

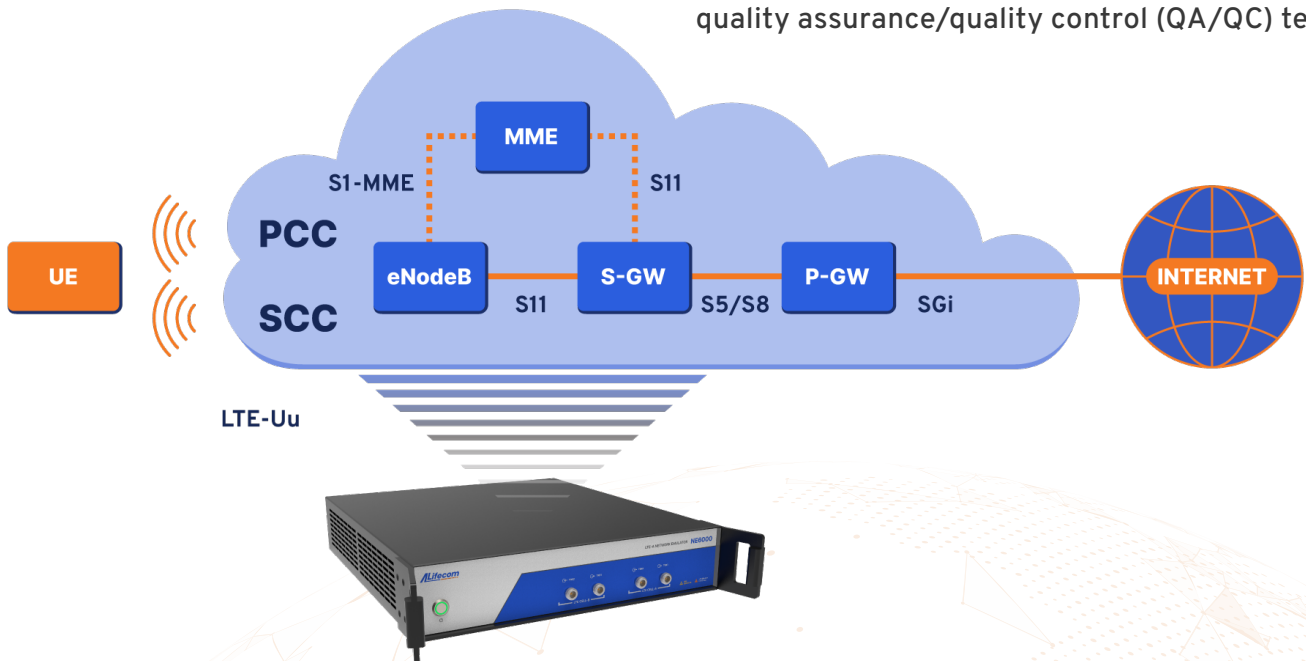


# NE6000 4G LTE-A Network Emulator

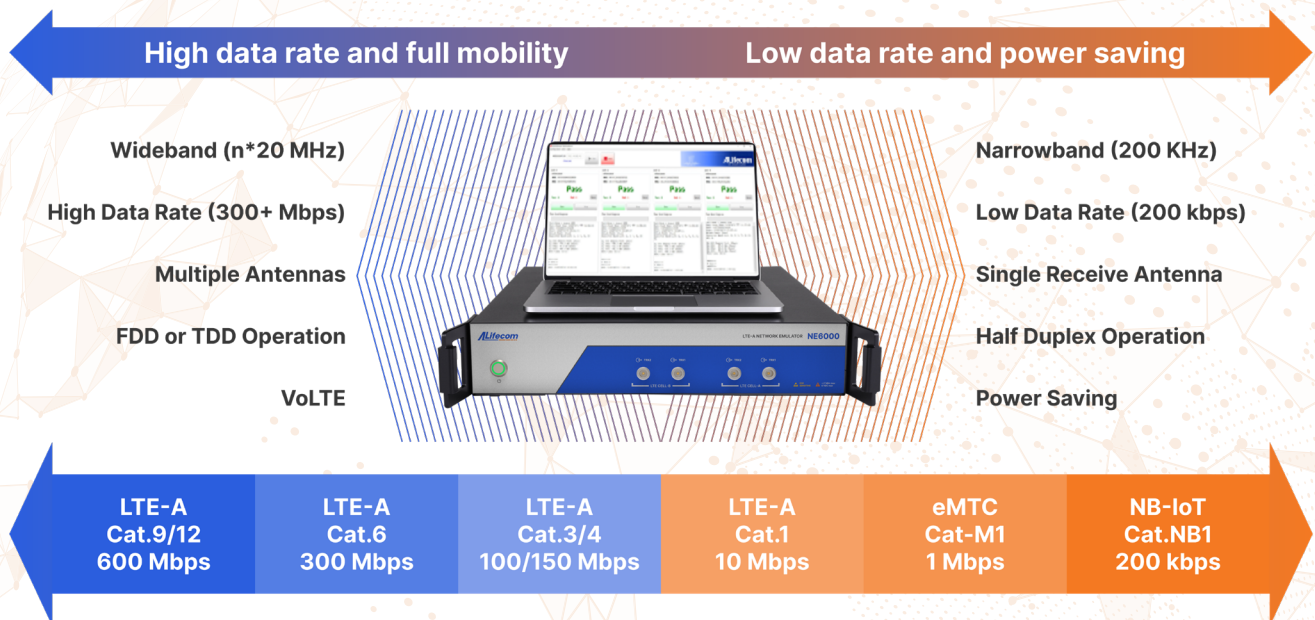
## Cat.6/NB-IOT/eMTC UE Signaling Test Solution

The ALifecom NE6000 is a test system used to test and diagnose issues in Long-Term Evolution (LTE) and LTE-Advanced (LTE-A) communication systems. It is designed to emulate a complete LTE-A network system, including an evolved Node B (eNB) and a true Evolved Packet Core (EPC).

