

AMS-8050 ANTENNA MEASUREMENT SYSTEM

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ETS-Lindgren's Model AMS-8050 Antenna Measurement System supports testing a wide range of portable wireless devices and mobile handsets in free-space or using a head and hands phantoms. The AMS-8050 is a compact, fully anechoic RF enclosure for over-the-air (OTA) testing. It is used for wireless device measurements including pre-certification testing, design verification, performance verification, and production sample testing.

As a self-contained freestanding system, the AMS-8050 is the ideal solution when space is limited. The system's portable chassis makes it an excellent choice for multiple research and development groups since it can be easily moved from one test group to another. The system includes integrated drawers for storing test equipment, cables and related accessories, allowing all of the components to conveniently travel with the system.

5G FR1 Over-The-Air (OTA) test solutions are now available! ETS-Lindgren offers a turnkey package which will enable support for 5G NR SISO non-standalone [NSA] and/or standalone [SA] testing in the FR1 band.

Key Features

- Efficient Over-the-Air (OTA) Antenna Pattern Measurement
 - 2D/3D Antenna Patterns
 - TRP, EIRP
 - TIS, EIRP
 - TIS, EIS
 - NHPRP, NHPIS
- Ideal as a Shared Resource for Pre-compliance Testing
- Compact, Anechoic Absorber-lined RF Enclosure
- Self-contained, Built on a Moveable Cart System
- 1.5m Path Length
- No Special Installation of Construction Required
- EMQuest™ Data Acquisition and Analysis Software

Features

Pre-Compliance Testing

If you're using an external test house for certification testing, our system can help you go fully prepared. OTA performance measurements made in the AMS-8050 have shown good correlation to measurements made in larger, fully compliant chambers.

Compact Anechoic RF Enclosure

The AMS-8050 is an ideal solution when space is a limitation. It can be used as a self-contained test lab for making fast OTA performance measurements of small wireless devices and mobile handsets.

Self-Contained, Moveable System

The AMS-8050 is incorporated into a moveable chassis: the entire system may be transported between different test stations. Integrated equipment bays allow components required for testing to remain with the system. The ability to transport the system and store all components within the cart makes it an ideal solution for use by multiple research and development groups.

Easy Installation

The AMS-8050 System is easily installed into new or existing construction. Additionally, the moveable cart assembly allows for the system to be easily relocated within a testing facility.

EMQuest Data Acquisition and Analysis Software

The AMS-8050 System includes our versatile EMQ-100 Antenna Pattern Measurement Software. The software makes fully-automated pattern and frequency response measurements for both active and passive antennas, for either vector or scalar qualities, in either transmit or receive mode. Post-processing capabilities include calculations for directivity, gain, radiation efficiency, total radiated power, and total isotropic sensitivity. EMQ-100 also calculates industry specific quantities such as Near-Horizon Partial Isotropic Sensitivity required by the CTIA Test Plan for Mobile Station Over-the-Air Performance. Advanced graphing capabilities allow data to be shown in a variety of 2-D and 3-D formats, exported to Microsoft Excel™, PDF files, or saved in RTF format.

Specifications

Electrical Specifications

Frequency Range: 700 MHz to 10 GHz
Multi-axis Positioner: Accuracy 0.5 degrees, Resolution 0.1 degrees
Path Length: 1.5 m
Drive System Electrical (VAC): 208/240 VAC; NEMA 6-15
Drive System (Amps): 10 A
Equipment/DUT Electrical (VAC): 115/230 VAC; NEMA 5-15
Equipment/DUT (Amps): 5 A
Voltage (Hz): 50/60 Hz
Plug Type: IEC 320
Shield Performance: >90 dB
Shield Material: Aluminum

Physical Specifications

Test Volume (L x W x H): 11.4 cm x 35.5 cm x 39.3 cm (4.5 in x 14 in x 15.5 in)
Shield Dimensions (L x W x H): 2.52 m x 1.42 m x 1.88 m (8.25 ft x 4.6 ft x 6.2 ft)
Overall Dimensions: 2.6 m x 1.5 m x 1.9 m (10.16 ft x 5.0 ft x 6.33 ft)
Shielded Door Dimensions: 76.2 cm x 76.2 cm (30 in x 30 in)
Weight: 860 kg (1890 lb)
Maximum DUT Weight: 6.8 kg (15 lb)

Other Specifications

- Fully Anechoic Test Chamber with RF Shielded Door
- Electrical Power Filter for Drive System Motors (installed in Drive Cart)
- Electrical Power Filter for Equipment and DUT Outlets (Installed in the System Cart with One IEC Outlet Strip)
- One Type N and One type SMA Feedthrough Connector
- SMA Rotary Joint on the Positioner
- Ferrite Beaded Cable Kit with Second Rotary Joint for Full 3D Passive Testing
- Dual Polarized Vivaldi Antenna
- Circularly-polarized Communication Antenna
- EMQuest EMQ-100 Antenna Pattern Measurement Software
- Multi-Axis Positioner System (MAPS)
- EMCenter Modular RF Platform for Positioner Controller and Switching
- Antenna Mounting Fixture for Range Calibration
- Free Space Device Mount
- Workstation Computer with Intel® Quad-core Processor
- EMQuest EMQ-100 Antenna Measurement Software
- Design, On-site Setup and General Operating Training