

# Data Diode Security Solutions

For Critical Infrastructure, Commercial,  
and Government Applications



## The Trusted Leader

- Highest Performance
- Most Flexible Deployment
- Broadest Range of Capabilities
- Most Secure Software
- Easy to Use & Configure

## Secure Data Availability for Critical Networks

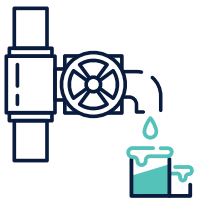
From industrial control system monitoring and CCTV feeds to IoT and mobile devices, every new connection introduces a new vector for cyberattack, and the surface area for such vulnerabilities has exploded. As such, there is a pressing, global need for more effective tools to protect critical networks from attacks that might cause severe financial, physical, or personal damage.

Best practices for protecting these networks involve simplifying, reducing, and isolating network connections, including segmenting networks from one another by creating either a virtual or physical separation between them. However, this separation can prevent data from getting to the systems and users that need it. The challenge has been how to limit access, minimize risk, and keep these networks secure while getting valuable operational data to authorized users when it's needed.

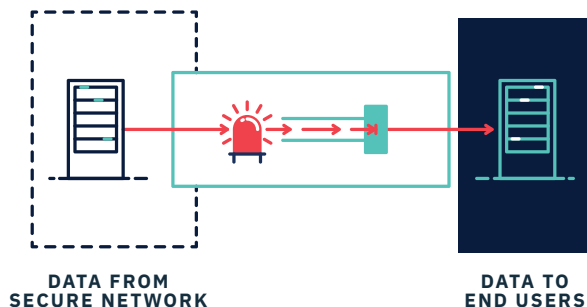
## What is a Data Diode?

A “**data diode**” is a hardware-enforced device that physically enforces a one-way flow of data. As one-way data transfer systems, data diodes are used as cybersecurity tools to isolate and protect networks from external cyber threats, while still allowing isolated networks to share data with outside users and systems. It is perhaps simplest to think of data diodes as digital one-way valves for data, allowing data to flow out, without a way back in.

ONE-WAY DATA VALVE



ONE-WAY DATA DIODE CIRCUIT



Owl represents the gold standard in data diode cybersecurity, designed to support the varied and complex cybersecurity needs within the wide range of critical infrastructure industries. Acclaimed for their unmatched performance, reliability, and ease of use, Owl data diodes protect the operational networks and digital assets of some of the world's largest critical infrastructure facilities, including power plants, substations, laboratories, oil rigs, and more.

To learn more about data diode technology, download the free eBook, “The Definitive Guide to Data Diodes” at: [whatisadatadiode.com](https://whatisadatadiode.com)



