

Fuente Álamo de Murcia - Spain

EMITE releases 1 to 220 GHz automated antenna feed carousel for 5G gNodeB OTA CATR Testing

EMITE has made another big step forward in 5G OTA testing by releasing a unique fully-automated feed antenna carousel for standardized 3GPP 38.141 5G gNodeB OTA testing using a 1.8m Compaq Antenna Test Range (CATR) in the EMITE F100 anechoic chamber. The novel antenna carousel is capable of providing fully automated measurements for the frequency range from 1 to 220 GHz, and for both vertical and horizontal polarizations. With an embedded mmWave hardware module, several antennas are rotated to the CATR focal point position, and when in combination of automated Vector Signal Analyzer (VSA) and Vector Signal Generator (VSG) test algorithms the user saves several days of manual changes.



With full support for chapters 6 and 7 of 3GPP TS 38.141, the novel antenna feed carousel brings automation to an unheard-of level in gNodeB OTA testing. Several RF paths with different signal levels, in combination to mmWave oscillators, switches, amplifiers, multipliers, mixers and combiners, set the pace for world-wide first OTA tests up to 220 GHz with the push of a button. The system is currently in use at two customer sites, leading manufacturers of gNodeB.

The EMITE-unique fully-automated Graphic User Interface (GUI) software suite allows testing of all Key Performance Indicators (KPIs) in chapters 6 and 7 of 3GPP TS. 38.521-1/2/3. The novel antenna carousel can be combined to a barbecue-type DUT positioner, allowing automated loading-unloading of very heavy gNodeBs at the chamber flushed entrance. The automation is also capable of operating overnight without human supervision.

“Witnessing a full TS 38.141 test with hundreds of test instrument interactions, feed carousel movements and for diverse frequency chunks and test instruments frequency segmentations, allowed by the unique 1-200 GHz antenna carousel, and doing it within a couple of hours is something one could only imagine a few years ago. Once more, EMITE has brought automation to a new level. Standardized gNodeB OTA testing can now have light speed”, Said David A. Sánchez-Hernández, CEO of EMITE.

About EMITE

EMITE Ingeniería, S.L. is a high-tech company, spin-out from the Technical University of Cartagena (Spain). EMITE designs, develops, manufactures and commercializes OTA Test Systems for performance, compliance and pre-compliance testing of any 2G to 5G standards and pre-standards worldwide, including 5G, LTE-A and Wi-Fi (up to 6E). Headquartered at the Fuente Álamo High Tech Park in the Region of Murcia (Spain) and with distributors in 25 countries, test house show rooms in America, Asia and Europe, and both national and international awards, EMITE OTA Test Systems are being used worldwide by carriers, OEMs, test labs, regulatory authorities and many others around the wireless ecosystem. With a customer-driven roadmap and a vision of changing the way technology gets through our life, EMITE OTA Test Systems are more than just chambers, bringing OTA testing into a new era of capabilities and easiness. EMITE MIMO OTA Test Systems were selected by 3GPP and CTIA as candidate methodology for the study and work items through standardization of LTE MIMO OTA test methods. www.emite-ing.com

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