

HARDWARE-ENFORCED DATA DIODE

Unidirectional Network Segmentation

Hardware data diode protection that shields your critical networks from outside network threats, without ever opening a return path into your operational systems.

OWA-1U-500M/1G



Where the OWA sits in your architecture

Core OT Network LEVELS 2-3

- DCS & SCADA
- Historian
- Alarms & Events DB

OT-DMZ
3.5

OWA Gateway HARDWARE DIODE

OWA-1U-500M/1G

Physical, one-way boundary between production and supervision.

NO RETURN
LINK

ONE-WAY IT / OT CONVERGENCE

IT / Sovereign Cloud LEVELS 4-5

- SIEM & Syslog
- IT Data Lake, Historian
- Backups & A&E DB

What is the OWA-1U-500M/1G

The **OWA-1U-500M/1G OT Edition** is a compact, hardware enforced security gateway that permits strict one-way data movement at sustained speeds from 500 Mbps to 1 Gbps on the same chassis. By placing a physical boundary between IT and OT domains, it delivers **airgap-grade isolation** of critical operational systems that reaches well beyond what a firewall can offer

Its secure-by-design architecture enables real-time delivery of OT data (SCADA, DCS, Historian) into IT or cloud platforms, along with reliable forwarding of alarms and events, all without exposing critical assets to outside cyber threats. In practice it enforces a **physical separation of duty** between the production (OT) layer and the supervision (IT) layer. Built to satisfy demanding frameworks including IEC 62443 and NIS2, the OWA line lets you converge IT and OT securely while preserving integrity, availability, and safety.

Arista Cyber delivers, deploys, and supports the OWA platform across North America in partnership with **Cyberium**, the manufacturer of the technology. Learn more at cyberium.io.

KEY CHARACTERISTICS



Complete Physical Separation

Upstream and downstream proxies sit physically apart inside one 1U chassis, each with its own power supply and front-panel connections.



True Bandwidth

A sustained 500 Mbps or 1 Gbps on a single link, tuned for file and multi-protocol transfer.



Built for Resilience

Active/Active high availability with automatic failover, plus automatic traffic recovery if the IT side goes offline. (1)



OT Systems Compatibility

Connects to a wide range of protocols and systems through native connectors and add-on Agent software. Full list on the back



Strict Unidirectionality

No return data link, not even on a separate side channel. Data only ever moves one way.



Absolute Reliability

Zero packet loss, zero file loss, and zero file corruption across every transfer



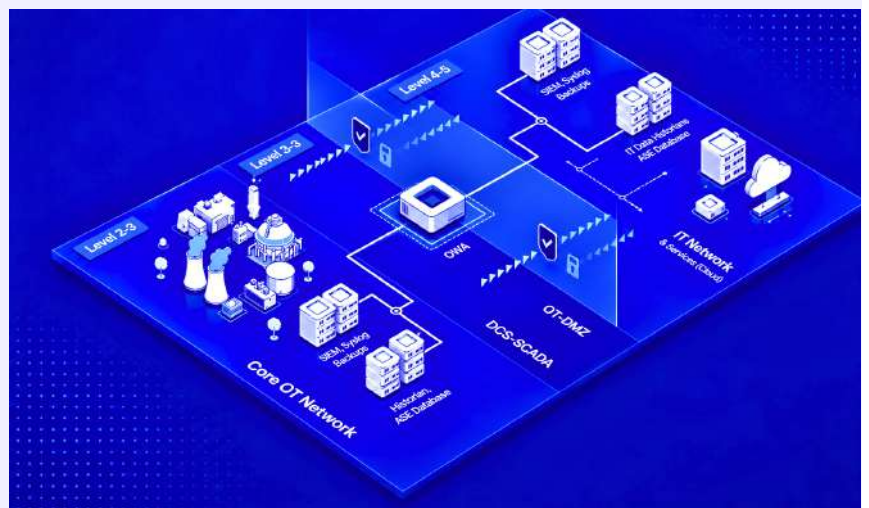
Simplified Compliance

Aligns with IEC/ISA 62443 FR 5 Restricted Data Flow SL-C 4, NERC CIP v5, NIS2, and NEI 08-09.



Seamless Deployment

Transparent to end users with no network redesign required. Simple administration and high MTBF.



