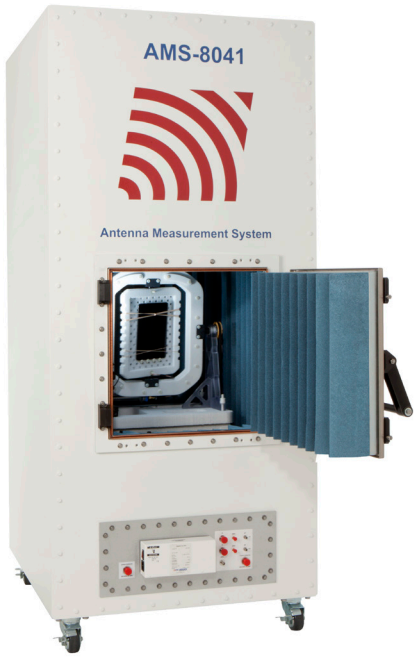
WIRELESS TEST SYSTEMS OVER-THE-AIR TEST LAB



MODEL AMS-8041

- **400 MHz to 6 GHz Frequency Range**
- **Active Over-The-Air (OTA) Performance and Passive Antenna Measurements**
- **>80 dB typical RF Isolation**
- **80 cm Path Length**
- **User Available I/O Ports:**
  - **— 2 SMA Connectors**
  - **— 2 Type N Connectors**
- **Communication Antennas (2)**
- **Roll-about Casters for Mobility**
- **Onsite Setup and Training**

ETS-Lindgren's AMS-8041 is a self-contained enclosure for making wireless device over-the-air performance and passive antenna pattern measurements. The unit can be used for design verification, pre-certification, production sample testing, desense and regression testing. Rolling casters and the ability to pass through 0.9 m x 2.1 m (3 ft x 7 ft.) doors, allow the unit to be readily moved between test stations.

Antennas

The AMS-8041 is equipped with a Model 3165-02 dual polarized Vivaldi antenna capable to measure both linear and circular measurements over the frequency range of 400 MHz to 6 GHz. The antenna is mounted on a removable access panel at the top of the enclosure. The antenna can be interchanged with another antenna of a different frequency if needed. Two antennas are used for communication with the DUT.

Two-Axis Positioner

3D antenna measurements can be made for both active and passive antennas using the AMS-8041's two-axis positioner. The positioner is constructed of low- dielectric materials and is designed for hand-held devices weighing up to 1 kg (2.2 lb.). The positioner is controlled by EMQuest™ Software.

Anechoic Absorber

FlexSorb™, a flexible RF absorber that bends and returns to its original form, is used in AMS-8041 to reduce breakage from extended lab use. The absorber is performance optimized and limits reflections and moding, for more accurate, repeatable measurements. Tapered wedges line the walls, pyramidal absorber is used on the floor and around the measurement antenna with lossy foam absorber around the pyramidals.

EMQuest Data Acquisition and Analysis Software

The AMS-8041 System includes our versatile EMQ-100 Antenna Pattern Measurement Software. The software makes fully-automated pattern and frequency response measurements for active and passive antennas. 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 2D and 3D formats, exported to Microsoft Excel™, PDF files or saved in RTF format.

Applications

The AMS-8041 is designed to provide an environment for relative OTA radiation performance of wireless devices. It can be used to measure approximate EIRP, EIS or RSSI in a given direction and polarization (DUTs are positioned with the included two axis positioner). These results can be used to compare the behavior of multiple identical devices, or the same device under different conditions such as external interference or desensitization due to other platform components or radios. In addition, the AMS-8041 can make typical measurements of passive antennas. This is useful for comparing relative changes in performance when hardware components are interchanged during production design.

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Standard Configuration

- Shielded Enclosure with RF Anechoic Lining, RF Shielded Door, Casters
- Two-Axis DUT Positioner
- One Dual Polarized Measurement Antenna, Two Communication Antennas
- Connectors for I/O
  - Two SMA Connectors
  - Type N Connectors
- Ethernet Fiber Optic Media Converter for Positioner Control
- Internal RF Cabling for Measurement and Communication Antennas
- Two Days Onsite Setup and General Operation Training
- EMQuest Software

Options

- Additional Antennas for Added Frequency Ranges
- Range Calibration Dipole (Included with Individual Test Package Purchase)
- Additional Feed Through Connector & Filter Options
- Instrumentation Including Workstation
- Test Package Options
  - Cellular
  - Wi-Fi
  - LTE-SISO
  - A-GPS 2G/3G/4G (LTE)
  - Bluetooth
  - Radiated Spurious Emission (RSE)
  - TD-SCDMA

Technical Specifications

Electrical (Antenna)	
Type	Dual Polarized Vivaldi
Frequency Range	400 MHz to 6 GHz
Cross-Polarization Isolation	> 25dB
Maximum Continuous Power	50 Ω
Connectors	SMA (2)
RF Shielding	
Isolation (Nominal)	> 80 dB
Power Requirements (Positioner and Filter)	
Voltage	200 to 230 VAC 50/60 Hz
AMPS	10 A
Socket	IEC 320
Physical (RF Shielded Enclosure)	
Nominal Outside Length	201.4 cm
	79.3 in
Nominal Outside Width	87.4 cm
	34.4 in
Nominal Outside Depth	101.1 cm
	38.9 in
Weight	261.3 kg
	575.0 lbs
Physical (RF Shielded Door)	
Length	48.3 cm
	19.0 in
Width	48.3 cm
	19.0 in

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