OWL Cyber Defense

# Securing Your Pharma Operations with Owl Data Diodes

Overview

The digital transformation of the pharmaceutical industry is driving more efficient production and supply chains, novel research, and better clinical trials. Yet, the business and social value of pharmaceutical data mean this industry is a prime target for malicious cyberattacks and industrial espionage.

Data breaches impact an organization's ability to safely make drugs, damage reputations, and are costly. For example, a recent cyberattack at Merck caused months of production disruption and an estimated $410M in lost revenue and insurance payouts.[1,2]

And the impact is only getting worse. A 2018 study reports a 6.4% annual increase in the global average cost of a data breach, up to $3.86M.[3]

Owl Cyber Defense (Owl) manufactures data diode cybersecurity products for hardware-enforced one-way data transfer and assured network security against malware, ransomware, control override, and other forms of cyberattack. Our products are used by the U.S. intelligence, military, and government communities; and critical infrastructure (including nuclear, oil, and gas) and commercial enterprises.
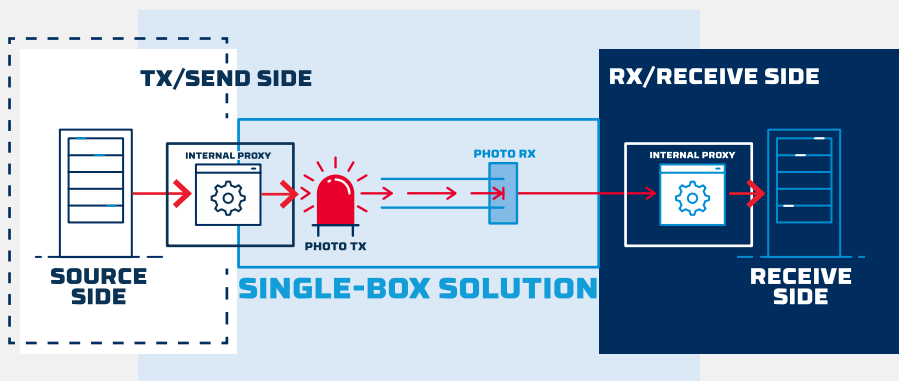
Owl uses a multi-layered, patented approach to the design of our data diodes. Owl data diodes are hardware-enforced, electronic cybersecurity devices designed with two separate circuits – one send-only, and one receive-only – which physically constrain the transfer of data to one direction only, forming an "air gap" between the source and destination networks.

Data Diodes in Pharma

Owl's data diode solutions reach beyond the government and critical infrastructure markets. Our products can be deployed anywhere there is a need to securely send or collect data. Owl data diodes can also protect against disruption of digital asset controls to streamline automated processes, so your team can focus more time on quality assurance.

Learn how our solutions can secure the sensitive data and assets in your firm's network:

- **Pharma production:** Secure your drug manufacturing systems and plant infrastructure from invasion and control. Owl data diodes can allow your production controllers to stream important operational data and required serialization logs to drive data-driven actions, while barring a common entry vector into manufacturing systems, particularly legacy systems with known network vulnerabilities. Our highly secure one-way connectivity products support standard industrial protocols and work reliably with all leading industrial control platforms.

- **Clinical trial networks**: Ensure the integrity of your clinical trial data network. Our data diodes allow you to securely share and aggregate clinical trial data and avoid breaches in private patient and product information that lead to costly fines and loss of trust in drug quality. Owl data diodes provide hardware-enforced security to network segments, supporting DHS and FDA best practices in network management, intrusion prevention, and device security.

- **Clinical and Research Data Centralization:** Protect your most valuable intellectual property (IP) from industrial espionage. Owl data diodes can help you decide the entry and exit routes for data from other systems into your research and clinical data repositories, giving you control and protecting your data repositories from penetration. Implementing and validating standard research data protocols, Owl's data diodes help you easily integrate and implement automated updates to your clinical trial and research databases without introducing new risks to your clinical or research network.

- **Managed File Transfer:** Secure and shield your trusted network by preventing direct connectivity between external partners and internal servers. An Owl data diode ensures files can be sent from your internal network to your application DMZ or gateway, or the open internet, through a one-way link that can't be breached. Owl works with leading MFT vendors to assure easy integration of our enhanced security solution with your choice of MFT platform.

- [1]https://www.healthcareitnews.com/news/petya-cyberattack-cost-merck-135-million-revenue
- [2]https://www.reuters.com/article/us-merck-co-cyber-insurance/merck-cyber-attack-may-cost-insurers-275-million-verisks-pcs-idUSKBN1CO2NP
- [3]https://www.ibm.com/security/data-breach

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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

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