmitPeriodicL1-RSRP*) when impacted by DCI format 2\_6 that *drx-onDurationTimer* does not start for the next Long DRX cycle  The capability signalling includes the minimum time gap between the end of the slot of last DCI format 2\_6 monitoring occasion and the beginning of the slot where the UE would start the *drx-onDurationTimer* of Long DRX for each SCS. The value *sl1* indicates 1 slot. The value *sl2* indicates 2 slots, and so on. Support of this feature is reported for licensed and unlicensed bands, respectively. When this field is reported, either of *sharedSpectrumChAccess-r16* or *non-SharedSpectrumChAccess-r16* shall be reported, at least. | UE | No | No | Yes  (Incl FR2-2 DIFF) |
| ***enhancedSkipUplinkTxConfigured-r16***  Indicates whether the UE supports skipping UL transmission for a configured uplink grant only if no data is available for transmission and no UCI is multiplexed on the corresponding PUSCH of the uplink grant as specified in TS 38.321 [8]. | UE | No | Yes | No |
| ***enhancedSkipUplinkTxDynamic-r16***  Indicates whether the UE supports skipping UL transmission for an uplink grant addressed to a C-RNTI only if no data is available for transmission and no UCI is multiplexed on the corresponding PUSCH of the uplink grant as specified in TS 38.321 [8]. | UE | No | Yes | No |
| ***enhancedUuDRX-forSidelink-r17***  Indicates whether UE supports sidelink related Uu-DRX mechanisms for PDCCH monitoring. This field is only applicable if the UE supports *sl-TransmissionMode1-r16*. | UE | No | No | No |
| ***extendedDRX-CycleInactive-r17***  Indicates whether UE supports the extended DRX in RRC\_INACTIVE with values of 256, 512 and 1024 radio frames as specified in TS 38.331 [9]. The UE may indicate support for extended DRX in RRC\_INACTIVE only if it supports extended DRX in RRC\_IDLE. | UE | No | No | No |
| ***extendedDRX-CycleInactive-r18***  Indicates whether UE supports the extended DRX in RRC\_INACTIVE with values above 1024 radio frames as specified in TS 38.331 [9]. The UE may indicate support of this capability only if it supports extended DRX in RRC\_IDLE. | UE | No | No | No |
| ***harq-FeedbackDisabled-r17***  Indicates whether the UE supports disabled HARQ feedback for downlink transmission. A UE supporting this feature shall also indicate the support of *nonTerrestrialNetwork-r17*. | UE | No | No | No |
| ***intraCG-Prioritization-r17***  Indicates whether the UE supports the HARQ process ID selection based on LCH priority as specified in TS 38.321 [8]. A UE supporting this feature shall also support *jointPrioritizationCG-Retx-Timer-r17*. | UE | No | No | No |
| ***jointPrioritizationCG-Retx-Timer-r17***  Indicates whether the UE supports simultaneous configuration of LCH based prioritization and *cg-RetransmissionTimer-r16* as specified in TS 38.321 [8]. A UE supporting this feature shall also support *lch-priorityBasedPrioritization-r16* and *configuredGrantWithReTx-r16*. | UE | No | No | No |
| ***lastTransmissionUL-r17***  Indicates whether the UE supports starting the *drx-HARQ-RTT-TimerUL* after the end of the last transmission within a bundle as specified in TS 38.321 [8]. | UE | No | No | No |
| ***lch-PriorityBasedPrioritization-r16***  Indicates whether the UE supports prioritization between overlapping grants and between scheduling request and overlapping grants based on LCH priority as specified in TS 38.321 [8]. | UE | No | No | No |
| ***lch-ToConfiguredGrantMapping-r16***  Indicates whether the UE supports restricting data transmission from a given LCH to a configured (sub-) set of configured grant configurations (see *allowedCG-List-r16* in *LogicalChannelConfig* in TS 38.331 [9]) as specified in TS 38.321 [8]. | UE | No | No | No |
| ***lch-ToGrantPriorityRestriction-r16***  Indicates whether the UE supports restricting data transmission from a given LCH to a configured (sub-) set of dynamic grant priority levels (see *allowedPHY-PriorityIndex-r16* in *LogicalChannelConfig* in TS 38.331 [9]) as specified in TS 38.321 [8]. | UE | No | No | No |
| ***lch-ToSCellRestriction***  Indicates whether the UE supports restricting data transmission from a given LCH to a configured (sub-) set of serving cells (see *allowedServingCells* in *LogicalChannelConfig*). A UE supporting *pdcp-DuplicationMCG-OrSCG-DRB* or *pdcp-DuplicationSRB* (see *PDCP-Config*) shall also support *lch-ToSCellRestriction*. | UE | No | No | No |
| ***lcp-Restriction***  Indicates whether UE supports the selection of logical channels for each UL grant based on RRC configured restriction using RRC parameters *allowedSCS-List*, *maxPUSCH-Duration*, and *configuredGrantType1Allowed* as specified in TS 38.321 [8]. | UE | No | No | No |
| ***logicalChannelSR-DelayTimer***  Indicates whether the UE supports the *logicalChannelSR-DelayTimer* as specified in TS 38.321 [8]. | UE | No | Yes | No |
