Owl Computing Technologies®

OPDS-100D
PERIMETER DEFENSE SOLUTION

Remote Monitoring. DIN Rail Form Factor.

Critical Infrastructure operators (power generation, T&D, substations, oil & gas, utilities, telecoms, etc.) are taking decisive steps to protect the digital equipment in their Operational Technology (OT) networks against cyber attacks and threats. To stave off these threats Owl Perimeter Defense Solutions (OPDS) are being used to segment OT networks and protect the SCADA equipment and PLCs operating on them. Deployed at the edge of an OT network, the OPDS products allow data that is necessary for business operations and resiliency to flow out of the OT networks to end users while simultaneously protecting the OT network from any in-bound attacks.

The Owl Solution

The OPDS-100D, is a one-way data transfer solution built on patented data diode technology and designed specifically for OT networks. It features a compact, vertical form factor that connects to a DIN rail mounting system.

The OPDS-100D is deployed at the edge of a segmented OT network and contains the proprietary Owl DualDiode Technology that only allows data to physically flow in one direction. Data generated within a plant, substation, refinery, pump station or any other critical infrastructure facility is transferred across network boundaries to remote users for monitoring, performance, production and maintenance activities.

Capable of supporting up to 104 Mbps, the OPDS-100D one-way transfer supports files, packet streaming, database replication and a variety of other data types, protocols and formats.

OPDS-100D

Licensable Bandwidth Tiers

Owl uniquely offers licensable bandwidth tiers. The OPDS-100D supports variable bandwidth licensing, allowing customers to easily upgrade device throughput capacity with a simple software license key. Customers can select from 10 Mbps, 26 Mbps, 52 Mbps or 104 Mbps for their starting configuration, and upgrade within minutes if bandwidth requirements increase. This allows customers to purchase only the bandwidth needed today, with the knowledge that they can quickly and easily increase bandwidth at any time.

Single Device, Multiple Missions

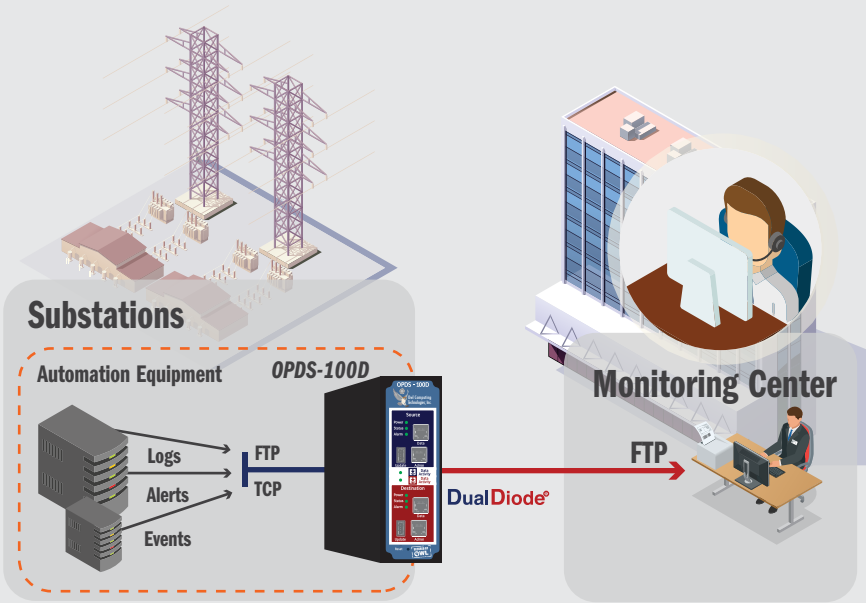
The OPDS-100D is an extremely low SWaP, single-device data diode solution, designed for DIN rail environments commonly found in the OT networks of industrial facilities and other critical infrastructure. With the power to support multiple functions simultaneously, the OPDS-100D can transfer files & images, stream video, replicate historians, send email alerts, transfer SNMP traps & syslog messages and support remote HMI screens. No competing product on the market offers the same range of capabilities in a single, easily deployable device.

