NOFFZ TECHNOLOGIES

sUTP 5018

BASE STATION EMULATOR

FOR CUSTOM CELLULAR NETWORKS

PRODUCT

Applications: Cellular Signaling Test for Validation and Production

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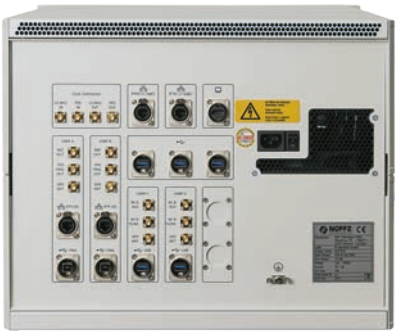
Front



Rear

NOFFZ BSE with N-type Connectors for 4x4 MIMO RF and Ethernet for Remote Control

FEATURES AND HIGHLIGHTS

Bring a whole mobile network to your lab or production: NOFFZ Base Station Emulator (BSE) creates a custom cellular test network. This makes testing cellular devices easier than ever before. Compact, cost-effective testing of multiple DUTs in parallel from 2G to 5G, including endurance testing for several days.

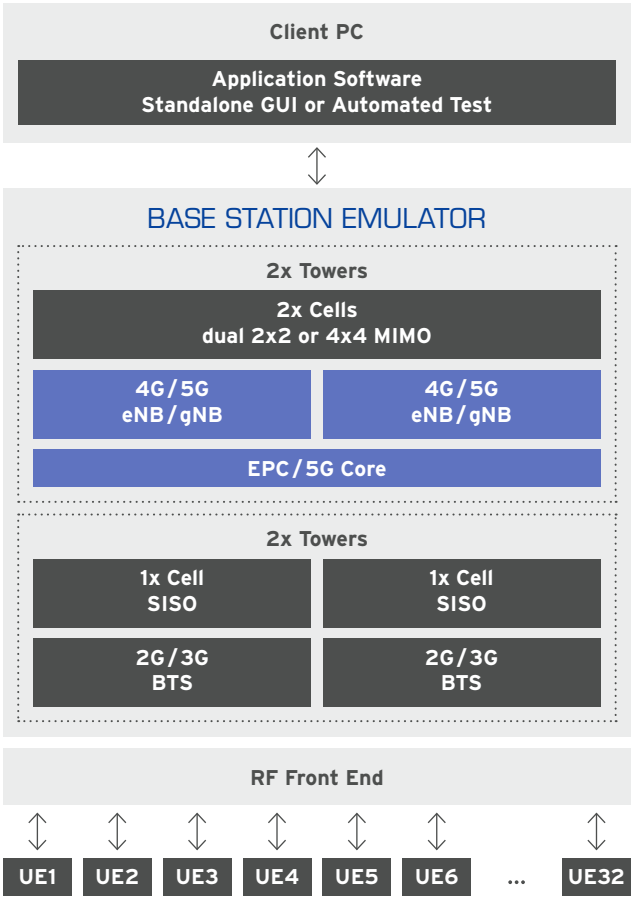
- Fraction of the cost of traditional instruments
- Single-box, full coverage: GSM, UMTS, LTE, 5G NR FR1
- IoT support: LTE-M and NB-IoT
- Parallel registration and measurements on multiple DUTs
- Test data connection, voice, eCall, VoIP handover
- Automate test cases in any sequencer

PRIVATE MOBILE NETWORK

Validation of mobile devices such as automotive telematics control units (TCUs), smart city gateways, connected smart sensors, industrial remote controllers, batteries, phones and IoT gadgets requires replication of complex RF test scenarios in the lab. It is not enough to go to the live network and test only a fraction of the features. Modern labs and factories can highly benefit from an affordable, private 5G mobile network to test their products, develop systems and services.

