METADEFENDER™
Optical Diode CE

Physically Block Cyberattacks

MetaDefender Optical Diode CE was designed from the ground up for industrial and rugged applications needing an affordable, stable, easy-to-use solution that physically keeps attackers away from protected networks and equipment.

Key Features

⇒ Transmit data in a physically-enforced, one-way fashion

Send files and data between segmented networks using TCP, UDP, SFTP, and FTP

Stream industrial Modbus or BACnet data

⇄ Convert legacy industrial data to modern JSON formats

Connect to equipment without propriety external servers of software

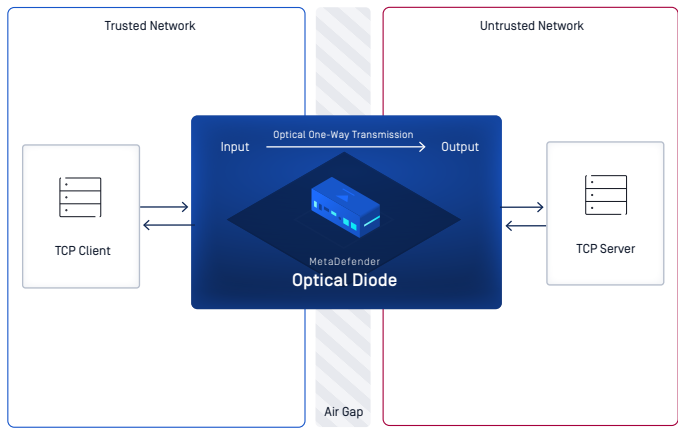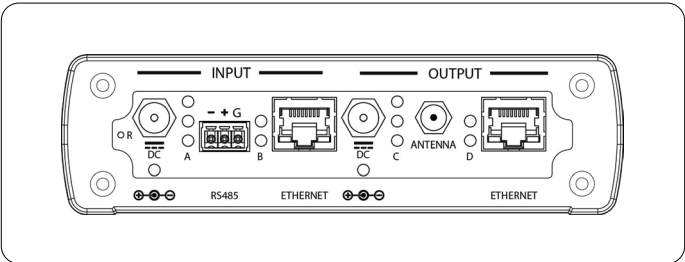Obtain data feeds previously out of reach due to cybersecurity concerns

Rapidly bring equipment into the industrial IoT

Designed and manufactured in the USA

METADEFENDER OPTICAL DIODE

Optical Diode CE
Ethernet + Cellular

Additional Features

- Denial of Service (DOS) Protection
- Anti-Tamper Protection
- Power Loss/Fluctuation Protection
- Field Configurable
- Optional Secure Hosting of Data in AWS Cloud
- ETL Listed (US, EU, Canada)
- CE, RoHS
- Full optical isolation with independent grounding of each side of the diode

Specifications

Maximum Data Throughout[1]	CE5	5.0 Mbps
	CE15	15.0 Mbps
Dimensions	5.1 x 5.8 x 1.6" (130 x 147 x 41mm)	
Weight	1.25 lb (.57kg)	
Isolation Technology	Optical	
Provided Power Supplies	100-240VAC 1.0A in, 12VDC 1.5A out[2]	
Voltage	12-48 VDC	
Diode Power Consumption (max)	8.0 W	
Design Operating Temperature Range	- 22 to 158°F (-30 to 70°C)	

Connections

Input Side	DC Barrel Jack (O.D. 5.5mm, I.D. 2.1mm, L 9.5mm, Center Positive Polarity)	
	Ethernet RJ-45 Serial RS-485 Combicon MC connector	
Output Side	DC Barrel Jack (O.D. 5.5mm, I.D. 2.1mm, L 9.5mm, Center Positive Polarity)	
	Ethernet RJ-45 4G cellular LTE modem (Verizon / AT&T)	
Protocols Supported	SFTP, FTP, FTPS[3] UDP, TCP, TLS[4] Modbus Serial (in), Modbus TCP BACnet-MSTP (in), BACnet-IP (in) LON-IP (in) MQTT (Fend Cloud on AWS)[5]	

Fend Cloud Features[5]

Send data securely to cloud-based platform

Monitor the status of diodes remotely via web-based app

Connect with third-party analytics providers using API

1. Data throughput may vary depending on network conditions, protocol, and application. FTPS and TLS maximum speed 4Mbps. SFTP maximum speed 2.8Mbps. Supported serial baud rates: 9600, 19200, 36400, 57600, 115200.
2. Customers can provide their own power supply as long as the output meets the input ratings of the diode. The MetaDefender Optical Diode is designed to be installed in industrial settings such as equipment rooms, control rooms, and IT closets where only adults are normally present.
3. Supports Linux and Windows. Tested with Windows and Linux native FTP, WinSCP, XL Reporter, and CoreFTP.
4. Supports TLS versions 1.0 to 1.2
5. Requires subscription to Fend Cloud service.

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