

DefenseShield™ Frequently Asked Questions

Electromagnetic Compatibility (EMC) Hardened Enclosure

Q: What is the attenuation performance by frequency?

A: The standard DefenseShield RF Shielded Cabinet provides 85db of attenuation at frequencies from 1MHz to 10GHz, with key performance in the standard 2.4GHz and 5GHz wi-fi ranges. DefenseShield 5G provides 75dB at 1MHz-40GHz (5G).

Q: How is power brought into the RF shielding server cabinet?

A: Single phase or three-phase power options from 15A to 30A (32A international) are available with one or two input feeds. These are brought through a proprietary power line filter mounted to either the top or bottom of the cabinet. These filters protect against propagation of frequencies above 150kHz with minimal leakage current.

Q: How much maintenance is required?

A: Minimal maintenance in the form of light cleaning of filters and gasket inspection is suggested on a monthly basis or as needed. See the User Manual for more detail.



Q: What is the rated heat load of the RF shielding server cabinet?

A: The DefenseShield cabinet has high CFM fans that provide air flow capable of maintaining safe temperatures for equipment loads of 10kW or more when room temperature air is delivered at the front.

Q: What happens if/when a fan dies?

A: The DefenseShield cabinet features fans that are hot-swappable in the rare case that an individual fan fails. Additionally, the system has automatic power failover for the fans. If one circuit fails, power is automatically routed from the second circuit to maintain power to all fans.

Q: How are data connections brought into the RF shielding server cabinet?

A: Data lines must be filtered or converted. Standard and custom I/O panels are available for this purpose. Work with Enconnex engineering to select the appropriate method for the particular application.

Warning: Do not put copper cables (USB, HDMI, Ethernet, etc.) into the rack or through the waveguide! The metal in the cable will act as an antenna and compromise the shielding effectiveness of the rack. This is true even for shielded cables.

Q: What standards does/can the rack meet?

A: The DefenseShield, with standard or optional features, meets the following standards:

- UL 2416 (NWIN) Listed
- MIL-STD-461
- IEEE-299
- NSA 94-106
- MIL-STD-285
- TEMPEST