Ordering SKU: OWA-1U-500M or OWA-1U-1G

TECHNICAL SPECIFICATIONS

FIGURES COVER BOTH PROXY SERVERS

Mounting	19" rack, 1U rack space for the two proxies. 1U rack kit with static rails included.
Dimensions	H 44 mm × W 479 mm × D 420 mm
Weight	12 kg / 26.5 lb
Operating temp.	10 °C to 35 °C (50 °F to 95 °F), no direct sunlight on the equipment.
MTBF	> 50,000 hr
Electrical / power	100-240 V AC. Avg. consumption 250 W. 2 × 400 W PSU.

NETWORK & CONNECTIVITY

Ports / interfaces	2 × 1/10 Gbps (copper), 2 × 10/25 Gbps (SFP+). Front-panel cabinet for visual inspection.
USB / other	2 × USB port, 2 × VGA port.
Max throughput	500 Mbps or 1 Gbps (by version). True deliverable end-to-end capacity.
File benchmark	More than 1,000 files of 125 KB per second at 1 Gbps over FTPS.

SECURITY COMPONENTS

Optical link	Standard optical link isolator.
Operating system	Hardened OS based on AlmaLinux SE.

PROTOCOLS & OT SYSTEMS COMPATIBILITY

Industrial protocols	MQTT, OPC UA/DA, Modbus, DNP3, IEC 104.
Historians & OT systems	AVEVA Pi2Pi Replication, AspenTech (InfoPlus21), Bently Nevada (S1), Emerson (AMS Optics), GE (OSM On-Site Manager), Honeywell (Uniformance PHD), Yokogawa (Data Historian).
Centralized monitoring	Cisco Splunk (extended API integration), ArcSight (via Syslog), generic SIEM (via Syslog), generic SNMP traps, screen view (via HDMI replicator).
Alarms & events	Hexagon (PAS), Emerson (DeltaV AgileOps).
IT protocols	UDP, HTTP/S API, SMTP.
Files	Direct File Channel supporting SFTP and FTP/S/ES. MS Windows File Transfer Agent via the Files Channel.
DB replicator (DCS/SCADA)	Simple SQL DB full/incremental backup replicator (Oracle / MS SQL). Advanced SQL DB granular change replicator (Oracle / MS SQL).

MANAGEABILITY & RESILIENCE

High availability	Active/Active automated failover with a second OWA appliance, plus a High Availability option subject to eligibility.
Traffic buffering	Up to 1 hour (2) of automatic replay if the downstream network is unavailable.
Monitoring	Via Syslog or a Web GUI central console for traffic, health, and performance, downstream of the proxies
Logging	Every configuration change and all traffic is logged
Admin accounts	Separated across the upstream and downstream proxies
Config save / restore	Locally, on USB, or over the network

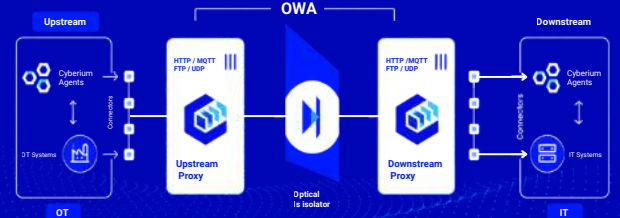
OT Portfolio Overview

	OWA-1U-500M 500 Mbps	OWA-1U-1G 1 Gbps	OWA-1U-500M 500 Mbps	OWA-1U-1G 1 Gbps
Rack & power	1U rack space. Single power supply per proxy.		2U or 3U rack space. Redundant power supply per proxy.	
Isolation between proxies	Unidirectional optical link.		2U: unidirectional optical link. 3U: optical & passive (no power) data diode option, ANSSI qualified (FR) or EAL7+.	
Capacity	2 concurrent connectors. Up to 1-hour (1) traffic buffer.		Unlimited concurrent connectors. Up to 1-day (1) buffer, extendable to a 1-week option.	
Industrial protocols	Off-proxy appliance Replicator Agents.		On-proxy appliance Replicator Agents. (2)	
IT to OT WSUS updates	Not recommended as a reverse data diode. No antivirus control available.		Recommended as a reverse data diode, with a dual-antivirus option available.	

How it works

UPSTREAM → OPTICAL ISOLATOR → DOWNSTREAM

UNIDIRECTIONAL OPTICAL ISOLATOR



(1) Buffer capacities are based on an average traffic load at 500 Mbps bandwidth. (2) Not applicable to all agents and subject to limitations based on desired performance. Please consult an Arista Cyber representative. The OWA-3U-1G/10G is fully compatible with Cyberium Agents, an exclusive suite of OT/IT software replicator agents. See the Cyberium OWA Agents datasheet for more.

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