

OPSWAT.

METADEFENDER™

# Optical Diode

## For Safe OT/IT Communication

In compliance with NEI and other cyber security controls, MetaDefender Optical Diode serves as a deterministic isolation device which protects critical assets while allowing multiple data types to be transferred concurrently. The hardware-enforced, one-way optical link between the source and destination servers reliably transfers data over a non-routable protocol, ensuring complete security from network-borne threats. Optical Diode provides access to real-time OT data and enables secure IT/OT data and file transfers without the risk of introducing security threats to critical OT production networks and assets.

## Benefits

- Airtight protection for OT/ICS-to-IT communication
- Secure, segmented, unidirectional data paths
- True protocol break, non-routable connection
- Redundant optical connection for unsurpassed reliability
- Easy deployment and operation
- Seamlessly integrates with MetaDefender Kiosk, Core, and Managed File Transfer



## 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

We offer a 100Mbps base platform that can be field upgraded to 1Gbps. Additionally, we offer an option for 10Gbps delivered on enterprise servers. The 10Mbps DIN Rail model is field upgradeable to 50Mbps.



### High-Availability

With the purchase of a second Optical Diode, enable high-availability configurations (active/standby).<sup>1</sup>



### Transparent to Users

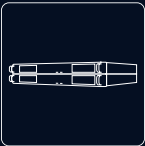
High-fidelity data replication means there is no need to alter work procedures of corporate users.



### 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



1U



DIN Rail

MetaDefender Optical Diode assures  
no way back to the OT network

Electrical

Redundant Power Supply	250W	✖
Voltage	100–240VAC, auto ranging	12–36VDC
Power Consumption	150W typical	19.55W typical

Hardware

Dimensions	2x 19 x 1.75 x 15.75" [483 x 44 x 400mm]	2x 2.5 x 7.32 x 6.3" [65 x 186 x 160mm]
Weight	2x 27lb [12.2kg]	2x 4.85lb [2.2kg]
Operating Temp	32 to 131°F [0 to 55°C]	-40 to 158°F [-40 to 70°C]
MTBF	>50,000 hours	
Mounting	1U rack kit included	No additional hardware needed

Other Specifications

Connectivity	2x USB for connecting provided crypto keys
Tested Latency <sup>2</sup>	0.6ms TCP, 0.7ms UDP

Protocol & Certification

Industrial	Modbus OPC (UA, DA, A&E) MQTT IEC104 DNP3 AVEVA PI historian <sup>3</sup> ICCP
IT	UDP, 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 <sup>4</sup>

1. Available on 1U model only.  
2. Actual latency results may vary according to setup used, traffic characteristics, and network topology.  
3. Applicable only to 1U server.  
4. Available on din rail model only - effective November 2024.