

**CTIA Authorized Test Lab**

**Features:**

- **Turnkey Over-The-Air Test Systems Suitable for CTIA Authorization**
- **2 Different Configurations Available**
  - **AMS-8500**  
**Full Size Rectangular Anechoic Chamber**  
7.32 m L x 3.66 m W x 3.66 m H  
(24 ft. x 12 ft. x 12 ft.)  
Frequency Range: 700 MHz - 6 GHz
  - **AMS-8600**  
**Compact Size Tapered Anechoic Chamber**  
12.50 m L x 3.05 m W x 3.05 m H  
(41 ft. x 10 ft. x 10 ft.)  
Frequency Range: 400 MHz - 6 GHz
- **System Integration**
  - **Software**
  - **Hardware**
  - **Training**



*ETS-Lindgren Rectangular OTA Test Lab*



*ETS-Lindgren Tapered OTA Test Lab*

**ETS-Lindgren's Over-The-Air Test Labs** are fully configured to perform both research and development testing and type approval according to the Cellular Telecommunications and Internet Association's (CTIA's) Test Plan for Mobile Station Over the Air Performance. The system can also be used to perform antenna measurements at test distances in both near- and far-field test conditions for more generic antenna properties.

Both rectangular and tapered anechoic chambers perform to higher frequencies when optional antennas and antenna launch systems are purchased. Both of these Over-The-Air (OTA) test labs are suitable for accreditation as CTIA Authorized Test Labs (CATL) for over-the-air performance testing. Such accreditation is dependent upon the use of appropriate test equipment and laboratory procedures and passing of the necessary proficiency audits.

ETS-Lindgren's EMQuest EMQ-100 Antenna Measurement Software offers fully automated

2-D (polar) and 3-D (spherical) pattern measurement capabilities as well as frequency response measurements for both passive antennas and active wireless mobile stations (cell phones). A wide range of fully parameterized test methods allows extremely versatile testing of both vector and scalar quantities in either transmit or receive mode. Post-processing capabilities include calculation of antenna properties such as half-power beamwidth, directivity, gain, radiation efficiency, total radiated power, and total isotropic sensitivity. EMQ-100 also calculates industry specific quantities such as near-horizon partial radiated power and near-horizon partial isolation sensitivity required by the CTIA Over-the-Air Performance Test Plan.

An optional add-on module is available for wireless network throughput testing, making EMQuest the first commercially available software to offer a measurement solution for over-the-air performance testing of Wi-Fi devices.

Advanced graphing capabilities allow acquired data to be displayed in a variety of 2-D and 3-D formats. Tabular data can be exported to Microsoft Excel™ spreadsheets. Reports can be exported to PDF files, or saved in RTF format for import to Microsoft Word™.

In December 2002, ETS-Lindgren became the first ever CTIA Authorized Test Lab (CATL) for Mobile Station Over-The-Air Performance Testing. We use that same expertise in the manufacture and installation of all of our OTA Test Labs. With continued involvement in a wide range of wireless testing standardization efforts, we also remain at the forefront of research and development into electromagnetic and performance testing of all types of antennas and wireless devices. Feel free to contact us with your custom wireless testing needs.

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### Baseline package for AMS-8500

- RF-shielded, rectangular anechoic chamber, 7.32 m L x 3.66 m W x 3.66 m H (24 ft. x 12 ft. x 12 ft.), including RF shielding, absorber and installation
- Shield Test per MIL-STD-285
- ETS-Lindgren Multi-Axis Positioning System (MAPS™) with Light Duty (Free-Space) and Medium Duty (SAM Head Phantom) masts
- ETS-Lindgren Model 2090 Positioning Controller
- ETS-Lindgren Model 3164-04 Diagonal Dual Polarized Horn antenna, 700 MHz - 6 GHz, with antenna launch system
- Low Loss RF cables from MAPS™ to the feed-through panel at the shielding
- EMQuest™ EMQ-100 Antenna Measurement Software with appropriate desktop computer
- ETS-Lindgren Model 3102 Conical Log spiral communications antenna
- ETS-Lindgren Model 3126 Precision Sleeve Dipoles and Model 3127 Resonant Loop Antennas (one each at 836.5 MHz and 1880 MHz) with mounts and ferrite beaded cables for range calibration and site validation (ripple test) per the CTIA OTA test plan
- SAM head phantom according to IEEE Std 1528-2002 with mount to Medium Duty MAPS™
- Self leveling laser level with tripod for accurate alignment
- Turnkey software and hardware integration and system training
- Quiet-Zone ripple test according to the CTIA Over-The-Air test plan at frequencies 836.5 MHz and 1880 MHz
- Software support and upgrades for one year

### Baseline package for AMS-8600

- RF-shielded, tapered anechoic chamber, 13.72 m L x 3.05 m W x 3.05 m H (45 ft. x 10 ft. x 10 ft.), including RF shielding, absorber and installation
- Shield Test per MIL-STD-285
- ETS-Lindgren Multi-Axis Positioning System (MAPS™) with Light Duty (Free-Space) and Medium Duty (SAM Head Phantom) masts
- ETS-Lindgren Model 2090 Positioning Controller
- ETS-Lindgren Model 3164-03 Diagonal Dual Polarized Horn antenna, 400 MHz - 6 GHz, with antenna launch system
- Low Loss RF cables from MAPS™ to the feed-through panel at the shielding
- EMQuest™ EMQ-100 Antenna Measurement Software with appropriate desktop computer
- ETS-Lindgren Model 3102 Conical Log spiral communications antenna
- ETS-Lindgren Model 3126 Precision Sleeve Dipoles and Model 3127 Resonant Loop Antennas (one each at 836.5 MHz and 1880 MHz) with mounts and ferrite beaded cables for range calibration and site validation (ripple test) per the CTIA OTA test plan
- SAM head phantom according to IEEE Std 1528-2002 with mount to Medium Duty MAPS™
- Self leveling laser level with tripod for accurate alignment
- Turnkey software and hardware integration and system training
- Quiet-Zone ripple test according to the CTIA Over-The-Air test plan at frequencies 836.5 MHz and 1880 MHz
- Software support and upgrades for one year

### Optional Equipment

- RF test equipment with full integration to OTA Test Lab. Various options available
- Heavy Duty Multi-Axis Positioning System (MAPS™) Model 2020
- Shielded control room
- Additional ETS-Lindgren Model 3102 Conical Log Spiral communications antenna mounted in chamber ceiling
- ETS-Lindgren Model 3164-05 Quadridge Horn antenna (Frequency Range: 2 GHz - 18 GHz) with antenna set-up panel
- ETS-Lindgren Model 3126 Precision Sleeve Dipoles with other center frequencies
- ETS-Lindgren Model 3127 Resonant Loop Antennas with other center frequencies
- Laptop mounting adapter for Medium Duty MAPS mast
- Free-space mounting adapter for Medium Duty MAPS mast
- Center rotate SAM phantom mounting adapter for Medium Duty MAPS mast