

METADEFENDER™

Optical Diode DIN Rail

For Safe OT/IT Communication

MetaDefender Optical Diode – DIN Rail is purpose-built for harsh industrial environments, C1D2 certified for safe operation in volatile chemical settings, and compact enough for space-constrained deployments such as industrial cabinets. In addition to its rugged design, it ensures compliance with NEI and other cybersecurity controls by acting as a deterministic isolation device that safeguards critical assets. Its hardware-enforced, one-way optical link allows secure, non-routable transfer of multiple data types—enabling real-time OT data access and secure IT/OT file transfers without exposing production networks to network-borne threats.

Benefits

- Airtight protection for OT/ICS-to-IT communication
- Secure, segmented, unidirectional data paths
- True protocol break, non-routable connection
- Easy deployment and operation
- Seamlessly integrates with MetaDefender Kiosk, Core, and Managed File Transfer
- Hardware-enforced one-way data transfer with optional back-to-back request/response mode

Key Features



No Return Path

One-way data flows are enforced by a unidirectional optical connection between the Optical Diode server pair.



Easy to Deploy

The preconfigured platform deploys quickly and seamlessly.



Simple to Operate

Ready for use in minutes after one-time initial setup with no firewall audit or configuration needed.



Scalable

The DIN Rail model is 10Mbps, field upgradeable to 50 or 100Mbps.



Transparent to Users

High-fidelity data replication means there is no need to alter work procedures of corporate users.

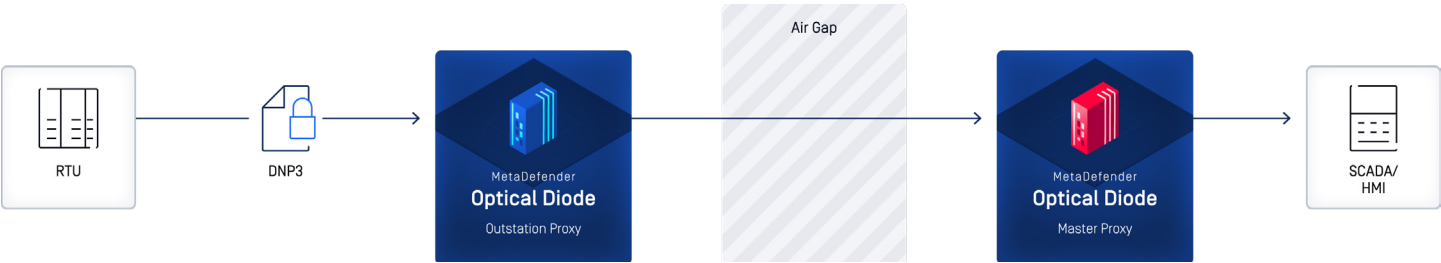


Industrial Cybersecurity Compliance

NEI 13-10, NERC CIP, NIST ICS/CSF/800-82/800-53, IEC 62443, NRC 5.71, CFATS, ISO 27001/27032/27103, ANSSI, IIC SF, and more. Protects against industrial attack techniques outlined by MITRE ATT&CK.



METADEFENDER OPTICAL DIODE



MetaDefender Optical Diode assures no way back to the OT network

Electrical

Voltage	12-36VDC
Power Consumption	19.55W typical

Hardware

Dimensions	2x 2.5 x 7.32 x 6.3" [65 x 186 x 160mm]
Weight	2x 4.85lb [2.2kg]
Operating Temp.	-40 to 158°F [-40 to 70°C]
MTBF	75,908 hours
Mounting	No additional hardware needed

Other Specifications

Connectivity	2x USB for connecting provided crypto keys
Tested Latency*	0.6ms TCP, 0.7ms UDP

*Actual latency results may vary according to setup used, traffic characteristics, and network topology.

Protocol & Certification

Industrial	Modbus OPC [UA, DA, A&E] MQTT IEC104 DNP3 ICCP
IT	UDP unicast and multicast, TCP, HTTP, HTTPS, SMTP Video/audio stream transfer Ethernet packet transfer
IT Monitoring	Log transfer SNMP traps Syslog SIEM integration via Syslog Screen view
File System	FTP, FTPS, SFTP Folder and file transfer/copy User-defined file polling interval Transfer priority based on date/time and filename Windows File Share SMB, CIFS Antivirus updates Patch [WSUS] updates
Certification	Common Criteria EAL 4+ FCC/CE/UKCA C1D2 PSE