

Glossary

Term	Description
3GPP (3rd Generation Partnership Project)	A project for developing third-generation (3G) mobile phone system standards that is currently developing international standards for LTE and LTE-Advanced.
5G	Fifth-generation mobile communications system. Positioned as the successor specifications to fourth-generation (4G) mobile communications systems, 5G will be the next method of mobile communications.
GCF (Global Certification Forum)	An association that sets operating standards for networks and certification testing standards for mobile terminals to ensure the global interoperability of terminals. GCF certified measurement systems and measurement items guarantee that test performance (measurement procedures and measurement accuracy) is in conformance with conditions required for certification testing for mobile terminals.
IoT	Stands for the "Internet of Things." IoT will not only allow computers and other communications devices to interact but also will give communications functions to manufacturing equipment in factories, appliances, and virtually all other things in the world around us. This will give these "things" interactive communications functions when connected with the Internet and will facilitate automatic control and remote measurement.
LTE	Long-Term Evolution. High-speed mobile service that enables data communication at 5 to 10 times the speed of 3G mobile phone and telecommunications services.
FDD-LTE	A high-speed mobile communications system that employs Frequency-Division Duplexing (FDD) to separate a frequency band into transmission and reception portions to allow concurrent communication in both directions.
TDD-LTE	A high-speed mobile communications system that employs Time Division Duplexing (TDD) to separate transmission signals and reception signals on the same frequency by short time intervals to enable alternate communication in both directions.
LTE-Advanced (LTE-A)	Fourth-generation (4G) mobile communications standard approved by the International Telecommunication Union (ITU). The goal is to run faster than LTE, which is becoming popular globally, using new technology such as carrier aggregation. The 3rd Generation Partnership Project (3GPP), which aims for greater functionality via high speeds, is currently setting the international standard.
M to M (Machine to Machine)	Machines communicating, controlling, and operating each other without a human intermediary.
MIMO (Multiple-Input and Multiple-Output)	A wireless communications technology that uses multiple antennas at the transmitter and receiver to transmit and receive data at the same frequency axis. Capable of increasing communications speeds, a key technology of LTE-Advanced.
Wi-SUN	An international wireless communications standard. SUN is short for "Smart Utility Network," and the technology is planned for use in transmissions between wireless communications devices in utility meters, such as for gas and electric power.
Conformance Testing/ Interoperability Testing	In regions employing 3GPP standards, this testing of the transmission/reception characteristics and performance of mobile terminals, the communications procedures of mobile terminals and base stations, and other items is designed to guarantee the interoperability of the base stations of telecom operators and the mobile terminals of manufacturers.
Carrier Aggregation	Technology that enables the combination of multiple allotted frequencies to create a larger virtual bandwidth. The larger the bandwidth, the faster large volumes of data can be transmitted. A key technology of LTE-Advanced.
Connectivity	A general term signifying connections between and among mobile devices, etc. and other equipment and devices. This term is used to distinguish such modes as Wi-Fi, Bluetooth, NFC, and other communications modes, from cellular communications. Recently, connectivity has been extended to include automobiles, digital cameras, home appliances, game devices, and healthcare devices.
Service Assurance	Solutions to assure the performance and service quality of telecom operators and service provider networks, and to raise the efficiency of network administration and operation.
Small Cells	A type of station for mobile communications, used typically to supplement the coverage of regular ground stations. Small cell stations have lower output power and are used to cover smaller areas. Small cells supplement macro cells with high output power, and are used to provide coverage to areas such as mountainous regions and buildings that macro cell signals cannot reach. Installations include the interiors of buildings that signals cannot penetrate.
Non-Cellular	In contrast to cellular communications methods, such as LTE, W-CDMA, CDMA2000, etc., non-cellular refers to short-distance WLAN (Wireless LAN), Bluetooth, etc.
Mobile Backhaul	Transmission network that connects wireless base stations to core networks.
Mobile Fronthaul	Transmission network that connects wireless base stations with network centers that aggregate the control and base band functions of mobile base stations.
Life-Cycle Assessment	This is a method of calculating the burden of products on the natural environment over their full useful lives (covering sourcing of materials, manufacturing, distribution, usage, and disposal through recycling). At present, the usage of energy at each stage is measured on a CO ₂ conversion basis.
Reference Design	Product blueprint chip maker provides to device vendors for a product that uses the chip maker's products. Makes development and production of mobile devices easier.