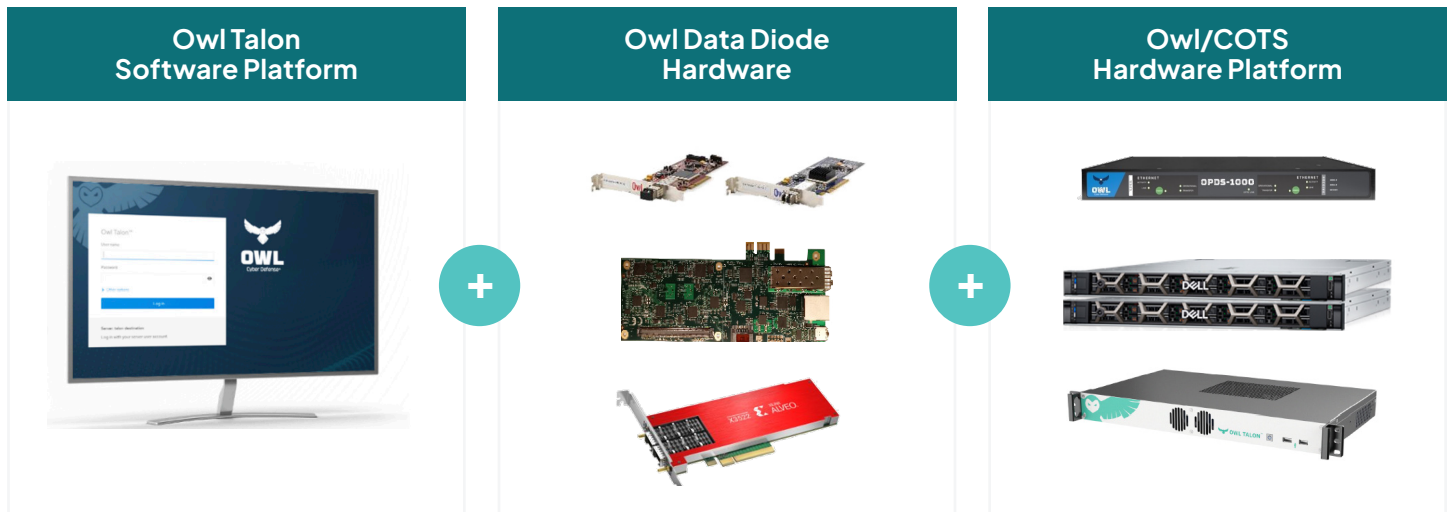
# Owl Talon™ Data Diode Platform

## THE DATA DIODE, REINVENTED

25 years ago, Owl launched the first commercialized data diode to the market. Now, we're reinventing the data diode again with Owl Talon.

Building on a quarter century of one-way networking expertise and customer feedback, Owl Talon is the latest, revolutionized iteration of Owl's award-winning, NSA-approved data diode platform. By deconstructing the traditional data diode appliance, you can now seamlessly connect and enable one-way transfers of both one-way and two-way data types and protocols with unmatched ease of use, reliability, and time to value. Owl Talon is the future of secure data mobility, from systems monitoring to cloud connectivity.

## The Owl Talon System



### UNMATCHED EASE OF USE

Featuring a modern, web-based user interface, Owl Talon is extremely easy to set up and configure in just minutes, getting you up and running faster than ever before.



### MAXIMUM SECURITY FEATURES

Improved security features, including a STIG-compliant OS, enhanced SELinux enforcement with access and permission controls, a BIOS password, AIDE to detect unauthorized activities, and disk encryption for added protection.



### MULTIPLE USES, ONE DEVICE

Owl Talon can “do it all” with multiple, simultaneous protocols and dataflows on one device, allowing you to save space and leverage the same system as your use case needs evolve.



# Owl Talon

## v3.x Software Platform

Developed using the Microsoft Secure Development Lifecycle process, the Owl Talon software platform has an all-new, web-based user interface and improved security features, making it more secure and easier to deploy than ever before.

To save you additional time, space, power, and cost, Owl Talon can support multiple, simultaneous data flows and protocols on one device. With an extensible foundation for a broad range of OT and IT protocols and interfaces, Owl Talon also features a “Bring Your Own Functionality” container structure that not only enables all your one-way data transfer use cases but also interfaces with custom or predeveloped applications or filters.

### Software Tiers

The Owl Talon Software Platform is offered at three tiers to provide the highest possible value to you at the lowest viable cost, based on your use case and system requirements.

<b>Base</b>	1 Data Type
<b>Multi-Purpose</b>	3 Data Types, One OT Application
<b>Enterprise</b>	All Data Types & Applications

### Key Features

#### Supported Protocols

- UDP (unicast, multicast, broadcast)
- TCP
- Syslog
- SMTP (email)
- SNMP Traps
- Virtual Screen View
- NTP
- File Transfer (RFTS)
- OPC (DA/A&E)

#### Security Enhancements

- Enhanced SELinux enforcement with access and permission controls
- A BIOS password to prevent unauthorized access and modifications
- AIDE to detect unauthorized activities
- Disk encryption for added protection
- STIG compliance, security report (SCAP/AIDE) interface
- Penetration tested

#### Coming Soon (Q1 2025)

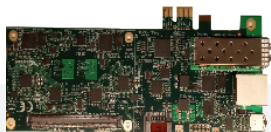
- AVEVA PI System



# Owl Talon

## Data Diode Cards

Owl data diode cards are the hardware-based components which enforce one-way data flow. They are typically provided pre-installed into a hardware platform and require Owl Talon software as a part of a complete Owl Talon solution. All Owl data diodes are tested and approved for use in U.S. Government, intelligence, and defense networks. Card kits may be purchased separately with Owl Talon software for self-installation and configuration into customer owned compute platforms.



