

Abbreviations and Acronyms

3GPP	Third Generation Partnership Project
5GCN	5G Core Network
AAS	Active Antenna System
ACIR	Adjacent Channel Interference Ratio
ACK	Acknowledgment (in ARQ protocols)
ACLR	Adjacent Channel Leakage Ratio
ACS	Adjacent Channel Selectivity
ADC	Analog-to-Digital Converter
AF	Application Function
AGC	Automatic Gain Control
AM	Acknowledged Mode (RLC configuration)
AM	Amplitude Modulation
AMF	Access and Mobility Management Function
A-MPR	Additional Maximum Power Reduction
AMPS	Advanced Mobile Phone System
ARI	Acknowledgment Resource Indicator
ARIB	Association of Radio Industries and Businesses
ARQ	Automatic Repeat-reQuest
AS	Access Stratum
ATIS	Alliance for Telecommunications Industry Solutions
AUSF	Authentication Server Function
AWGN	Additive White Gaussian Noise
BC	Band Category
BCCH	Broadcast Control Channel
BCH	Broadcast Channel
BiCMOS	Bipolar Complementary Metal Oxide Semiconductor
BPSK	Binary Phase-Shift Keying
BS	Base Station
BW	Bandwidth
BWP	Bandwidth part
CA	Carrier aggregation
CACLR	Cumulative Adjacent Channel Leakage Ratio
CBG	Codeblock group
CBGFI	CBG flush information
CBGTI	CBG transmit indicator
CC	Component Carrier
CCCH	Common Control Channel
CCE	Control Channel Element
CCSA	China Communications Standards Association
CDM	Code Division Multiplexing
CDMA	Code-Division Multiple Access
CEPT	European Conference of Postal and Telecommunications Administration
CITEL	Inter-American Telecommunication Commission

C-MTC	Critical Machine-Type Communications
CMOS	Complementary Metal Oxide Semiconductor
CN	Core Network
CoMP	Coordinated Multi-Point Transmission/Reception
COREST	Control resource set
CP	Cyclic Prefix
CP	Compression Point
CQI	Channel-Quality Indicator
CRB	Common resource block
CRC	Cyclic Redundancy Check
C-RNTI	Cell Radio-Network Temporary Identifier
CS	Capability Set (for MSR base stations)
CSI	Channel-State Information
CSI-IM	CSI Interference Measurement
CSI-RS	CSI Reference Signals
CS-RNTI	Configured scheduling RNTI
CW	Continuous Wave
D2D	Device-to-Device
DAC	Digital-to-Analog Converter
DAI	Downlink Assignment Index
D-AMPS	Digital AMPS
DC	Dual Connectivity
DC	Direct Current
DCCH	Dedicated Control Channel
DCH	Dedicated Channel
DCI	Downlink Control Information
DFT	Discrete Fourier Transform
DFTS-OFDM	DFT-Spread OFDM (DFT-precoded OFDM, see also SC-FDMA)
DL	Downlink
DL-SCH	Downlink Shared Channel
DM-RS	Demodulation Reference Signal
DR	Dynamic Range
DRX	Discontinuous Reception
DTX	Discontinuous Transmission
EDGE	Enhanced Data Rates for GSM Evolution, Enhanced Data Rates for Global Evolution
ECC	Electronic Communications Committee (of CEPT)
eIMTA	Enhanced Interference Mitigation and Traffic Adaptation
EIRP	Effective Isotropic Radiated Power
EIS	Equivalent Isotropic Sensitivity
eMBB	enhanced MBB
EMF	Electromagnetic Field
eNB	eNodeB
EN-DC	E-UTRA NR Dual-Connectivity
eNodeB	E-UTRAN NodeB
EPC	Evolved Packet Core
ETSI	European Telecommunications Standards Institute
E-UTRA	Evolved UTRA

