

Commercial Product Portfolio

High-assurance cybersecurity solutions for critical infrastructure

Key Features

- **Hardware-Enforced by Design:** Reverse data flow is physically impossible. Hardware enforcement delivers assurance software-only controls can't match, for the most critical networks.
- **Support a Wide Array of Use Cases:** From fixed one-way transfer and bidirectional exchange to portable field response and walk-up media inspection, Owl covers every way organizations must move data securely.
- **Rigorously Tested, Globally Trusted:** U.S. Government Protocol Filtering Diode evaluation, Common Criteria EAL4+ certification, EU CE compliance (TCF, DoC, EN safety/EMC standards), RoHS, IEC 62443 alignment, and ISO 9001:2015 operations.

Featured Products

Data Diodes

- Owl Talon One (up to 1 Gbps)
- Owl Talon Torrent (up to 100 Gbps)
- Owl Incident Response Diode

Cross Domain Solutions

- IxD

Removable Media Solutions

- XD Air 6

Protecting Critical Infrastructure with Hardware-Enforced Cybersecurity

Modern critical infrastructure faces relentless cyber threats targeting operational technology, industrial systems, government networks, and high-value data flows. Owl Cyber Defense® delivers trusted, hardware-enforced solutions that allow organizations to operate securely while transferring the data their missions depend on. For more than two decades, Owl has led the industry in developing high-assurance cross domain solutions and data diodes purpose-built for defense, intelligence, energy, transportation, and industrial sectors worldwide.

This document reviews Owl's commercially available product lines:

- **Owl Talon:** secure, adaptable data diode platform featuring flexible deployment options, platform extensibility & one-way transfer speeds up to 100 Gbps
- **Owl Ird:** industry's first portable data diode for secure one-way transfer from compromised or unconnectable endpoints in the field.
- **XD Air 6:** portable media threat protection kiosk, delivering all-in-one file inspection, cleaning, and safe transfer with walk-up, plug-and-go operation.
- **IxD:** Hardware-enforced cross domain solution developed specifically for CI to support multiple, simultaneous one-way and bidirectional data streams.

Owl's Commercial Product Portfolio

Whether the mission requires compact 1 Gbps transfer, extreme 100 Gbps throughput, portable file sanitization, or industrial cross domain enforcement, Owl provides proven solutions built for the world's most demanding environments.

Owl Data Diodes: Hardware-Enforced One-Way Security

Data diodes are cybersecurity devices that physically enforce one-way communication between networks. Unlike firewalls or software segmentation, they use photodiodes, fiber optics, and FPGA logic to ensure information flows in one direction only, eliminating inbound pathways even if perimeter defenses fail. Protocol Filtering Diodes (PFDs) add protocol-rule enforcement to protect cannot-fail systems from backchannel threats. By guaranteeing deterministic, unidirectional movement, Owl PFDs enable secure OT-to-IT connectivity, continuous sensor visibility, database replication, and compliant data sharing without risk to operations. As organizations feed more data into AI, hardware-enforced protection becomes essential to uptime, safety, and compliance.



Owl Talon® One: 1 Gbps Data Diode Solutions

Up to 1 Gbps one-way transfer in flexible configurations. Suited for both industrial and enterprise environments & ideal for use cases from simple, single data flows up to complex, multi-protocol and historian replication needs. High-Availability available in all models. Supported Protocols: TCP, UDP (unicast, multicast, broadcast), NTP, Syslog, SMTP (email), SNMP Traps, RFTS, OPC (DA/A&E, UA), Remote Screen View, AVEVA PI Transfer (OPTS), Remote Desktop, MQTT, SFTP, Modbus.



Owl Talon Torrent®: 100 Gbps Data Diode Solutions

For missions that demand max throughput. Hardware-enforced transfer at 10 Gbps (1U) and 100 Gbps (2U) via appliance or standalone cardkit solution. For environments requiring ultra-highvolume, low-latency movement of telemetry data, bulk file transfer, etc. Supported Protocols: TCP, UDP (unicast, multicast, broadcast), NTP, Syslog, SMTP (email), SNMP Traps, RFTS, OPC (DA/A&E, UA), Remote Screen View, AVEVA PI Transfer (OPTS), MQTT, SFTP, Modbus.



Owl Incident Response Diode™: One-Way Forensic Collection

Portable, field-ready hardware-enforced path for safely extracting evidence from compromised endpoints. Presents as two USB storage interfaces—one trusted, one untrusted—to enable responders to collect data quickly without any risk of backflow.



Owl XD Air 6: Portable File Inspection and Sanitization

XD Air 6 is a portable, ruggedized media scanning kiosk trusted by defense and high-assurance organizations worldwide. It combines multiple antivirus engines with two independent Content Disarm & Reconstruction (CDR) engines that rebuild files from known-good components, catching zero-day threats that traditional tools miss.



Owl IxD: Industrial Cross-Domain Solution

The IxD cross-domain solution brings military-grade boundary security to industrial and critical infrastructure networks. Unlike pure diodes, IxD supports both one-way and controlled bidirectional flows, each rigorously inspected and enforced through hardware segmentation and policy-driven content filtering.



Securing Today's Critical Infrastructure

Owl's portfolio empowers organizations to strengthen their cybersecurity posture with hardware-enforced, high-assurance protection. Please reach out to request a technical consultation or for product briefings, architectural workshops, or deployment guidance.



Owl Cyber Defense Solutions, LLC, headquartered in Columbia, MD, leads the industry in data diode and cross-domain network cybersecurity solutions for faster, safer and smarter decision making. We create solutions tailored for high-risk sectors including the military, government and critical infrastructure. Our advanced technologies enable secure, near-instantaneous collaboration, bridging network barriers to protect critical missions. With a focus on scalability and interoperability, Owl ensures that organizations can maintain secure, reliable, and compliant communication channels against evolving cyber threats.

For more information on Owl, or to schedule a demo, visit www.owlcyberdefense.com.