APPLICATION AREAS

- Automated Validation Test
- Field Return Analysis
- End-of-Line Production Test
- HIL Simulation
- R&D Application Development
- EMC Lab, Environmental Monitoring
- Education and many more



SPECIAL FEATURES

Single box from 2G to 5G

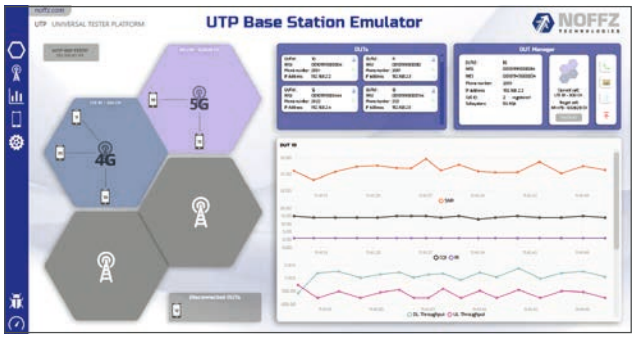
- Configurable for up to 4 radio towers
- 2 dedicated towers for legacy: 2G and 3G
- 2 towers for 4G and 5G in any combination
- Change configurations easily from 5G NSA to SA with focus on URLLC, eMTC, IoT applications or eMBB

Multi-DUT connectivity

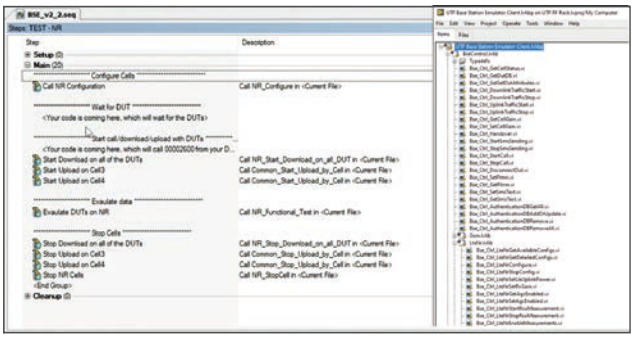
- Attach DUTs easily to the network by inserting test SIM/eSIM data in the subscriber database
- Register up to 32x devices and start using the network
- DUTs can also interact with each other

Cost-efficient

- Based on COTS CPU architecture
- Using software-defined radios instead of instrument-grade hardware
- No need to become a 3GPP expert to configure and operate



NOFFZ BSE Manager software UI to setup and monitor activities on the test network



Automate test cases based on standard API (LV, .NET)

TECHNICAL DATA

Cellular Network

5G NR	NR Rel-16 compliant (Request for Rel-17); Non-Standalone Support (NSA); Standalone support (SA); 5 – 100 MHz support FR1 (sub-6 GHz); SISO, 2 x 2 MIMO (NSA and SA); 4 x 4 MIMO (only SA); Handover support; 256-QAM PUSCH/PDSCH
LTE	LTE Rel-16 compliant; LTE-M, NB-IoT (in-band, guard band and standalone); SISO dual band; 2x2 MIMO dual band; 4x4 MIMO single band; Carrier aggregation 5x CC; VoIP support; Handover support
GSM	GSM 850, GSM 900, DCS 1800 and PCS 1900; 2 x simultaneous ARFCNs; Handover support; Emergency Call support; GPRS/EDGE
UMTS	Band 1, 4, 5, 8, 19; 1 x UARFCN; Rel-1999 support
Authentication	Use test SIM card or test eSIM profile Supported algorithms: Milenage, XOR, TUAK and COMP128v1 (legacy)

Physical Specifications

RF Performance	**Max Tx Output RF Power:** +3.3 dBm @900 MHz **Max Rx Input RF Power:** +5 dBm **Frequency accuracy:** +/- 2.5 ppm **EVM (20MHz BW, 64QAM):** @2.6GHz, < 2 % | @3.5GHz, < 4 % **Phase Noise (1.8GHz):** -80 dBc/Hz @10 kHz. -100 dBc/Hz @100 kHz
RF Interfaces (Front Panel)	**4x N-type; MIMO 1:** GSM, UMTS, NR/LTE stream 1 **MIMO 2-4:** NR/LTE stream 2-4
Interfaces (Back Panel)	**2x Ethernet,** 1 Gbit; **3x USB 3.0** – debug only; **4x SMA RF** – debug only; **AC power:** 100-240 V, 50-60 Hz
Dimensions	**Without mounting brackets:** W 480 x H 480 x D 630 mm **With mounting brackets:** W 505 x H 480 x D 630 mm
Weight	25 kg
Temperature	Maximum operating temperature range of 0 °C to 65 °C; maximum environmental temperature is 35 °C

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EXPERIENCE GLOBAL EXCELLENCE IN TESTING & AUTOMATION

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