EVM	Error Vector Magnitude
FCC	Federal Communications Commission
FDD	Frequency Division Duplex
FDM	Frequency Division Multiplexing
FET	Field-Effect Transistor
FDMA	Frequency-Division Multiple Access
FFT	Fast Fourier Transform
FoM	Figure-of-Merit
FPLMTS	Future Public Land Mobile Telecommunications Systems
FR1	Frequency Range 1
FR2	Frequency Range 2
GaAs	Gallium Arsenide
GaN	Gallium Nitride
GERAN	GSM/EDGE Radio Access Network
gNB	gNodeB
gNodeB	generalized NodeB
GSA	Global mobile Suppliers Association
GSM	Global System for Mobile Communications
GSMA	GSM Association
HARQ	Hybrid ARQ
HBT	Heterojunction Bipolar Transistor
HEMT	High Electron-Mobility Transistor
HSPA	High-Speed Packet Access
IC	Integrated Circuit
ICNIRP	International Commission on Non-Ionizing Radiation
ICS	In-Channel Selectivity
IEEE	Institute of Electrical and Electronics Engineers
IFFT	Inverse Fast Fourier Transform
IL	Insertion Loss
IMD	Inter Modulation Distortion
IMT-2000	International Mobile Telecommunications 2000 (ITU's name for the family of 3G standards)
IMT-2020	International Mobile Telecommunications 2020 (ITU's name for the family of 5G standards)
IMT-Advanced	International Mobile Telecommunications Advanced (ITU's name for the family of 4G standards)
InGaP	Indium Gallium Phosphide
IOT	Internet of Things
IP	Internet Protocol
IP3	3rd order Intercept Point
IR	Incremental Redundancy
ITRS	International Telecom Roadmap for Semiconductors
ITU	International Telecommunications Union
ITU-R	International Telecommunications Union-Radiocommunications Sector
KPI	Key Performance Indicator
L1-RSRP	Layer 1 Reference Signal Receiver Power
LC	Inductor(L)-Capacitor

LAA	License-Assisted Access
LCID	Logical Channel Index
LDPC	Low-Density Parity Check Code
LO	Local Oscillator
LNA	Low-Noise Amplifier
LTCC	Low Temperature Co-fired Ceramic
LTE	Long-Term Evolution
MAC	Medium Access Control
MAC-CE	MAC control element
MAN	Metropolitan Area Network
MBB	Mobile Broadband
MB-MSR	Multi-Band Multi Standard Radio (base station)
MCG	Master Cell Group
MCS	Modulation and Coding Scheme
MIB	Master Information Block
MMIC	Monolithic Microwave Integrated Circuit
MIMO	Multiple-Input Multiple-Output
mMTC	massive Machine Type Communication
MPR	Maximum Power Reduction
MSR	Multi-Standard Radio
MTC	Machine-Type Communication
MU-MIMO	Multi-User MIMO
NAK	Negative Acknowledgment (in ARQ protocols)
NB-IoT	Narrow-Band Internet-of-Things
NDI	New-Data Indicator
NEF	Network exposure function
NF	Noise Figure
NG	The interface between the gNB and the 5G CN
NG-c	The control-plane part of NG
NGMN	Next Generation Mobile Networks
NG-u	The user-plane part of NG
NMT	Nordisk MobilTelefon (Nordic Mobile Telephony)
NodeB	NodeB, a logical node handling transmission/reception in multiple cells. Commonly, but not necessarily, corresponding to a base station
NOMA	Nonorthogonal Multiple Access
NR	New Radio
NRF	NR repository function
NS	Network Signaling
NZP-CSI-RS	Non-zero-power CSI-RS
OBUE	Operating Band Unwanted Emissions
OCC	Orthogonal Cover Code
OFDM	Orthogonal Frequency-Division Multiplexing
OOB	Out-Of-Band (emissions)
OSDD	OTA Sensitivity Direction Declarations
OTA	Over-The-Air
PA	Power Amplifier
PAE	Power-Added Efficiency
PAPR	Peak-to-Average Power Ratio