| ***longDRX-Cycle***  Indicates whether UE supports long DRX cycle as specified in TS 38.321 [8]. | UE | Yes | Yes | No |
| ***mg-ActivationCommPRS-Meas-r17***  Indicates whether UE supports preconfiguration of MGs in RRC signalling for PRS measurements and the use of DL MAC CE from the gNB, as specified in TS 38.321 [8], to activate/deactivate the preconfigured MG for PRS measurements. | UE | No | No | No |
| ***mg-ActivationRequestPRS-Meas-r17***  Indicates whether UE supports preconfiguration of MGs in RRC signalling for PRS measurements and supports the use of UL MAC CE, as specified in TS38.321 [8], to request the activation/deactivation of the preconfigured MG for PRS measurements. The UE can include this field only if the UE supports *mg-ActivationCommPRS-Meas-r17*. | UE | No | No | No |
| ***multipleConfiguredGrants***  Indicates whether UE supports more than one configured grant configurations (including both Type 1 and Type 2) in a cell group. For each cell, the UE supports at most one configured grant per BWP and the maximum number of configured grant configurations per cell group is 2. If absent, for each configured cell group, the UE only supports one configured grant configuration on one serving cell. | UE | No | Yes | No |
| ***multipleSR-Configurations***  Indicates whether the UE supports 8 SR configurations per PUCCH cell group as specified in TS 38.321 [8]. | UE | No | Yes | No |
| ***recommendedBitRate***  Indicates whether the UE supports the bit rate recommendation message from the gNB to the UE as specified in TS 38.321 [8]. | UE | No | No | No |
| ***recommendedBitRateMultiplier-r16***  Indicates whether the UE supports the bit rate multiplier for recommended bit rate MAC CE as specified in TS 38.321 [8], clause 6.1.3.20. This field is only applicable if the UE supports recommendedBitRate. | UE | No | No | No |
| ***recommendedBitRateQuery***  Indicates whether the UE supports the bit rate recommendation query message from the UE to the gNB as specified in TS 38.321 [8]. This field is only applicable if the UE supports *recommendedBitRate*. | UE | No | No | No |
| ***secondaryDRX-Group-r16***  Indicates whether UE supports secondary DRX group as specified in TS 38.321 [8]. | UE | No | Yes | No |
| ***shortDRX-Cycle***  Indicates whether UE supports short DRX cycle as specified in TS 38.321 [8]. | UE | Yes | Yes | No |
| ***simultaneousSR-PUSCH-DiffPUCCH-groups-r17***  Indicates whether the UE supports simultaneous transmission of SR and PUSCH in different PUCCH groups as specified in TS 38.321 [8]. | UE | No | No | No |
| ***singlePHR-P-r16***  Indicates whether UE supports the P bit in single PHR MAC CE as specified in TS 38.321 [8]. | UE | No | No | No |
| ***skipUplinkTxDynamic***  Indicates whether the UE supports skipping of UL transmission for an uplink grant indicated on PDCCH if no data is available for transmission as specified in TS 38.321 [8]. | UE | No | Yes | No |
| ***spCell-BFR-CBRA-r16***  Indicates whether the UE supports sending BFR MAC CE for SpCell BFR as specified in TS 38.321 [8]. | UE | No | No | No |
| ***srs-ResourceId-Ext-r16***  Indicates whether the UE supports the extended 6-bit (Positioning) SRS resource ID in SP Positioning SRS Activation/Deactivation MAC CE, as specified in TS 38.321 [8]. | UE | No | No | No |
| ***sr-TriggeredBy-TA-Report-r17***  Indicates whether the UE supports triggering of SR when a TA report is triggered and there are no available UL-SCH resources. A UE supporting this feature shall also indicate the support of *nonTerrestrialNetwork-r17*. | UE | No | No | No |
| ***survivalTime-r17***  Indicates whether the UE supports services with survival time requirement using configured grant resource and PDCP duplication, as specified in TS 38.321 [8]. A UE supporting this feature shall support *pdcp-DuplicationMCG-orSCG-DRB* or *pdcp-DuplicationSplitDRB*. A UE supporting this feature shall also support *configuredUL-GrantType1-v1650* or *configuredUL-GrantType2-v1650*. | UE | No | No | No |
| ***tdd-MPE-P-MPR-Reporting-r16***  Indicates whether the UE supports P-MPR reporting for Maximum Permissible Exposure, as specified in TS38.321 [8]. | UE | No | TDD only | FR2 only |
| *ul-LBT-FailureDetectionRecovery-r16*  Indicates whether the UE supports consistent uplink LBT detection and recovery, as specified in TS 38.321 [8], for cells operating with shared spectrum channel access.  This field applies to all serving cells with which the UE is configured with shared spectrum channel access. | UE | No | No | No |
| ***uplink-Harq-ModeB-r17***  Indicates whether the UE supports HARQ Mode B and the corresponding LCP restrictions for uplink transmission. A UE supporting this feature shall also indicate the support of *nonTerrestrialNetwork-r17*. | UE | No | No | No |