### Owl Talon One Data Diode Card

The Owl Talon One (OTO) data diode card is a single PCIe card with a built-in Owl Radium protocol filtering diode. Rather than designing for custom Owl appliances, the Owl Talon One card is hardware-independent and is intended to be compatible with a variety of COTS hardware platforms.

#### Speed

Up to 1 Gbps

#### Platforms

OnLogic HX600,  
OnLogic MK100



### Owl V7 Data Diode Card Kits

Owl V7 Data Diode Card Kits are comprised of two purpose-built network interface cards (one send, one receive) connected via a fiber optic cable. Each individual card is installed on a separate host server in a PCIe slot. Owl V7 cards facilitate high bandwidth, low latency one-way transfer.

#### Speed

Up to 10 Gbps

#### Platforms

OPDS-1000 (V7t),  
Dell R660



### Owl V8 High Speed Data Diode Card Kits

Owl V8 Data Diode Card Kits are comprised of two purpose-built network interface cards (one send, one receive) connected via a fiber optic cable. Each individual card is installed on a separate host server in a PCIe slot. Owl V8 cards are designed for low latency, ultra-high data transfer requirements.

#### Speed

Up to 50 Gbps

#### Platforms

SuperMicro TwinPro,  
Dell R660

## Warranty & Maintenance




The Owl Talon software platform is compatible with the full range of data diode cards and support is provided for both the Owl software and data diode cards. As a part of annual warranty & maintenance, Owl consistently provides quarterly releases for Owl Talon software, including security updates (as needed), new features, and other improvements. Due to 3rd party components, warranty and maintenance for COTS Owl Talon hardware platforms is sold separately.






## Owl Talon Hardware Platforms

We are excited to offer Owl Talon on a range of hardware compute platforms, featuring DIN rail and data center options. Owl Talon is also backwards compatible with the latest of Owl's legacy hardware platforms for existing OPDS-1000, XD Prism MPP, and EPDS customers.

Platform SKU	Form Factor	Diode Card Throughput	Use Case
<b>OnLogic HX600</b> TALON.IPC.01-01 	Compact, DIN Rail Compatible	Owl Talon One Card 1 Gbps	Industrial Environments (Q1 2025 Release)
<b>OnLogic MK100</b> TALON.SERV.01-02 	1U Rackmount	Owl Talon One Card 1 Gbps	Most use cases with standard rackmount availability STIG-compliant requirements
<b>Dell 660</b> TALON.SERV.02-02 	2U Rackmount	V7 Cards 10 Gbps  V8 Cards 50 Gbps	High throughput requirements STIG-compliant requirements

## Owl Talon v2.x Legacy Platforms




For customers with use case requirements not yet met by Talon v3.x, Talon v2.x platforms are available to meet your project requirements and are fully upgradeable to Talon 3.x when the required feature sets are released.

Platform SKU	Form Factor	Diode Card Throughput	Use Case
<b>OPDS-1000</b> OPDS-1000-SC OPDS-1000-HC 	1U Rackmount	V7t Cards  26 Mbps (SC) 1 Gbps (HC)	PI System, OPC, Modbus, MQTT, & S/FTP transfer  Upgradeable to Owl Talon v3.x for systems sold 2021 and later.

