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LTE Signalling Radio Bearer types-SRB0,SRB1,SRB2

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This tutorial section on LTE basics covers following sub topics:

Main page features terminologies Frame TDD FDD Channel types PHY stack throughput VoLTE CA cell search network entry Timers PSS vs SSS Security LTE Bands EARFCN Hotspot router

This page describes **LTE** Signalling Radio Bearer types which include LTE SRB0, SRB1 and SRB2. LTE Signalling radio bearers(**SRB**) are used for the transfer of RRC and NAS signalling messages.

- RRC messages are used as signalling between UE and eNodeB.
- NAS(Non Access Stratum) messages are used as signalling between UE and MME.

RRC messages can be used to encapsulate NAS messages for their transfer between UE and eNodeB. The S1 application protocol is later

used to transfer NAS messages between eNode and MME.

LTE SRB Type	Direction	RRC message	RLC Mode
LTE SRB0 (CCCH)	Downlink	RRC Connection Setup RRC Connection Reject RRC Connection Re-establishment RRC Connection Re-establishment reject	Transparent
	Uplink	RRC Connection Request RRC Connection Re-esblishment Request	
LTE SRB1(DCCH)	Downlink	RRC Connection Reconfiguration RRC Connection Release Security Mode Command UE Capability Enquiry DL information transfer(if no SRB-2) Mobility from EUTRA Command Handover from EUTRA preparation request CS Fallback parameter response CDMA2000 Counter Check	Acknowledged
	Uplink	RRC Connection Setup Complete Security Mode Complete Security Mode Failure	

		RRC Connection Reconfiguration Complete RRC Connection Re-establishment Complete Measurement report UE Capability information UL Information Transfer(if no SRB2) UL handover preparation transfer CS fallback parameters request CDMA2000 Counter Check response
LTE SRB2 (DCCH)	Downlink	DL Information Transfer
	Uplink	UL Information Transfer

As mentioned in the LTE SRB table, there are three types of SRB in the LTE technology.

- SRB0 used to transfer RRC messages which use CCCH channel.
- SRB1 used to transfer RRC messages which use DCCH channel.
- SRB2 used to transfer RRC messages which use DCCH channel and encapsulates a NAS message.

SRB1 is also used to encapsulate NAS message if SRB2 has not been configured.
SRB2 has lower priority then SRB1 and it is always configured after security activation.
SRB0 uses transparent mode RLC while SRB1 and SRB2 use acknowledged mode RLC.

LTE Signalling Radio Bearers(LTE SRB) : 3GPP reference TS 36.331

LTE RELATED LINKS

LTE PSS SSS
LTE RS DMRS SRS
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LTE PUCCH
LTE PRACH
LTE PMCH
LTE PHICH
LTE PDSCH
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