

# XD Bridge ST™

Cross Domain Solution for Streaming Fixed Format and Structured Data

## Key Features

- TCP/UDP streaming of structured (XML schemas) and fixed format data messages
- Hardware-enforced diode-based domain separation, certified to meet U.S. Government High Threat Network standards
- Software-enforced linear assured pipeline filtering
- Multiple pipelines/dataflows enable simultaneous, independent data transfers, increasing throughput, flexibility, and operational efficiency
- Secure, high-speed, policy-driven data transfer, deep inspection, configurable filtering, and protocol versatility
- Available in data center form factor with support for up to 10Gbps

## Compliance

- Meets U.S. Government CDS Baseline requirements and approved for deployment to the U.S. DoD & IC
- CLIP enforced STIG compliant configuration
- Meets rigorous "Raise the Bar" standards



## RTB-Ready Secure Data Transfer

XD Bridge ST™ is a streaming structured and fixed-format Cross Domain Solution (CDS) featuring hardware-enforced domain separation, certified by the U.S. Government for secure, high-speed, and compliant data transfers between security domains. It delivers robust content and dataflow assurance, ensuring only validated information crosses boundaries.

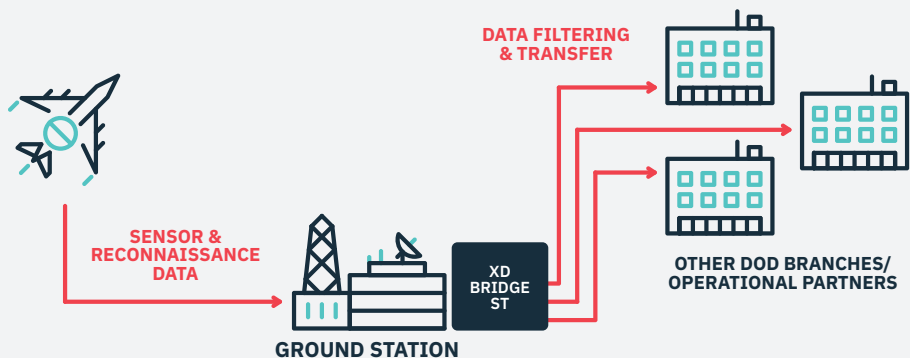
**Assured Structured Data Handling:** XD Bridge ST securely transfers structured data using DFDDL-based schema validation and redundant linear filtering pipelines, ensuring only compliant, authorized data crosses security domains.

**Flexible Data Flow and HTN Compliance:** Supporting unidirectional and bidirectional flows, XD Bridge ST uses U.S. Government approved data diodes for hardware-enforced separation, meeting High-Threat Network (HTN) requirements.

**Customization and High Performance:** Customers can apply custom XSLT stylesheets for ruleset filtering. Multiple form factors and up to 10 Gbps bandwidth provide high performance and flexibility for mission-critical deployments.

## XD Bridge ST In Action: Secure Real-Time Sensor Data Sharing for Joint Operations

The U.S. DoD needed to securely share real-time surveillance data (sensor/reconnaissance feeds) with joint operations partners while filtering classified details. Deploying Owl XD Bridge ST enabled policy-based filtering and near-real-time transfer. This allowed partners immediate access to actionable intelligence without exposure to sensitive information, enhancing situational awareness and reducing blue-on-blue conflict risks.



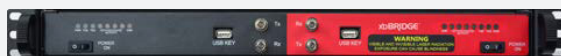
## How It Works

XD Bridge ST enables secure data transfer between networks of differing security levels through a rigorous, hardware-enforced process. Data originating from Domain 1 first enters a protocol adapter, which standardizes the incoming information for processing. The data then moves through a series of linear filtering pipelines, where it is inspected, sanitized, and validated against schemas such as XML, USMTF, or VMF, ensuring that only compliant and clean data proceeds. Once filtered, the data passes through one of XD Bridge ST's two built-in, NSA-approved optical data diodes, which provide hardware-enforced separation between domains. On the receiving side, the data undergoes another set of filters for additional inspection and validation before being repackaged by a protocol adapter and delivered to Domain 2.

### LOW SIDE SECURITY DOMAIN



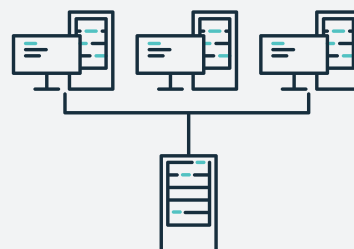
TCP, UDP DATA STREAMS  
XML, FIXED FORMAT



#### SR SENSOR DATA STREAMS

- Unclassified Data Feeds (NWS, FAA)
- Monitoring / Reporting Information
- Equipment Software Updates
- Off-board mission planning systems
- Fusion Workstations
- Coalition Info Sharing
- Maintenance Systems

### HIGH SIDE SECURITY DOMAIN



## Available Form Factors

XD Bridge ST is available in data center form factor, with support for bandwidth up to 10 Gbps. Technical specifications including operating conditions, power supply, storage conditions, mounting system, and network connectivity are available in the applicable form factor data sheets.

### Data Center – 1U

Up to 10 Gbps bandwidth



### Supported Protocols Include:

- UDP – Unicast/Multicast
- TCP – TLS
- up to 10 GbE

### Supported XML content (up to 100MB)

#### RAIN-compliant content filtering:

- DFDL (e.g., SYSLOG, Fixed Format Messaging)
- XML Schema (XSD)
- XML Stylesheet (XSLT)
- Complex Dirty Word Search (DWS)
- Also supports: XMLDSig and XProc filtering



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)

