

E600 – Medium-size Reverberation Chamber

Passive, Active and Time-Domain MIMO OTA Testing

400 MHz to 52.6 GHz

Main Features

- Dimensions: 2750 mm (L) x 1555 mm (W) x 2000 mm (H)
 - With footprint reduction 2342 mm (L) x 1555 mm (W) x 2058 mm (H)
- Mains power: 100-240 VAC 50-60 Hz
- Passive Mode: 400 MHz to 52.6 GHz
- Active Mode: 400 MHz to 7.25 GHz and 24.25 to 52.6 GHz
- Time-domain measurements
- Authorized for AT&T 10776 R57 (19091) testing
- MIMO Graphic User Interface (GUI) for Windows
- Fully automated measurements with control of VNA, eNB, gNB, CE, AP and STA
- Cellular SISO/TxD/MIMO OTA up to 8x8 x 8DLCC
- 5G OTA FR1 / FR2 and FR1+FR2
- WLAN (Up to 802.11ax and 7.125 GHz)
- HTTP Adaptive Streaming (HAS) for video
- Packet Capture Module for WLAN
- Windows, Android, iOS, MacX, Linux, UWP and Tizen UE apps
- Data interface: USB/GPIB-TCP/IP
- RF isolation (shielding): ~ 100 dB
- Enhanced repeatability with autocalibration
- K, SMA, USB, RJ45 and AC/DC power supply connectors on turntable (optional)
- DB9/RJ45/FO/USB/Waveguide penetrations (optional)
- AC/DC filters for DUT power supply (optional)
- Can be served in pieces and re-assembled in-situ (optional)



Measurement system

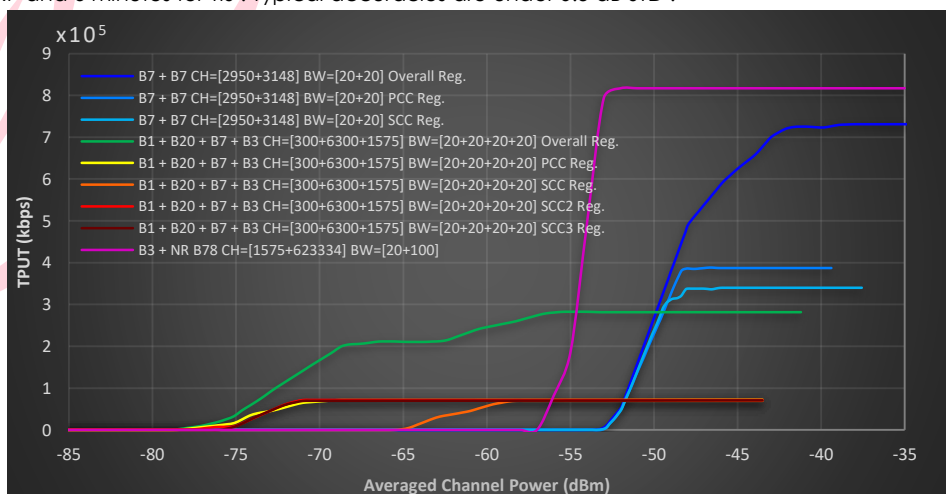
The E600 is a multicavity mode-stirred source-stirred reverberation chamber represents that state-of-the-art in reverberation chamber technology. E600 provides unique up to 8x8 MIMO measurement capabilities of antennas and **passive** RF front-ends including Efficiency, Correlation, Mutual Coupling, MIMO Capacity, Diversity Gain (ADG, EDG, IDG), loss effects (DGL, CL.MIMO), **active MIMO** Over-The-Air (OTA) 3GPP/CTIA/PTCRB Figures of Merit for 2G, 3G, 4G and 5G cellular up to 8x8 MIMO x 8DL CC and any wireless LAN system (up to 802.11ax and 7.125 GHz) or Short Range/Low Energy technology (BT, BLE, ZigBee, ZWave, LoRA, Sigfox, LTE-M, NB-IoT) including Total Radiated Power (TRP), Total Isotropic Sensitivity (TIS), MIMO Throughput (MAC TPUT), CQI, MIMO Throughput Sensitivity (MTS) MIMO to Transmit Diversity Threshold (M2TxD), IS-Frequency Error, IS-Occupied Bandwidth (OBW), IS-Adjacent Channel Leakage Power Ratio (ACLR) and IS-Spectrum Emission Mask (SEM), and **time-domain** SISO/MIMO measurements including RMS Delay Spread (RMS DS), Power Delay Profile (PDP), Coherence Bandwidth (CBW), Path Loss (PL), Standard Deviation (STD) and TCP/UDP/FTP Throughput versus time, HTTP Adaptive Streaming (HAS), path loss or averaged received power in both downlink and uplink (DL/UL) paths], VDT-OTA, Mute% sound acoustic and channel parameters (PDF, CDF, Scatterplot, k-factor, eigenvalues) for AuTs/DUTs of up to 50cm and 50kg, and a wide variety of Rayleigh, Rician, NIST Indoor-Urban, isotropic SCME Urban-Macro#, isotropic SCME Urban-Micro#, CDLx, TDLx and other fading environments, all united in one single and intuitive interface for an enhanced frequency range that now covers from 400 MHz up to 52.6 GHz. There is no RC in the market more advanced than the E600 from our E-Series.

Typical testing times are under 1 minute for TRP and 6 minutes for TIS*. Typical accuracies are under 0.5 dB STD*.

All Cellular standards to date

All Wireless standards to date

EMITE test systems are now used at major operators, OEMs, test labs and antenna manufacturers, with presence in America, Europe, Asia and Oceania.



