

Wi-Fi Alliance R&D Lab Installs Low Reflectivity Verification Chamber

Expert Collaborators:

Wi-Fi Alliance and ETS-Lindgren

The Wi-Fi Alliance and ETS-Lindgren are a perfect team addressing wireless test technology. ETS-Lindgren lends its considerable expertise in the test and measurement industry with an extensive history of thousands of test chambers installed worldwide. The company has been at the forefront of wireless testing, most notably with numerous “firsts” in various industries – including designing and installing the world’s first WiMAX Forum™ Designated Certification Laboratory as well as the world’s first system for performing CTIA Part 2 Over the Air (OTA) performance testing.



Wi-Fi Alliance Wireless R & D Lab in Santa Clara, California
www.wi-fi.org

The Wi-Fi Alliance is a global, non-profit industry association of more than 300 member companies devoted to promoting the growth of Wireless Local Area Networks (WLANs). With the aim of enhancing the user experience for wireless portable, mobile, and home entertainment devices, the Wi-Fi Alliance’s testing and certification programs help ensure the interoperability of WLAN products based on the IEEE 802.11 specification.

Test and Certification of Wi-Fi Devices

ETS-Lindgren’s new Low Reflectivity Verification (LRV) chamber at

the Wi-Fi Alliance was designed to test and certify the interoperability of Wi-Fi devices. The chamber supports the organization’s considerable capabilities and serves as a comprehensive interoperability certification tool, expanding test plan development capacity by 25 - 30%.

Expediting Test Time to Ensure Quality and Reduce Costs

The LRV chamber will facilitate the rapid development of new test plans and familiarize the eleven Wi-Fi Alliance Authorized Test Labs worldwide with this new testing technology. New test technology

enables faster testing which reduces costs while helping to assure users of the interoperability and quality of Wi-Fi devices.

Driving Technology in the Wireless Industry

ETS-Lindgren is an active member of the Wi-Fi Alliance and supports the organization’s goal of taking the lead in initiatives designed to enhance and simplify the user experience. Because it increases testing capacity, the organization’s new LRV chamber by ETS-Lindgren helps set the stage for the Wi-Fi Alliance to achieve its goal.

Chamber Technical Specifications

- Series 81™ modular panel RF shielding system measuring:
12 ft x 12 ft x 8 ft
(3.66 m x 3.66 m x 2.44 m)
- Single-leaf 4 ft x 7 ft (1.21m x 2.13m) Recessed Contact Mechanism (RCM) RF shielded door
- 12" x 24" (305 mm x 610 mm) wave guide air vents
- Dual-line 2 x 30 amp 50/60 Hz power line filter for interference control
- 110V convenience outlets
- Interior lined with a thin treatment of ETS-Lindgren's EHP-LFBCL Lossy Foam Absorber capable of handling 200 V/m per NRL Report 8093 (Tests 1, 2, and 3)
- Shielding performance is 100 dB from 200 kHz to 50 MHz (electric field), 100 dB from 50 MHz to 1 GHz (plane wave), and 20 dB at 1 kHz, 56 dB at 10 kHz and 100 db at 200 kHz (magnetic field)
- Designed to perform Wi-Fi verification testing, including:
WPA™ and WPA2™ Wi-Fi Protected Access, WMM® (Wi-Fi Multimedia™), 802.11n draft 2.0, Test Engine Development, (Wi-Fi Protected Setup™)
- Achieves approximately -50 dB of reflectivity in the 2 to 4 GHz S-Band

Unique Chamber Usage

The Wi-Fi Alliance will perform certification testing with approximately five individuals seated simultaneously at a table within the chamber for up to 30-minute increments. In order to maintain an accessible, safe and comfortable environment, the chamber includes the following features:

- Fiber optic lighting for reduced heat generation
- Waveguide air vents for ample ventilation
- Anti-static vinyl floor tile
- Seismic anchors and wet stamp calculations

Chamber Customer Support

ETS-Lindgren stands ready to provide ongoing operational support with this cost-effective test and measurement solution. With over 75 years experience in meeting highly custom test and measurement requirements through industry-leading product development, vertically integrated manufacturing and dedicated project management, ETS-Lindgren is uniquely positioned to support the success of the Wi-Fi Alliance.

About ETS-Lindgren

ETS-Lindgren is an international manufacturer of components and systems that measure, shield, and control electromagnetic and acoustic energy. The company's products are used for electromagnetic compatibility (EMC), microwave and wireless testing, electromagnetic field (EMF) measurement, radio frequency (RF) personal safety monitoring, and control of acoustic environments.

Headquartered in Cedar Park, Texas, ETS-Lindgren has manufacturing facilities in North America, Europe and Asia. The company is a wholly owned subsidiary of ESCO Technologies, a leading supplier of engineered products for growing industrial and commercial markets. ESCO is a New York Stock Exchange listed company (symbol ESE) with headquarters in St. Louis, Missouri. Additional information about ETS-Lindgren is available at www.ets-lindgren.com. Additional information about ESCO and its subsidiaries is available at www.escotechnologies.com.