



ORDER OPTIONS

Model	Type	Description	SW Tools Included
NE7500P	Production	5G NR SA (FDD/TDD) FR1: 400MHz to 6 GHz FR2: with MM100 100 MHz BW DL 4x4 MIMO UL 2x2 MIMO 256QAM DL / 64QAM UL RF Ports x 4	ATS+iATS+CTS-Lite
NE7500R	R&D	5G NR SA (FDD/TDD) FR1: 400MHz to 6 GHz FR2: with MM100 100 MHz BW DL 4x4 MIMO UL 2x2 MIMO 256QAM DL / 64QAM UL RF Ports x 4	ATS+iATS+CTS
NE7500NSA	Production	NE7500P x1 NE6000P x1	ATS+iATS+CTS-Lite
NE7500NSA+	R&D	NE7500R x1 NE6000R x1 Control Unit (EPC) x1	ATS+iATS+CTS

NOTE:  
SW Tools

ATS = 1-DUT production test SW

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

CTS-Lite = Generic GUI for NE7500

CTS = Advanced GUI with applications test function and protocol analyzer for NE6000/NE7500

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# NE7500 5G NR Network Emulator

## Most Affordable NSA/SA Test Solution

The ALifecom NE7500 is a test system designed to simulate various aspects of a cellular network for the purpose of testing the performance and functionality of user equipment (UE), such as smartphones, tablets, and other wireless devices. It includes 3GPP compliant components such as a gNodeB and a 5G Core (5GC).

The system is used for a variety of purposes, including R&D regression testing, stability testing, and end-of-production line verification. It can be used to perform RF measurements, IP/MAC throughput tests, MIMO tests, inter- and intra-cell handover tests, and user experience tests. These tests can help ensure that the UE is functioning properly and meets the performance standards required for use in a cellular network.



### 4G/5G Test Items

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

### 5G NSA (NE6000+NE7500)



5G SA (NE7500)



5G NSA Mode Key Features

- Compliant with 3GPP 5G NR Release 16
- Primary Cell: 4G LTE-A FDD/TDD Dual Mode (NE6000)
- Secondary Cell: 5G NR FDD/TDD Dual Mode (NE7500)
- DL 2x2 MIMO for 4G LTE-A and DL 4x4 MIMO for 5G NR
- Frequency Range 400MHz ~ 6GHz
- Up to 20 MHz Frequency BW for 4G LTE-A and 100 MHz Frequency BW for 5G NR

5G SA Mode Key Features

- Compliant with 3GPP 5G NR Release 16
- 5G NR FDD/TDD Dual Mode (NE7500)
- DL 4x4 MIMO
- Frequency Range 400MHz ~ 6GHz
- Up to 100 MHz Frequency BW
- Modulation Scheme Up to 256QAM in DL and 64QAM in UL

NE7500 Specifications

Mobile Carrier	5G NR Rel.16
Frequency Range	400MHz ~ 6000MHz
Frequency Bandwidth	Up to 100 MHz Frequency BW
Antenna Mode	Up to 4x4 DL MIMO
Number of RF Port	4
Networking	AMF/SMF/UPF full function
Frequency Resolution	1 MHz
Reference Frequency	10 MHz
Signal Bandwidth	Up to 100 MHz
RF Input/Output Impedance	50 Ω
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 ≥-60 dBm ±1 dB, Level <-60 dBm ±1.5 dB
Output Level Resolution	0.1 dB
Output EVM Accuracy	<2 %
Access Method	OFDMA
Modulation Method	QPSK/16QAM/64QAM/256QAM

Received Signal

Maximum Input Level	+27 dBm
Input Power Level	-40 to +27 dBm
Input Level Accuracy	±1.0 dB
Access Method	CP-OFDM
Modulation Method	QPSK/16QAM/64QAM

FRIENDLY GUI AND USEFUL SW TOOLS

ALifecom provides a range of software tools (CTS, MTS and ATS) that can be used to cover various testing scenarios and segments in the development and integration of 5G NR SA/NSA devices as well as LTE devices.



- TX Power
- TX EVM
- RSSI
- DNN (APN)
- DL/UL MAC Throughput
- UE Status
- Band List
- ENDC
- Link Status
- RRC/NSA
- Protocol Message