NR NSA 2x2, LTE-A 4x4 x 2DL CC and LTE-A 2x2 x 4DLCC MIMO OTA TPUT tests using a smartphone and E600 RC, exhibiting 100% total Throughput, in excess of 817 Mbps absolute value for 2x2 in NR NSA.

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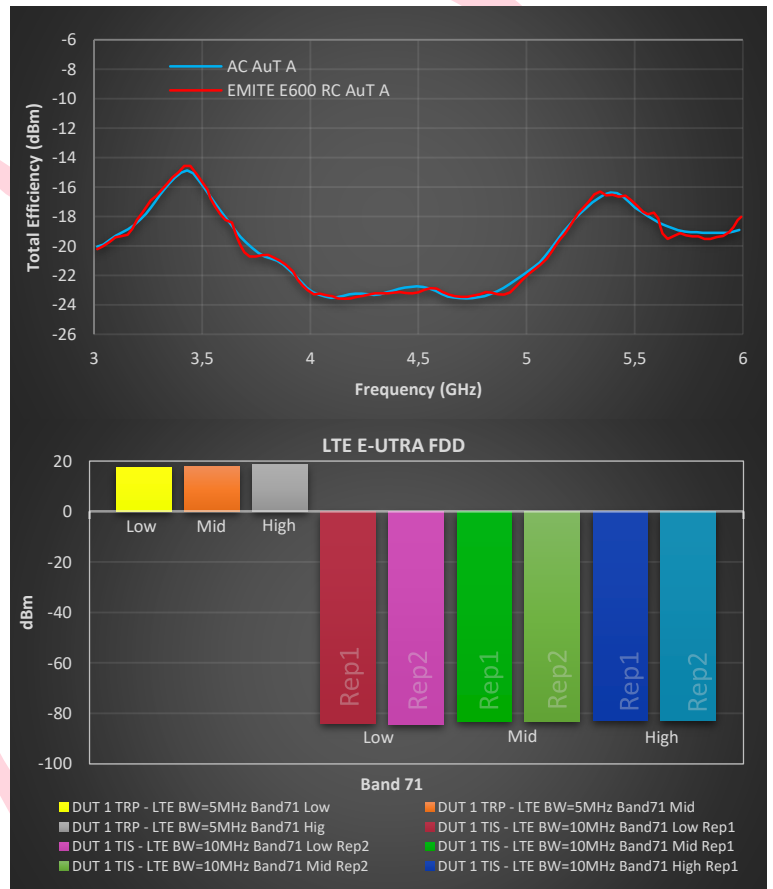
400 MHz to 52.6 GHz

Unique Features – only with EMITE

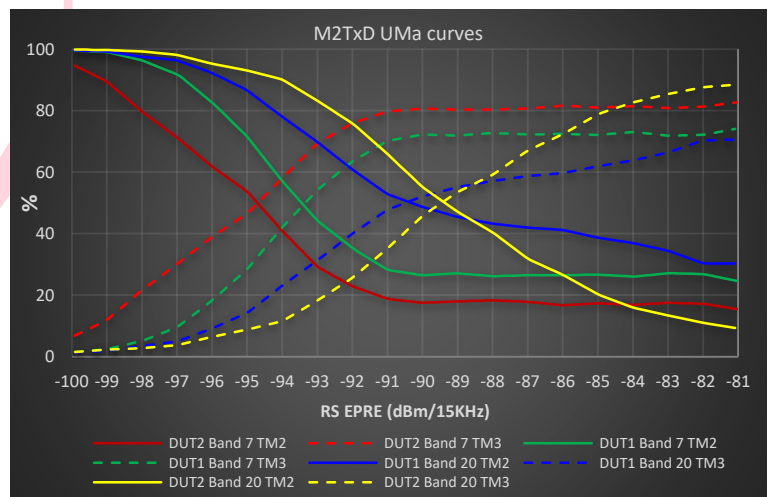
- Same unique features as E500 plus,
- Capable of testing Bands around 400 and 600 MHz
- Capable of testing LTE-A up to 8x8 x 8DLCC and 2x2 x 2ULCC
- Capable of testing 5G NR SA/NSA FR1, FR2 and FR1+FR2
- Capable of testing WLAN 802.11ax up to 7.125 GHz band
- Capable of testing Mute (%) for sound acoustic evaluation of wireless headsets and devices
- Capable of testing MIMO to Transmit Diversity Threshold (M2TxDT) in dynamic VRC environment
- Can be served in 4 pieces of 1m (W) max and re-assembled on-site
- Can be served in 1 single piece for cost reduction

Additional deliveries according to customer's specifications

- 17025-Accredited calibration
- Programming drivers of user-selected auxiliary test equipment and Access Points and STATIONS
- Chamber Turntable with integrated K, SMA, USB, RJ45 and AC/DC power supply connectors
- Installation of hardware and software
- Full day course to operating personnel
- Precision discone reference antennas
- SPEAG Phantom packages
- Absorbers for chamber loading
- Device Under Test Holders
- Calibration kits
- Wide variety of support and maintenance options.



LTE FDD TRP and TIS tests for Band71 using E600 RC showing repeatability within 1 dB.



This data sheet was correct at the time of going to print. The right is reserved to change specifications at any time. Data Sheet EMITE E600 2020.1 ENG. Wise Waves is a registered trademark of EMITE Ing. Spain The products are patent protected

*Using novel source-stirring in LTE. 1 dB for Band 71 #In combination with a channel emulator.

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