1. ***Modified section***

#### 4.2.21.2 General parameters

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| Definitions for parameters | Per | M | FDD-TDD DIFF |
| ***ncd-SSB-ForRedCapInitialBWP-SDT-r17***  Indicates that the UE supports using RedCap-specific initial DL BWP associated with NCD-SSB for SDT. If absent, the UE only supports SDT in an initial DL BWP that includes the CD-SSB. UE supporting this feature shall indicate support of *supportOfRedCap-r17* and *ra-SDT-r17 and/or cg-SDT-r17*. | UE | No | No |
| ***supportOf16DRB-RedCap-r17***  Indicates whether the (e)RedCap UE supports 16 DRBs. This capability is only applicable for (e)RedCap UEs. | UE | No | No |
| ***supportOfRedCap-r17***  Indicates that the UE is a RedCap UE with comprised of at least the following functional components:  - Maximum FR1 RedCap UE bandwidth is 20 MHz;  - Maximum FR2 RedCap UE bandwidth is 100 MHz;  - Support of RedCap early indication based on Msg1, MsgA (if UE indicated support of t*woStepRACH-r16*) and Msg3 for random access;  - Separate initial UL BWP for RedCap UEs;  - It includes the configuration(s) needed for RedCap UE to perform random access  - Enabling/disabling of frequency hopping for common PUCCH resources  - Separate initial DL BWP for RedCap UEs;  - It includes CSS/CORESET for random access  - For separate initial DL BWP used for paging, CD-SSB is included  - For separate initial DL BWP only used for RACH, SSB may or may not be included  - For separate initial DL BWP used in connected mode as BWP#0 configuration option 1, CD-SSB is included  - 1 UE-specific RRC configured DL BWP per carrier;  - 1 UE-specific RRC configured UL BWP per carrier;  - UE-specific RRC-configured DL BWP with CD-SSB or NCD-SSB;  - NCD-SSB based measurements in RRC-configured DL BWP.  A RedCap UE shall set the field to *supported*. | UE | CY | No |

#### 4.2.21.3 PDCP parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Definitions for parameters | Per | M | FDD-TDD DIFF |
| ***longSN-RedCap-r17***  Indicates whether the (e)RedCap UE supports 18 bit length of PDCP sequence number. This capability is only applicable for (e)RedCap UEs. | UE | No | No |

#### 4.2.21.4 RLC parameters

|  |  |  |  |
| --- | --- | --- | --- |
| Definitions for parameters | Per | M | FDD-TDD DIFF |
| ***am-WithLongSN-RedCap-r17***  Indicates whether the (e)RedCap UE supports AM DRB with 18 bit length of RLC sequence number. This capability is only applicable for (e)RedCap UEs. | UE | No | No |

#### 4.2.21.5 MeasAndMobParameters

| Definitions for parameters | Per | M | FDD-TDD DIFF | FR1-FR2 DIFF |
| --- | --- | --- | --- | --- |
| ***rrm-RelaxationRRC-ConnectedRedCap-r17***  Indicates whether (e)RedCap UE supports Rel-17 relaxed RRM measurements in RRC\_CONNECTED as specified in TS 38.331 [9]. | UE | No | No | No |

1. ***Modified section***

### 4.2.x eRedCap Parameters

#### 4.2.x.1 Definition of eRedCap UE

eRedCap UE is the UE with reduced peak data rate and, with or without reduced baseband bandwidth in FR1:

- The maximum bandwidth is 20 MHz for FR1. UE features and corresponding capabilities related to UE bandwidths wider than 20 MHz in FR1 are not supported by eRedCap UEs. eRedCap UEs do not support operation in FR2.

- The specifications and capabilities of a RedCap UE are also applicable to eRedCap UEs unless stated otherwise.

***End of the modified section***