7 UE procedures for transmitting and receiving on a carrier with intra-cell guard bands

For operation with shared spectrum channel access, when the UE is configured with any of *intraCellGuardBandUL-r16* for UL carrier and *intraCellGuardBandDL-r16* for DL carrier, the UE is provided with intra-cell guard bands on a carrier, each defined by start CRB and size in number of CRBs, and , provided by higher layer parameters *startCRB-r16* and *nrofCRBs-r16*, respectively. The subscript *x* is set to DL and UL for the downlink and uplink, respectively. Where there is no risk of confusion, the subscript *x* can be dropped. The intra-cell guard bands separate RB sets, each defined by start and end CRB, and , respectively. UE determines , , and the remaining start and end CRBs as and . The RB set *s* consists of resource blocks where . When the UE is not configured with *intraCellGuardBandUL-r16,* the UE determines intra-cell guard band(s), if any, and corresponding RB set(s) according to the default intra-cell GB pattern from [8, TS 38.101-1] corresponding to and carrier size . When the UE is not configured with *intraCellGuardBandDL-r16,* the UE determines intra-cell guard band(s), if any, and corresponding RB set(s) according to the default intra-cell GB pattern from [8, TS 38.101-1] corresponding to and carrier size .

For a carrier with intra-cell guard band(s), the UE expects , and where for a BWP *i* configured by *BWP-Downlink* or *BWP-Uplink*. Within the BWP *i*, RB sets are numbered in increasing order from 0 to where is the number of RB sets contained in the BWP *i* and RB set 0 within the BWP *i* corresponds to RB set in the carrier and RB set within the BWP *i* corresponds to RB set in the carrier.

When a UE is provided with *nrofCRBs-r16=*0 for all intra-cell guard band(s) on a carrier, the UE is indicated that no intra-cell guard-bands are configured for the carrier.

For a carrier where no intra-cell guard-bands are configured, the UE expects , and where for a BWP *i* configured by *BWP-Downlink* or *BWP-Uplink*. Within the BWP *i*, RB sets are numbered in increasing order from 0 to where , is the number of RB sets contained in the BWP *i* and RB set 0 within the BWP *i* corresponds to RB set in the carrier and RB set within the BWP *i* corresponds to RB set in the carrier. For , the number of RBs within a RB set is between 100 and 110. For , the number of RBs within a RB set is between 50 and 55 except for at most one RB set containing 56 RBs.