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 connectivity standards

→ Software-enforced linear assured pipeline filtering

→ Multiple pipelines/dataflows enable simultaneous, independent data transfers

→ 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

→ CLIP enforced STIG compliant configuration

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 DFDL-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) data sharing 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.
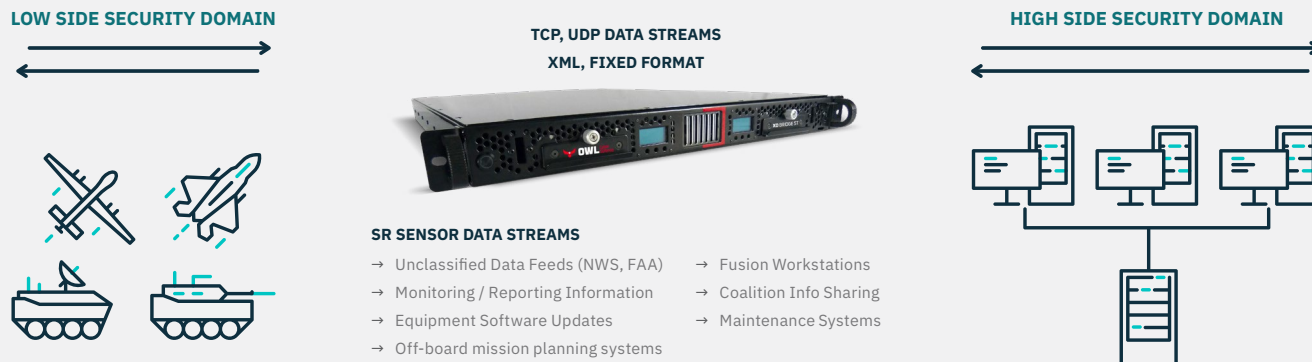
XD Bridge ST: Secure Real–Time Sensor Sharing for Joint Ops.

The U.S. DoD needed to securely share real-time surveillance data 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.

OWL CYBER DEFENSE
RAISE THE BAR
READY
FLYING ABOVE THE BAR
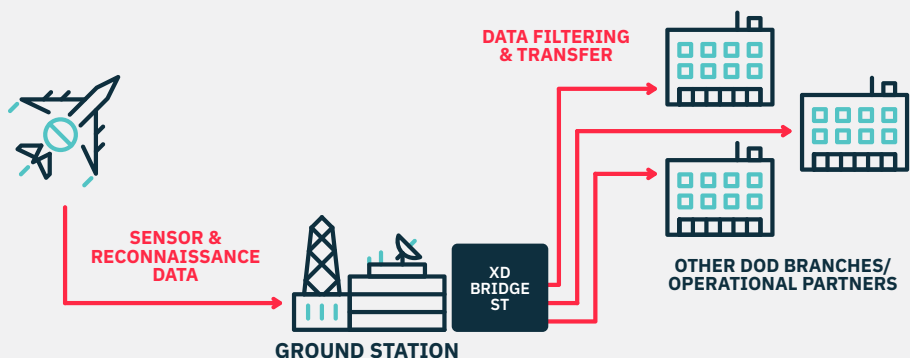
How It Works

XD Bridge ST uses hardware-enforced separation, linear pipeline filtering, and protocol adapters to securely transfer validated, structured and streaming data between networks, supporting formats like XML and VMF.

LOW SIDE SECURITY DOMAIN

TCP, UDP DATA STREAMS
XML, FIXED FORMAT

HIGH SIDE SECURITY DOMAIN

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

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™

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**