

GLOSSARY OF TECHNICAL TERMS

The section of glossary of technical terms contains explanations of certain terms used in this Document in connection with the business of our Group. The terms and their meanings may not correspond to standard industry meaning or usage of these terms.

“3GPP”	the 3rd Generation Partnership Project, an umbrella term for a number of standards organizations which develop protocols for mobile telecommunications
“5G”	the 5th generation mobile network, a new global wireless standard after 1G, 2G, 3G, and 4G networks
“AI”	artificial intelligence, simulation of human intelligence by machines
“API”	the acronym for application programming interface, which is a software intermediary that allows two applications to talk to each other
“bandwidth”	a measure of the width of a range of frequencies, measured in hertz
“BBU”	base band unit, a device in telecom systems that transports a baseband frequency, usually from a remote radio unit, to which it may be tied through optical fiber
“broadband”	a signalling method that includes or handles a relatively wide range (or band) of frequencies, which may be divided into channels, the wider or broader the bandwidth, the greater the information-carrying capacity
“CAGR”	compound annual growth rate; the CAGR formula involves (i) dividing the ending value by the beginning value, (ii) making a radical of the amount by the number of years (e.g. 2019~2021=2 years) and (iii) subtracting one to make the rate a percentage.
“capacity”	refers to the tightest upper bound on the amount of information that can be reliably transmitted over the wireless communication channel

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“CFR”	Crest Factor Reduction, a technique to reduce the peak to average power ratio of a waveform to a desired value
“channel simulator”	specialized test equipment that provides test and interference signal generation capability
“cloud”	a network of remote servers hosted on the Internet and used to store, manage, and process data in place of local servers or personal computers
“CU”	centralized unit, which provides support for the higher layers of the protocol stack in base station
“DAS”	distributed antenna system, a network of antenna that sends and receives cellular signals
“DFE”	digital front end, the interface between the analog front-end and digital baseband modules in a wireless system
“DMP”	data management platform, a software platform used for collecting and managing data
“DPD”	Digital Pre-Distortion, a technique to increase linearity or compensate for non-linearity in power amplifiers
“DU”	distributed unit, which provides support for the lower layers of the protocol stack in base station
“EDA software”	electronic design automation software, a category of software for designing electronic systems
“edge computing”	a distributed computing paradigm that brings computation and data storage closer to the location where it is needed to improve response times and save bandwidth
“FEM”	the finite element method, a popular method for numerically solving differential equations arising in engineering and mathematical modeling.

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“ERP”	enterprise resource planning, a business process management software that allows an organization to use a system of integrated applications to manage the business and digitalize back-office functions relating to technology, services, and human resources
“error vector magnitude”	deviation of the actual signal point from the ideal signal point in a transmission path, which indicates the quality of the transmitted radio signal
“FOB”	free on board, a term in international commercial law specifying at what point respective obligations, costs, and risk involved in the delivery of goods shift from the seller to the buyer under the Incoterms standard published by the International Chamber of Commerce
“FPGA”	field programmable gate array, a type of semiconductor device that can be reprogrammed to desired application of functionality after manufacturing
“fronthaul”	fiber-based connection in in RAN infrastructure between the Baseband Unit (BBU) and Remote Radio Head (RRH), which is established to supplement to the backhaul connection between the BBU and central network core
“Gbps”	Gigabits per second, representing billions of bits per second and commonly used as a measure of bandwidth on a digital data transmission medium such as optical fibre
“GDP per capita”	gross domestic product divided by the number of people in the same area
“GFA”	gross floor area
“GHz”	gigahertz
“heterogeneous network”	a network connecting computers and other devices where the operating systems and protocols have significant differences

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“IEEE”	Institute of Electrical and Electronics Engineers, the world’s largest association of technical professionals established for the advancement of technology
“IT”	information technology
“IoT”	Internet of things, a massive network connecting all sorts of information sensory devices, such as radio frequency identification units, ultra-red sensors, global positioning systems and laser scanners, to the internet with the aim of connecting all things to the network for easy identification and management
“IIoT”	industrial Internet of things
“jitter”	the variation in time delay between when a signal is transmitted and when it is received over a network connection
“LORA”	Long Range, a proprietary low-power wide-area network modulation technique
“LTE-U”	long-term evolution-unlicensed, a standard for wireless broadband communication for mobile devices and data terminals
“MES”	manufacturing execution systems, which are computerized systems used in manufacturing to track and document the transformation of raw materials to finished goods
“multiple-input multiple-output” or “MIMO”	a term used to describe the use of multiple antennas at both the transmitter and receiver to improve communication performance
“MU-MIMO”	multi-user, multiple-input, multiple-output technology, which allows a Wi-Fi router to communicate with multiple devices simultaneously

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“Multi-TRP”	transmission and reception point, a key technology that has been studied in fourth-generation (4G) mobile communication to alleviate the inter-cell interference via dynamic coordination between the multi-TRPs, to provide joint scheduling and transmissions or receptions
“OEM”	original equipment manufacturer
“O-RAN”	open radio access network (O-RAN), a network architecture integrating software and hardware which allows BBU and RRU components from different sources to work together seamlessly
“parameter tuning”	a process of adjusting all the related parameters, such as channel model, user traffic volume and application scenarios, of radio access network to match the actual communication environment
“peak throughput”	the maximum volume of data that can be transferred within a given timeframe. For example, when the peak throughput reaches 15Gbps, the maximum volume of data transferred within a second is 15G bits
“protocol stack”	a set of protocols used in a communication network to accommodate different network architectures
“pRRU”	pico remote radio unit, which is used to the baseband unit
“private network”	a computer network that uses a private address space of IP addresses. These addresses are commonly used for local area networks (LANs) in residential, office, and enterprise environments
“radio frequency” or “RF”	the oscillation rate of an alternating electric current or voltage or of a magnetic, electric or electromagnetic field or mechanical system in the frequency range from around 20kHz to around 300 GHz
“R&D”	research and development

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“rHub”	a switch device, which is converge and forward common public radio interface data to allow multiple pRRUs to serve multiple indoor floors or areas
“RRU”	remote radio unit, which can be configured to communicate with a BBU via a physical communication link and can communicate with a wireless mobile device via an air interface
“sensitivity”	refers to the minimum magnitude of input signal that is required to produce an output signal which meet specified criteria
“signal analyzer”	equipment that can analyze the capabilities of modern radiofrequency signals
“signal generator”	a type of electronic devices that generates signals with set properties of amplitude, frequency and wave shapes and can be used as stimulus in designing, testing and troubleshooting
“spectrum analyzer”	equipment that measures the power of signal spectrum
“SKU”	stock keeping unit, a distinct type of item for sale
“Wi-Fi”	the name of a wireless networking technology that uses radio waves to provide wireless high-speed internet and network connections
“WLAN”	wireless local-area network