PAR	Peak-to-Average Ratio (same as PAPR)
PBCH	Physical Broadcast Channel
PCB	Printed Circuit Board
PCCH	Paging Control Channel
PCF	Policy control function
PCG	Project Coordination Group (in 3GPP)
PCH	Paging Channel
PCI	Physical Cell Identity
PDC	Personal Digital Cellular
PDCCH	Physical Downlink Control Channel
PDCP	Packet Data Convergence Protocol
PDSCH	Physical Downlink Shared Channel
PDU	Protocol Data Unit
PHS	Personal Handy-phone System
PHY	Physical Layer
PLL	Phase-Locked Loop
PM	Phase Modulation
PMI	Precoding-Matrix Indicator
PN	Phase Noise
PRACH	Physical Random-Access Channel
PRB	Physical Resource Block
P-RNTI	Paging RNTI
PSD	Power Spectral Density
PSS	Primary Synchronization Signal
PUCCH	Physical Uplink Control Channel
PUSCH	Physical Uplink Shared Channel
QAM	Quadrature Amplitude Modulation
QCL	Quasi Co-Location
QoS	Quality-of-Service
QPSK	Quadrature Phase-Shift Keying
RACH	Random Access Channel
RAN	Radio Access Network
RA-RNTI	Random Access RNTI
RAT	Radio Access Technology
RB	Resource Block
RE	Resource Element
RF	Radio Frequency
RFIC	Radio Frequency Integrated Circuit
RI	Rank Indicator
RIB	Radiated Interface Boundary
RIT	Radio Interface Technology
RLC	Radio Link Control
RMSI	Remaining Minimum System Information
RNTI	Radio-Network Temporary Identifier
RoAoA	Range of Angle of Arrival
ROHC	Robust Header Compression
RRC	Radio Resource Control
RRM	Radio Resource Management

RS	Reference Symbol
RSPC	IMT-2000 Radio Interface Specifications
RSRP	Reference Signal Received Power
RV	Redundancy Version
RX	Receiver
SCG	Secondary Cell Group
SCS	Sub-Carrier Spacing
SDL	Supplementary Downlink
SDMA	Spatial Division Multiple Access
SDO	Standards Developing Organization
SDU	Service Data Unit
SEM	Spectrum Emissions Mask
SFI	Slot format indicator
SFI-RNTI	Slot format indicator RNTI
SFN	System Frame Number (in 3GPP).
SI	System Information Message
SIB	System Information Block
SIB1	System Information Block 1
SiGe	Silicon Germanium
SINR	Signal-to-Interference-and-Noise Ratio
SIR	Signal-to-Interference Ratio
SiP	System-in-Package
SI-RNTI	System Information RNTI
SMF	Session management function
SNDR	Signal to Noise-and-Distortion Ratio
SNR	Signal-to-Noise Ratio
SoC	System-on-Chip
SR	Scheduling Request
SRI	SRS resource indicator
SRIT	Set of Radio Interface Technologies
SRS	Sounding Reference Signal
SS	Synchronization Signal
SSB	Synchronization Signal Block
SSS	Secondary Synchronization Signal
SMT	Surface-Mount assembly
SUL	Supplementary Uplink
SU-MIMO	Single-User MIMO
TAB	Transceiver-Array Boundary
TACS	Total Access Communication System
TCI	Transmission configuration indication
TCP	Transmission Control Protocol
TC-RNTI	Temporary C-RNTI
TDD	Time-Division Duplex
TDM	Time Division Multiplexing
TDMA	Time-Division Multiple Access
TD-SCDMA	Time-Division-Synchronous Code-Division Multiple Access
TIA	Telecommunication Industry Association
TR	Technical Report

TRP	Total Radiated Power
TS	Technical Specification
TRS	Tracking Reference Signal
TSDSI	Telecommunications Standards Development Society, India
TSG	Technical Specification Group
TTA	Telecommunications Technology Association
TTC	Telecommunications Technology Committee
TTI	Transmission Time Interval
TX	Transmitter
UCI	Uplink Control Information
UDM	Unified data management
UE	User Equipment, the 3GPP name for the mobile terminal
UEM	Unwanted Emissions Mask
UL	Uplink
UMTS	Universal Mobile Telecommunications System
UPF	User plane function
URLLC	Ultra-reliable low-latency communication
UTRA	Universal Terrestrial Radio Access
V2X	Vehicular-to-Anything
V2V	Vehicular-to-Vehicular
VCO	Voltage-Controlled Oscillator
WARC	World Administrative Radio Congress
WCDMA	Wideband Code-Division Multiple Access
WG	Working Group
WiMAX	Worldwide Interoperability for Microwave Access
WP5D	Working Party 5D
WRC	World Radiocommunication Conference
Xn	The interface between gNBs
ZC	Zadoff-Chu
ZP-CSI-RS	Zero-power CSI-RS