USE CASE:

OPDS-100D Provides Secure Remote Monitoring of Substations

A transmission and distribution electric utility needed a way to protect its substations from cyberattacks while securely accessing operations information generated within the substation. The customer's most significant need was for remote personnel to understand what was going on in the substation 24x7 without exposing the substation to cyber threats.

The OPDS-100D was selected because of its deterministic one-way only transfer architecture, its DIN rail form factor, its ability to transfer up to 104Mbps and its ability to interface with different automation equipment within the substation. As both normal event logs and high priority alerts & alarms are generated within the substation, the OPDS-100D collects them and securely transfers them across the internal DualDiode. Once the logs & alerts cross the security boundary of the substation/DualDiode, they are transferred to remote monitoring locations for analysis.



Supported Protocols, File Types & Data Formats

The OPDS-100D is designed specifically for facilities utilizing DIN rail style mounting and provides a maximum throughput of 104Mbps. Like all OPDS products, it supports a wide range of data formats and transport layer protocols from a host of different sources including SCADA systems, PLCs, historians, sensors and other digital equipment located on the OT network.

Email (SMTP), FTP/SFTP, Modbus, OPC Foundation (DA, A&E), Remote File Transfer (alarms, events), DNP 3, Remote HMI Screen Replication, SQL Database replication, SIEM, SNMP Traps, Syslog, TCP transfers, UDP transfers (multicast, unicast).

In addition, industrial control solutions from a number of different vendors are also supported, including:
ABB, GE Proficy Historian, GE OSM Support, Mitsubishi Electric, OSIsoft PI historian, PAS Alarm Management, Rockwell Automation – RSLinx Classic, FactoryTalk Gateway, FactoryTalk Historian, Rolls Royce PMS, Schneider Electric – RemoteWatch, Wonderware eDNA, Wonderware Historian, Scientech R*Time.

Technical Specifications

Operating Conditions:
- -40°F to +140°F / -40°C to +60°C
- 5% to 90% humidity non-condensing

Power Supply:
- Input: 9-36V DC
- Estimated Normal Operating Usage 10-15 W Per Side
- Max. 20W Per Side

Storage:
- -40°F to 158°F / -40°C to 70°C
- 5% to 90% humidity non-condensing

Vibration:
- Vibration: (IEC 60255-21-1)
- Vibration 1g(10-500Hz) (Operational)
- Vibration 2g(10-500Hz) (Operational and Non-Operational)

Mounting System:
- DIN Rail(1") Mount, tabletop

Shock:
- Shock: (IEC 60255-21-2)
- Shock 10g 11ms (Operational)
- Shock 30g 11ms (Operational and Non-Operational)

Cooling System:
- Conductive cooling through enclosure side walls supplemented by adaptive active cooling based on system temperature control

Approvals:
- FCC Part 15 Expected Q3 2016
- CE Marking Expected Q3 2016, CB Marking Expected Q3 2016
- International Common Criteria Certification

ISO:
- Manufactured using ISO9001:2008 certified quality program

Chassis Size:
- 1.92" W x 6.132" H x 5.5" D
- 4.88 cm x 15.58 cm x 13.97 cm

Unit Weight:
- 2 lbs, 7 oz /1.1 kg.

Mean Time Between Failure (MTBF):
- 11 years

Network Connectivity:
- Separate Ethernet connections for network traffic and remote administration
- Physical connectors: 8P8C (RJ45)
- Supports 10BASE-T, 100BASE-TX, 1000BASE-T

About Owl

For over 17 years Owl Computing Technologies has been implementing next generation cybersecurity solutions for critical networks. Owl's DualDiode Technology®, a proprietary data diode, boasts 24 technology patents and has over 2,000 successful deployments globally across intelligence, government, military, financial services, utility, energy, and other critical infrastructure networks. Owl's hardware-enforced technology ensures secure networks and enables the reliable and robust transfer of all data types and file sizes.

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