USE CASE

One-Way Data Transfer from Unconnectable Networks

Move critical data out of isolated networks without ever connecting them

Challenge

→ Surveillance and air-gapped networks produce critical data that teams cannot safely retrieve with traditional network connections.

Solution

→ Owl IRD™ is a PFD that transfers data one-way out of isolated networks with zero return path.

Benefits

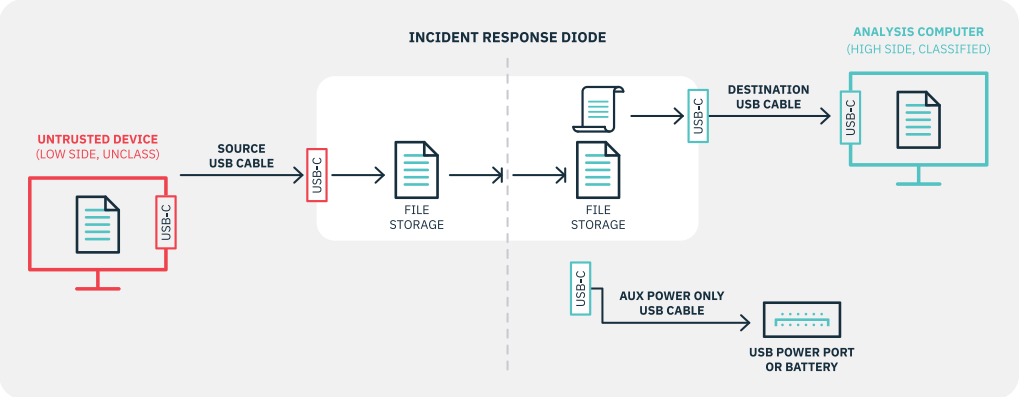
→ Owl IRD gives operators a safe, auditable path to retrieve data from networks and endpoints that could never before be directly accessed.

The Challenge: Isolated Networks Lock Out Visibility

Surveillance systems, classified sensors, and other permanently isolated networks generate continuous streams of high-value data like video feeds, system logs, operational telemetry, and forensic artifacts. But by design, these networks can never have a direct connection to any external system. Traditional retrieval methods force a choice between maintaining isolation or accessing the data. USB thumb drives introduce malware risk and break chain of custody. Ad hoc network connections violate security policy. And improvised "air gap" workarounds are neither repeatable nor auditable. The result is data that exists but cannot be safely used - leaving operators blind and investigations incomplete.

The Solution: Owl IRD™ Enables Safe, Hardware-Enforced Data Extraction

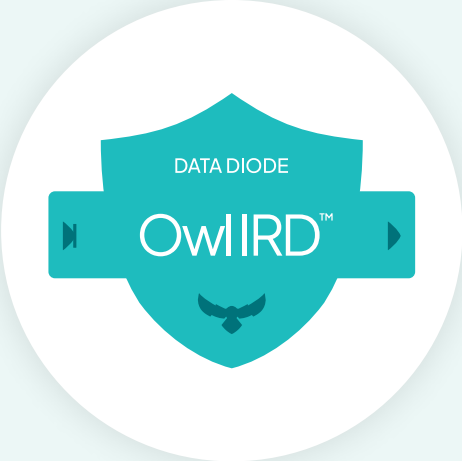
The Owl IRD is the industry's first pocket-sized Protocol Filtering Diode (PFD), purpose-built to extract data from endpoints and isolated networks through a hardware-enforced, one-way USB path — without ever creating a return connection. Using FPGA-level protocol filtering that meets U.S. Government PFD requirements, the Owl IRD physically prevents any data, command, or signal from traveling back into the source network or device. An operator simply connects the IRD's untrusted end to the isolated source and the trusted end to a clean collection system — video footage, logs, telemetry, and forensic evidence transfer out in one direction only, preserving chain of custody and eliminating reinfection or compromise risk at every step.



203-894-9342 | owlcyberdefense.com

The Result: Secure, Repeatable Data Extraction from Any Isolated Source

- **Hardware-guaranteed isolation:** FPGA-level one-way enforcement means no command, signal, or malware can ever traverse back into the source network.
- **Preserves chain of custody:** A repeatable, hardware-enforced transfer path produces a defensible evidence record for forensic investigations and compliance reporting.
- **Eliminates risky workarounds:** Replaces unsanctioned USB drives and ad hoc network connections with a U.S. Government-validated PFD process.
- **Field-deployable in seconds:** Pocket-sized form factor lets operators extract data on-site from surveillance systems, sensors, or isolated endpoints without any network reconfiguration.
- Supports diverse source types: Transfers video feeds, sensor telemetry, system logs, and forensic artifacts from any USB-accessible isolated source or endpoint.



Owl IRD™

The industry's first pocket-sized Protocol Filtering Diode, the Owl Incident Response Diode (IRD) gives operators a quick, simple, hardware-enforced, one-way USB path to safely extract data from compromised or isolated endpoints, surveillance systems, and air-gapped networks that traditional tools cannot touch. Plug in, drag & drop, done. FPGA-level protocol filtering meets U.S. Government PFD requirements, preserves chain of custody, and eliminates reinfection risk, no configuration, no complexity.

OWL Cyber Defense™

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.**

203-894-9342 | owlcyberdefense.com