The NE6000 can be used to perform various test items related to LTE and LTE-A signaling, and it provides a range of diagnostic and troubleshooting capabilities for the development and debugging of 4G User Equipment (UE). The NE6000 also offers a compact option for use in production lines and quality assurance/quality control (QA/QC) testing.



### SCOPE OF TESTING



## FEATURES AND TEST ITEMS

The NE6000 is designed to test different aspects of signaling for LTE-A technology. It comes in a 2U-tall, rack mountable form factor, making it easy to integrate into standard equipment racks. The NE6000 can be used to communicate with DUTs (devices under test) through the LTE-Uu interface.



### Key Features

- LTE-A FDD/TDD Dual Mode
- Dual 2x2 MIMO
- 2CC Carrier Aggregation (CA)
- LTE-A Cat.1 ~ Cat.4 (upgradable to Cat.6/9/12)
- NB-IOT/eMTC
- Frequency Range 400 MHz ~ 3.8 GHz
- 1.4/3/5/10/20 MHz Frequency BW
- IPv4/IPv6 Functional Test
- Multiple PDN (max. 8 PDN) Functional Test
- QoS GBR/non-GBR and Traffic Priority Functional Test
- Integrated Protocol Analyzer
- UL UE Target Power Setting (UE max. TX Power)
- Multi-DUT Testing: max. 4 UE's

### Test Items

■ Attach/Detach	■ RSSI
■ IMEI	■ Handover (FDD/TDD)
■ Band List	■ VoLTE
■ APN	■ Protocol Analyzer
■ MAC Throughput	■ SMS Test
■ IP Throughput	■ PWS
■ TX Power	■ NB-IOT PSM/eDRX Test
■ Sensitivity	■ eMTC PSM/eDRX Test

### NE6000 Specifications

Mobile Carrier	LTE-A Rel.14
Frequency Range	400 MHz ~ 3800 MHz
Frequency Bandwidth	1.4/3/5/10/15/20 MHz
Data Rate	DL: 150 Mbps (20 MHz, 2x2 MIMO) UL: 40 Mbps (20 MHz)
Category	CAT. 4 (upgradable: Cat.6~Cat.12/eMTC/NB-IoT)
Antenna Mode	1x1 SISO/2x2 MIMO
Max Number of RF Port	2 (upgradable: Cat.6 for 4 ports)
QoS	GBR/non-GBR and traffic priority
Security	AES/Snow3G
Networking	MME/S-GW/P-GW full function
Number of PDN	8
Frequency Resolution	1 MHz
Reference Frequency	10 MHz
Signal Bandwidth	10/20 MHz
RF Input/Output Impedance	50 $\Omega$
Computer Control Interface	Gigabit Ethernet
Weight	10 Kg
Power Consumption	<150 W
Calibration Cycle	12 months (recommended)
Warranty	12 months hardware with software updates

### Transmission Signal

Maximum Level	-35 dBm
Output Level Range	-100 to -35 dBm
Output Level Accuracy	Level $\geq$ -60 dBm $\pm$ 1 dB, Level $<$ -60 dBm $\pm$ 1.5 dB
Output Level Resolution	0.1 dB
Output EVM Accuracy	<2 %
Access Method	OFDMA
Modulation Method	QPSK/16QAM/64QAM

### Received Signal

Maximum Input Level	+27 dBm
Input Power Level	-40 to +27 dBm
Input Level Accuracy	$\pm$ 1.0 dB
Access Method	OFDMA/SC-FDMA
Modulation Method	QPSK/16QAM

**ORDER OPTIONS**

Model	Type	Description	SW Tools Included
<b>NE6000-IOT</b>	Production	LTE-A FDD/TDD Dual Mode 400MHz to 3.8GHz Cat.1/NB-IOT/eMTC RF Ports x 2	ATS+iATS+MTS
<b>NE6000P</b>	Production	LTE-A FDD/TDD Dual Mode 400MHz to 3.8GHz NB-IOT/eMTC/Cat.1 to Cat.4 RF Ports x 2 (4 with Cat.6 option)	ATS+iATS+MTS
<b>NE6000R</b>	R&D	LTE-A FDD/TDD Dual Mode 400MHz to 3.8GHz NB-IOT/eMTC/Cat.1 to Cat.4 RF Ports x 2 (4 with Cat.6 option)	ATS+iATS+CTS

**NOTE:**  
 SW Tools

**ATS** = 1-DUT production test SW  
**iATS** = multi-DUT (max. 4 UE's) for production test

**MTS** = Generic GUI for NE6000  
**CTS** = Advanced GUI with applications test function and protocol analyzer for NE6000

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