

## USE CASE

# Missile Detection & Defense

Secure, real-time sensor data sharing across global defense networks

### Summary

#### Challenge

Global missile defense requires secure, real-time cross-domain sensor data sharing without exposure risks.

#### Solution

XD Guardian XML enables filtered, high-speed transfers with hardware-enforced security and exportability.

#### Outcome

Secure multinational sensor data fusion enhances threat detection, response speed, and decision-making accuracy.

### Challenge: Securing Cross-Domain Sensor Data for Global Missile Defense

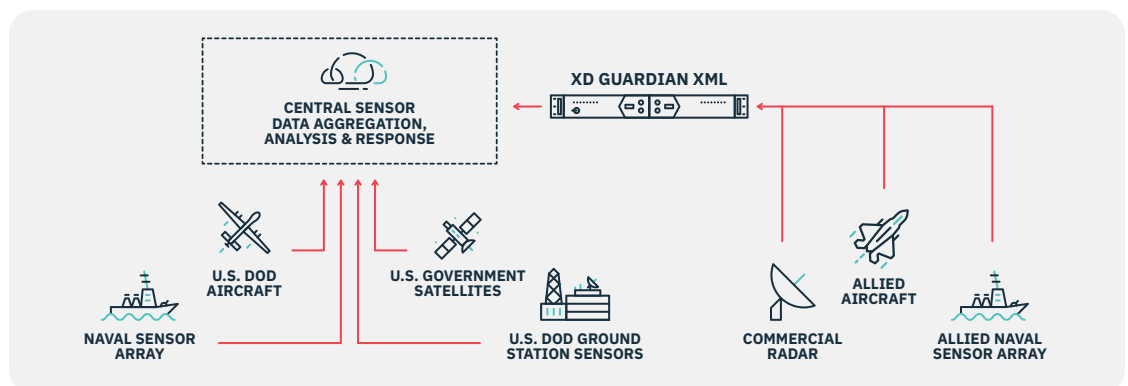
Modern missile threats, including ICBMs launched from global locations, require real-time sensor data integration across land, sea, air, and space domains. This data often crosses national borders and classified security boundaries, creating cybersecurity risks. The challenge lies in enabling ultra-low latency transfers of sensor data from multinational, multi-domain sources—commercial and government—without exposing sensitive network details, proprietary metadata, or routing information to adversaries. Existing solutions lacked the speed, exportability, and filtering precision to securely unify these disparate systems while complying with international data-sharing regulations.

#### Requirements

- Enable real-time sensor data transfers from numerous disparate, multinational sources
- Secure connections between commercial and government/defense-based sensors
- Filter network and information to prevent potential unauthorized exposure

### Solution: XD Guardian XML™ for Global Sensor Data Fusion

XD Guardian XML enables high-speed, multinational sensor data exchange while preventing unauthorized access to sensitive networks and data by providing an exportable, hardware-enforced cross domain solution that supports ultra-low latency, real-time data transfers and robust inline filtering, blocking unauthorized exposure of sensitive or proprietary information. Its hardware-based separation prevents the disclosure of source network routing, and pre-configured, customizable content filters ensure compliance with coalition and partner requirements. The functional equivalent of XD Guardian XML, XD Bridge ST, is the premier cross domain guard platform for system integrators with application-specific needs and is a U.S. Government accredited, RTB compliant, ultra high-performance cross domain solution. The result is a secure, scalable platform that enables trusted, real-time data sharing for multinational defense operations while meeting rigorous U.S. Government security standards.



## Results

Deployment of XD Guardian XML enabled seamless, secure integration of global sensor networks, enhancing missile threat detection and response times. Real-time data fusion improved decision-making accuracy, while advanced filtering and hardware security mitigated risks of data leakage.

## Key Outcomes

- Real-time, ultra-low latency sensor data sharing across numerous disparate multinational sources
- Zero unauthorized data/metadata exposures via inline validation and filtering
- Exportable CDS platform adopted by 15+ non-U.S. allied defense networks
- Hardware-enforced separation protects network routing and source identities

## XD Guardian XML: Secure, High-Assurance Data Transfer Across Security Boundaries

XD Guardian XML is a U.S. government certified, dual-guard, quad diode cross domain solution. It is the only exportable CDS available for commercial or defense deployments worldwide in organizations that require military-grade data transfer assurance. Featuring best-in-class performance with 1 Gb network interfaces, XD Guardian XML supports both unidirectional and fully bidirectional transfer modes with customizable content filtering and policy configuration. It is available in a standard 1U 19" rack-mountable configuration for use in enterprise applications and multiple tactical form factors. XD Guardian XML is a U.S. government accredited, dual-guard, quad diode cross domain solution. It is the only exportable CDS available for commercial or defense deployments worldwide in organizations that require military-grade data transfer assurance. Featuring best-in-class performance with 1 Gb network interfaces, XD Guardian XML supports both unidirectional and fully bidirectional transfer modes with customizable content filtering and policy configuration. It is available in a standard 1U 19" rack-mountable configuration for use in enterprise applications and multiple tactical form factors.



The functional equivalent of XD Guardian XM, XD Bridge ST, was purpose-built for and rigorously tested by the U.S. Government as a flexible, high performance Cross Domain Solution providing Raise the Bar-ready assured transfer for streaming or posting fixed format and structured data.



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](http://www.owlcyberdefense.com).