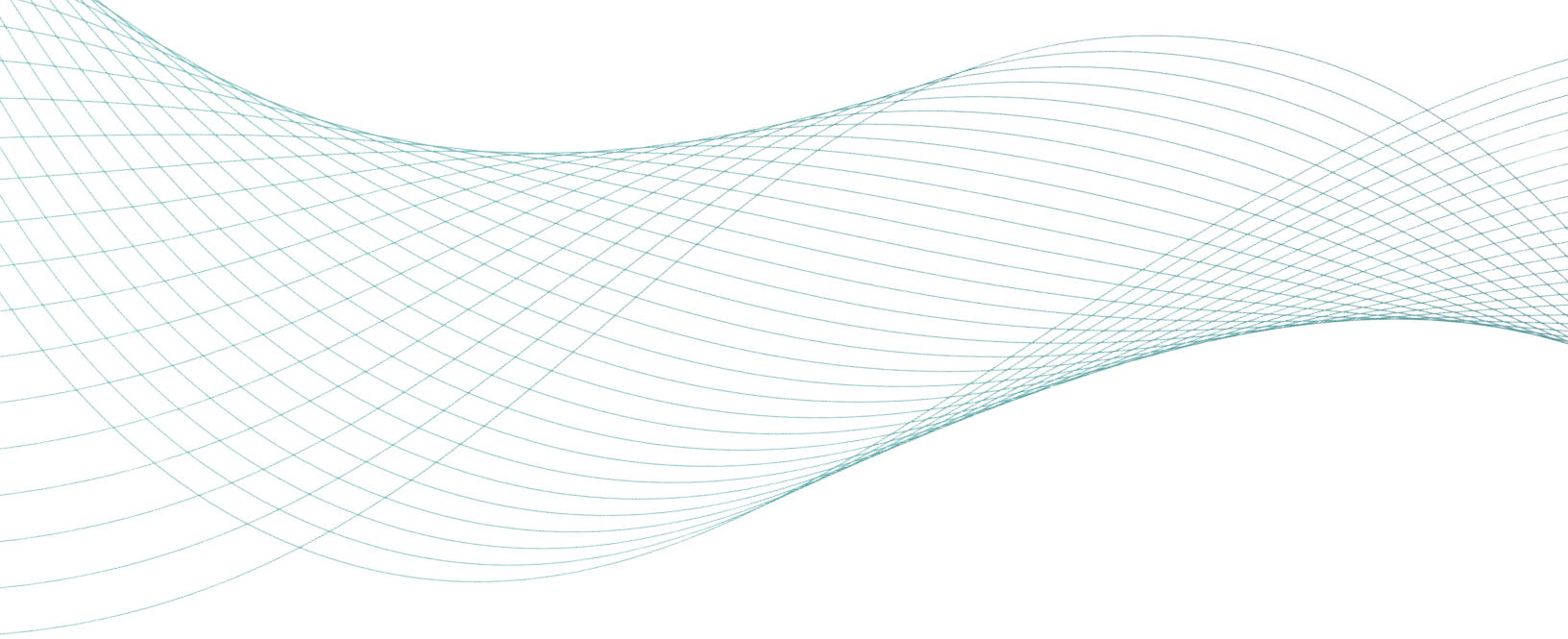


## Other Data Diode Solutions

Owl specialized data diode products are designed to meet operational needs beyond those of our standard Owl Talon product line. These products include specialized hardware and/or software to provide unique capabilities and enable secure data mobility for a wider variety of use cases.

Solution	Description	Form Factor	Key Features
<p><b>XD Verge</b> <i>XDESE-VERGE-RAD-DI-UDP</i></p> 	<p>XD Verge is a low SWaP, low-latency, hardware-enforced one-way transfer data diode built on Owl's revolutionary FPGA-based XDE Radium protocol filtering diode (PFD) module.</p>	<p>Compact, DIN-Rail Compatible</p>	<ul style="list-style-type: none"> <li>• FPGA-based protocol filtering one-way UDP data flow</li> <li>• Optical and digital isolator options</li> <li>• Includes API interface (no transfer software).</li> </ul>
<p><b>SSUS</b> <i>SSUS-1U</i></p> 	<p>Secure Software Update Solution (SSUS) is a specialized appliance designed to scan and transfer software updates and other executables or files into a secured network.</p>	<p>19" 1U Rackmount</p>	<ul style="list-style-type: none"> <li>• Low-to-High File Validation &amp; Transfer into Secure Networks</li> <li>• Transfer Updates or other Executables</li> <li>• AV Scan and Multiple File Checks</li> </ul>
<p><b>ReCon</b> <i>RECON-2U</i></p> 	<p>ReCon provides secure roundtrip, bidirectional communication. The solution reduces attack surface area while providing higher security than traditional firewalls in use cases where bidirectional data transfer is required.</p>	<p>19" 2U Rackmount</p>	<ul style="list-style-type: none"> <li>• Secured Single Channel Bidirectional Remote Command &amp; Control</li> <li>• Remote Help Desk / Diagnostics</li> </ul>





Owl Cyber Defense Solutions, LLC leads the world in data diode and cross domain network cybersecurity. With a constant focus on customers in the military, government, critical infrastructure, and commercial communities, Owl develops market-first, one-way data transfer products to meet a variety of operational needs, from entry level to enterprise.

For more information on Owl, or to schedule a demo, visit [www.owlcyberdefense.com](http://www.owlcyberdefense.com)

