OPSWAT.

DATASHEET

METADEFENDER™

Optical Diode 1U

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.

Easy to Deploy
The preconfigured platform deploys quickly and seamlessly.

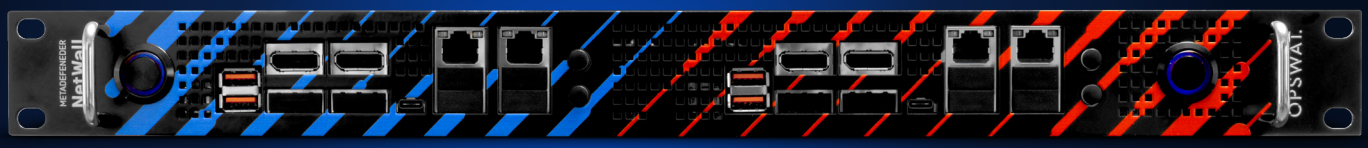
Simple to Operate
Ready for use in minutes after one-time initial setup with no firewall audit or configuration needed.

Scalable
Available in 100Mbps, 1Gbps and 10Gbps bandwidth.

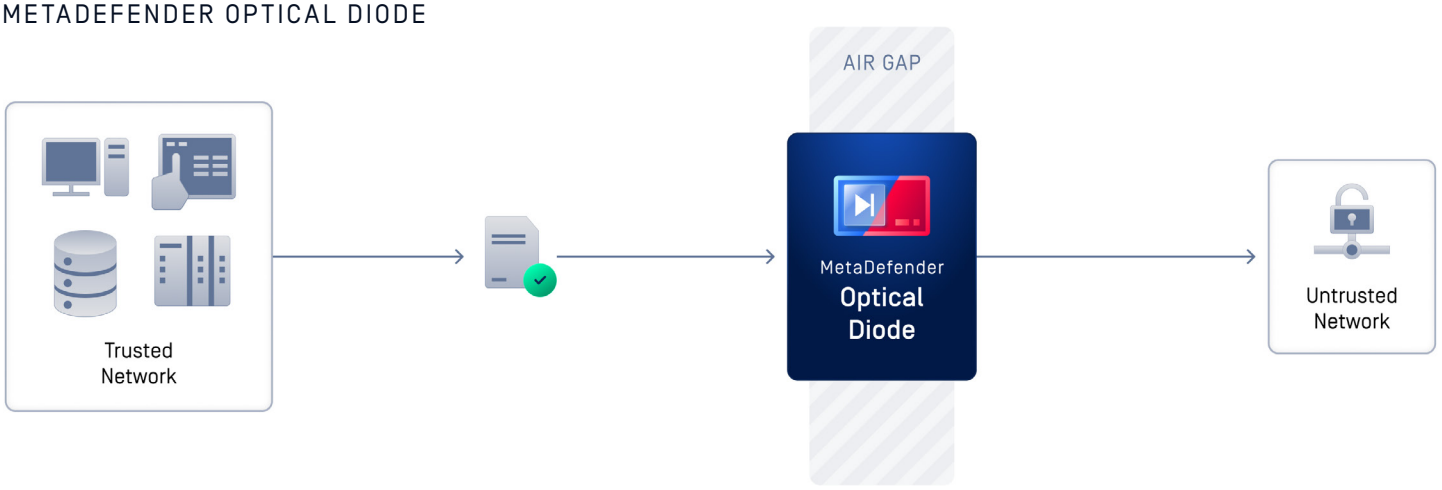
High-Availability
With the purchase of a second Optical Diode, enable high-availability configurations. (active/standby)

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

Power Supply	300W
Voltage	100–240VAC, auto ranging
Power Consumption	150W typical

Hardware

Dimensions	19 x 1.75 x 14.5" (483 x 44 x 368mm)
Weight	23lb (10.4kg)
Operating Temp.	50 to 95°F (10 to 35°C)
MTBF	> 50,000 hours
Mounting	1U rack kit included

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 MQTT Sparkplug B IEC104 DNP3 AVEVA PI Historian ICCP
IT	UDP unicast and multicast, TCP, HTTP, HTTPS, SMTP, NTP forwarding 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

Also available in 2X1U form factor

OPSWAT.
Protecting the World's Critical Infrastructure

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