SHIELDING RED EDGE™ EMP ENCLOSURE

RED EDGE ENCLOSURE

- **Modular Bolt-Together Shielding System with Hardness Critical Item (HCI) Certified Performance**
- **80 dB+ of Shielding Effectiveness Up to 10 GHz**
- **Red Edge HEMP Power Line Filtering**
- **Customizeable Data Feedthroughs and Filters**
- **Passive, Forced Air or Liquid Cooling Supported**
- **High Performance, Low Maintenance Door**
- **Shielding Effectiveness Meets MIL-STD 188-125 and IEMI Requirements**
- **Progressive Latching, Easy-to-Operate Door Assembly**

ETS-Lindgren's Red Edge EMP Enclosure is a fully integrated, hardened shielding system designed to enclose and protect mission-critical systems from the full spectrum of electromagnetic threats. The enclosure combines ETS-Lindgren's industry-leading RF shielding, precision-engineered shielded doors, and EMP-rated filters to create a certified protection environment tested to harden equipment against IEMI, EMP and HEMP events. While the enclosure houses a standard 19-inch equipment rack, it functions as a complete shielding system rather than a traditional rack, offering enclosure sizes ranging from 13 to 48 rack units (RU). This flexibility allows the Red Edge system to support a wide range of data, communications, control, and infrastructure applications that demand elevated resilience.

Product Features

Performance

The Red Edge enclosure delivers a minimum of 80 dB isolation up to 10 GHz, providing robust protection against both conducted and radiated electromagnetic energy. All potential points of pulse entry—including power, data and cooling penetrations—are systematically controlled with hardened, EMP-rated filters and shielded feed-through interfaces, preserving shielding integrity while maintaining standard rack-like usability. For environments requiring additional emission and electronic surveillance security, TEMPEST-level protection is also available through specially designed power and data filters. Performance aligns with EMP hardening expectations associated with MIL-STD-188-125 and principles of Hardness Critical Item (HCI) certification, ensuring confidence in the enclosure's protective capability under extreme conditions.

System Architecture

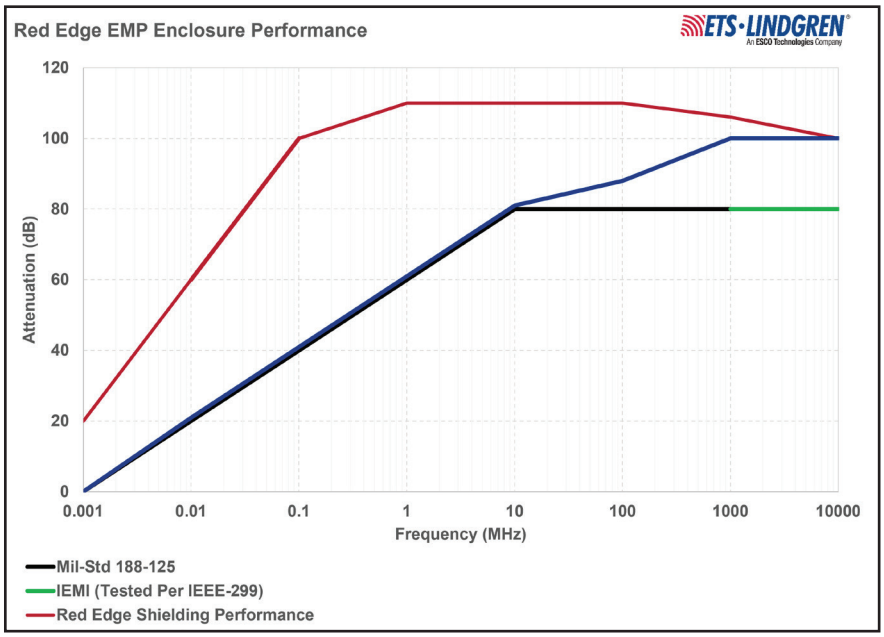
Although built around a standard 19-inch equipment format, the Red Edge enclosure is engineered as a comprehensive shielding solution. Its modular construction enables rapid deployment, field configurability, and the ability to integrate passive, forced-air or liquid-cooling options without compromising shielding performance. The system is available in both wall-mounted and floor-standing configurations, supporting a wide range of installation environments from small control rooms to large data and security suites. The high-performance shielded door assembly features progressive latching and a durable design that delivers repeatable, low-maintenance RF integrity over the life of the enclosure.

Compliance and Certification

The Red Edge EMP Enclosure fulfills recommendations issued by STRUCTURES, SECRET, InfraGard, IEC SC-77C and the CIPA amendments to the Homeland Security Act of 2002. Its shielding performance and system-level architecture reflect ETS-Lindgren's long-standing role in developing and supporting electromagnetic protection standards worldwide. The enclosure is tested and certified to ensure that critical equipment placed inside is hardened against catastrophic electromagnetic events and meets the operational expectations of today's critical-infrastructure protection frameworks.

Applications

The system is ideally suited for mission-critical environments requiring rack-level protection, including defense facilities, data centers, telecom switching sites, utility SCADA rooms, emergency operations centers and other high-value installations where downtime or data loss cannot be tolerated. Its standard 19-inch equipment compatibility ensures seamless integration into existing IT or control architectures while providing the elevated protection required by modern threat profiles.



11/25 PDF/RR © 2025 ETS-Lindgren v1.0