OWL Cyber Defense

OWL CYBER DEFENSE
SUPPORTS
RTB
REQUIREMENTS

Embedded Tactical Data Diode Module

Simple. Relible. Consumable.

KEY BENEFITS

- Available as an embedded module for new or existing product designs or as a stand-alone device

- Embedded hardware module for high assurance one-way data transfers

- Enables quick and secure information sharing among Mission Partners and Tactical Communities

- Plug-and-play with a single IP address

- Deterministic, one-way data transfer that doesn't require software patches

Secure Data Transfers Between Classified Networks

Soldiers are mission focused. Technology that draws attention away from critical war-fighting tasks is quickly discarded, however high-assurance cybersecurity is a must to protect classified networks while transferring data to external destinations. Operators need a solution that provides a high level of security, has a small form factor and is simple to use, does not require frequent maintenance, and can be acquired at an affordable cost.
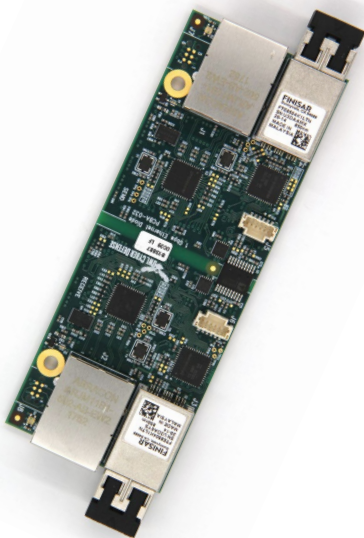
To address these needs, Owl is breaking new ground and providing a low size, weight, power, and cost (SWaP-c), hardware-enforced cybersecurity module with Field Programmable Gate Array (FPGA) technology that is available as a stand-alone device or can be directly plugged into a tactical device within a secure network. This technology provides a secure, one-way transfer between two classified networks and is extremely simple to implement and maintain. This technology reduces operators' needs for additional cybersecurity solutions and the overhead associated with maintaining it, thereby reducing both their capex and opex costs.
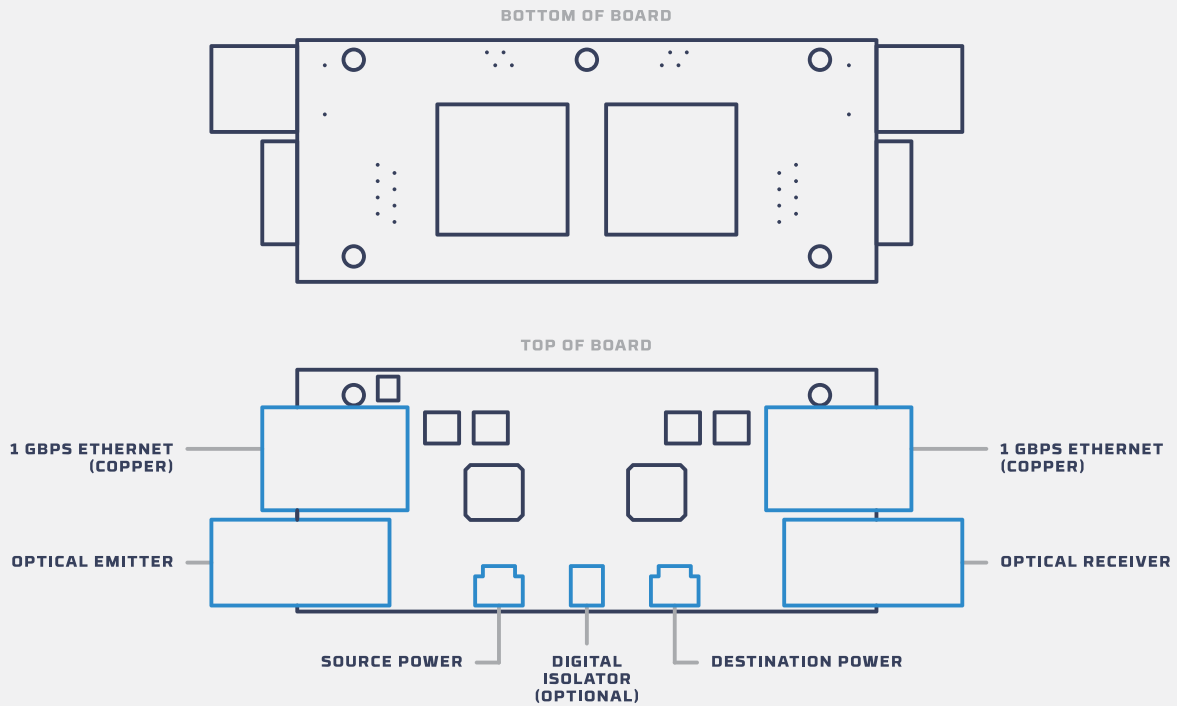
Data Diode Module

This technology is a single-board data diode module that can be incorporated into the design of tactical systems where safety and assurance is critical. This hardware module provides high assurance, one-way data transfers with secure data flow management between two networks, without requiring new software or computation resources. With a standard Ethernet interface and a high throughput maximum of 1 Gbps, this module performs one-way UDP (Unicast & Multicast interfaces) and TCP/IP (in development) data transfers, preventing external access to the classified source network.

Hardware-Enforced vs. Software-Based Security

The history of cybersecurity has shown that software-based systems are inherently vulnerable to misconfiguration and the constant emergence of zero-day exploits and malware. The opposite is true with hardware-based cybersecurity. Hardware is definitive and absolute; it cannot be tricked into doing something it wasn't designed to do. Unlike conventional cybersecurity solutions, this module does not depend on software and is not vulnerable to conventional zero-day exploits. As a result, this technology does not require frequent updates in order to consistently enforce high assurance.

BOTTOM OF BOARD

TOP OF BOARD

1 GBPS ETHERNET (COPPER)

1 GBPS ETHERNET (COPPER)

OPTICAL EMITTER

OPTICAL RECEIVER

SOURCE POWER

DIGITAL ISOLATOR (OPTIONAL)

DESTINATION POWER

Key Features

- High throughput maximum of 1 Gbps

- One-way UDP (Unicast & Multicast) and TCP/IP (in development) support

- Optical Isolation – single fiber optic cable

- Source and destination network isolation via an optical or digital isolator

- Extended operating temperature range (-40°C to +85°C)

- Low power consumption – no new software or computation resources needed

- Requires no software patches or signature updates

Technical Specifications

POWER CONSUMPTION
- Independent +5V DC Power Supply (separate for source/destination)
- 3.3W per side (6.6W total)

NETWORK CONNECTIVITY
- CAT5/6 Ethernet (RJ-45)

SUPPORTED PROTOCOLS
- UDP (Unicast, Multicast)
- TCP/IP (in development)

THROUGHPUT
- Maximum of 1 Gbps

OPERATING CONDITIONS
- -40°C to +85°C

MODULE DIMENSIONS
- 1.5" × 3"

OWL Cyber Defense

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