

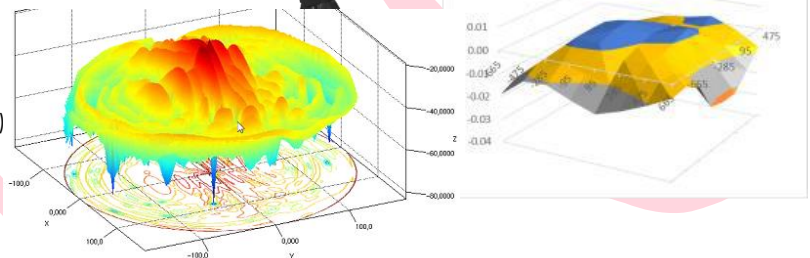
## H300 – Medium-size Anechoic Chamber

### Sub-6GHz and mm-Wave 5G OTA testing - 3GPP-permitted

0.6/3 GHz to 40/67/110 GHz

### Main Features

- Dimensions: 3.45 m (L) x 1.80 m (W) x 1.99 m (H)
- Mains power: 100-240 VAC 50-60 Hz
- 5G with simultaneous FR1+FR2 OTA testing
- 3GPP TR38.810 permitted for 5G OTA Testing
- MIMO Graphic User Interface (GUI) for Windows OS
- Fully automated measurements with control of VNA, CATR, DFF, SNF and gNodeB emulator
- 30 cm quiet zone (with 60cm extension)
- Serrated reflector, lateral feed
- Climatic chamber for temperature and humidity test set and control [-40 to 90°C with  $\pm 0.5^\circ\text{C}$  & 10% to 98% RH with  $\pm 0.5\%$  to  $\pm 3\%$ ]
- Time-domain measurements
  - Windows, Android, iOS, Mac OS, Linux, UWP and Tizen UE apps
- Data interface: USB/GPIB-TCP/IP
- RF isolation (shielding): > 80 dB
- 5G signaling KPIs
- Beam-pattern measurements
- Cat1/Cat2/Cat3 5G OTA Testing
- Vendor declaration of antenna size not needed
- GigE/DB9/FO/USB/Waveguide penetrations (optional)
- AC/DC filters for DUT power supply (optional)



### Measurement system

The EMITE H300 5G OTA Test System comprises a medium-size anechoic chamber, a Compact Antenna Test Range (CATR) with a 100cm x 100cm precision reflector, a lateral-positioned tower and feed antenna for the frequency range 3 to 40 GHz, a 3D AuT/DuT fully-automated 0.03°-accurate positioning system for up to 8kg DUTs with a 30cm quiet zone (can be extended to 60cm) and an additional direct feed antenna for the range 600 MHz to 3 GHz. Capable of testing beamforming and 5G signaling Key Performance Indicators, it is the only OTA test system in the market capable of testing FR1+FR2 bands combinations in a simultaneous manner. With unheard-of reflector-manufacturing accuracies, which reflect into extremely good phase accuracies, the H300 can be connected to a gNodeB emulator for active OTA measurements of 5G devices. Extensions to 67 and 110 GHz are available. With a variety of Operating Systems at the 5G UE, time-domain uplink and downlink FTP/TCP/UDP Throughput and latency measurements are also readily available.

The H300 OTA CATR + DFF + SNF Test Range provides complete 3D performance assessment for 5G devices and antennas from 0.6 up to 110 GHz, capable of supporting 5G Sub-6 GHz (from 600 MHz to 6 GHz) and mmWave (24 to 110 GHz) standardized OTA testing in accordance to 3GPP TR38.810, TR37.842 and TR38.101. Aerospace-used technology is built into our H300 test range. With serrated reflectors providing unique 15 $\mu\text{m}$  peak-to-peak roughness in 30 cm quiet zone and high accuracy 0.03° positioners, with both roll over azimuth and roll over elevation, the H300 is undoubtedly a best-in-its-type chamber, and the only one in the market capable of testing FR1 Sub-6 GHz and FR2 mmWave frequencies in a simultaneous manner. Additionally, an optional climatic enclosure allows for 5G OTA testing under controlled temperature (from -40 to 90°C) and humidity (from 10% to 98% RH) conditions.



**IFF-CATR, DFF and NTF-SNF permitted OTA Test Methods as per 3GPP TR 38.810 allow for a unique combination of features over the widest frequency range in the market**

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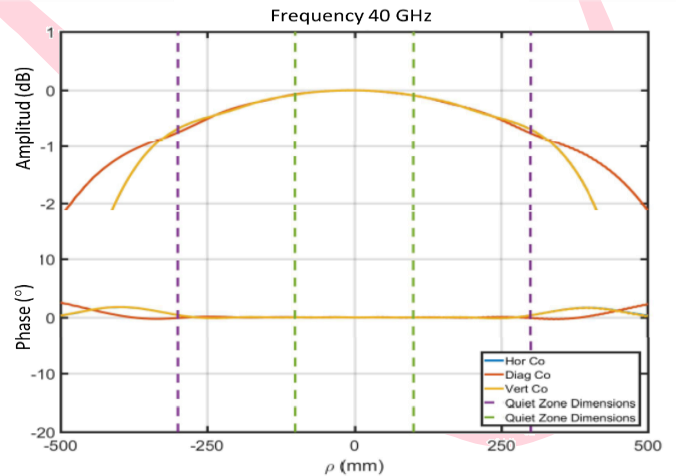
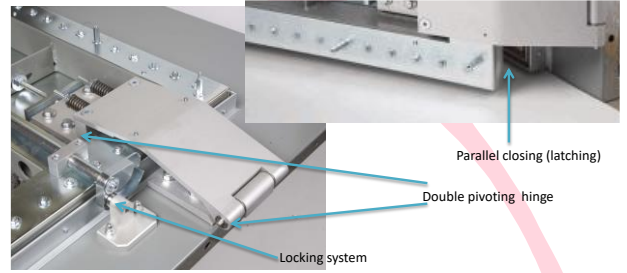
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### Unique Features – only with EMITE

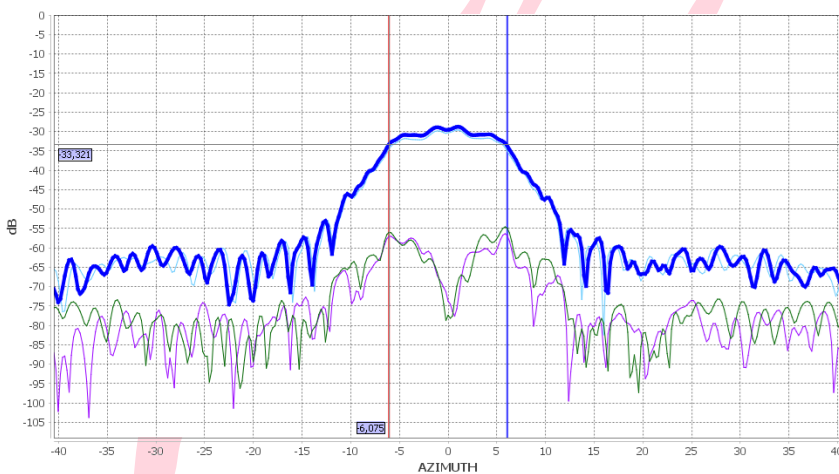
- Excellent 15 µm peak-to-peak reflector roughness for high quiet zone phase accuracy
- 30cm QZ with <math><0.35\text{dB}/\pm 5^\circ</math> amplitude/phase ripple
- Carbon-loaded polystyrene absorbers, extreme durability
  - No dropping tips, non-hygroscopic
  - Compliant with fire retardant standard ISO 11925-2 class E
- Roll over azimuth and elevation over azimuth
  - Max load 8 kg
- 600 mm x 900 mm door with double-pivoting hinges
- Dual-polarized circular corrugated probe, unique bandwidth
- Typical Accuracies 0.03°
- Standard Backlash 1 to 6 arc min
- Climatic chamber for temperature and humidity control



### Key Performance Indicators

In addition to conventional antenna parameters:

- Beam peak search Tx
- Beam peak search Rx
- EIRP @ TX Beam Peak Direction
- TRP (AC TRP)
- Spherical Coverage/CDF of EIRPs
- Error Vector Magnitude (EVM) @ TX Beam Peak Direction
- Reference Sensitivity (REFSENS)
- Effective Isotropic Sensitivity (EIS) @ RX Beam Peak Direction
- In-Band Blocking (IBB) @ RX Beam Peak Direction
- RF Latency
- E2E Latency
- Throughput
- DL/UL FTP/TCP/UDP Throughput



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The right is reserved to change specifications at any time.  
Data Sheet EMITE Ing H300 2019.2ENG.  
Wise Waves is a registered trademark of EMITE Ing. Spain  
The products are patent protected

<sup>1</sup> ±0.45dB amplitude and ±6.5° phase ripple from 3 to 4 GHz

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