

Owl Rugged Cross Domain Solutions

Hardware-Agnostic. SWaP-Optimized. Mission-Ready.

Key Features

- Meets the U.S. Government's rigorous Raise the Bar standards for Cross Domain Solutions.
- Deployable across any compliant low-SWaP rugged platform.
- Flexible schema management via Apache Daffodil enables direct operator control over data flows.
- Validated for cross domain voice, FMV, XML, TAK/CoT, VoIP, and RoIP.

Supported Dataflows

- Voice, Voice over IP
- Radio over IP
- Full-Motion Video
- Structured Data
- Text Chat
- Team Awareness Kit
- Cursor-on-Target

Supported Platforms

- Curtiss-Wright PacStar 451, 453, 454
- Curtiss-Wright CHAMP-3U VPX*
- Anduril/Klas VoyagerVM 4.0*
- Anduril/Klas VoyagerGPU 4.0*
- Trenton Systems Dual Node Server*
- More coming soon

*Integration/testing in process

The Trusted CDS Standard: Now Deployable at the Edge

For nearly three decades, Owl Cyber Defense has been at the forefront of cross domain security, delivering secure, adaptable Cross Domain Solutions (CDS) to the most demanding defense and intelligence missions.

Building on that legacy, Owl Rugged Cross Domain Solutions extend Owl's proven software architecture, which features high-assurance data pipelines, an easy-to-use admin GUI, flexible schema management via Apache Daffodil, and data routing via Apache NiFi, to a growing portfolio of validated low-Size, Weight and Power (SWaP) rugged platforms. Owl Rugged CDSs have successfully validated support for cross-domain voice, full motion video (FMV), one-way Team Awareness Kit (TAK) and Cursor-on-Target (CoT), Voice over IP (VoIP), and Radio over IP (RoIP). The result: secure, real-time data exchange across domains of varying classification levels with direct operator control over data types and filter logic.

A Proven, Multi-Functional Software CDS

Successful missions hinge on punctual, reliable collaboration. V2CDS from Owl Cyber Defense delivers point-to-point voice, VTC, FMV, streaming audio, and XML/binary structured data across network security boundaries using existing infrastructure, with dedicated performance per connection. With numerous security and authentication features and an exclusive assured pipeline architecture for voice and video content filtering, V2CDS mitigates covert channels to an acceptable risk level while enabling real-time collaboration between secure or classified network domains. V2CDS also leverages DFDL-based structured data schemas and Apache MiNiFi to enable direct operator control over data flows.

Built for Today. Expanding for Tomorrow.

As mission requirements evolve, Owl Rugged Cross Domain Solutions expand to support them, keeping pace with the demands of modern forward-deployed operations. While Owl Rugged CDSs have been successfully validated on Curtiss-Wright's PacStar 400-Series hardware, further integrations are underway with Anduril/Klas, Trenton Systems, and additional Curtiss-Wright platforms.

In addition to expanded platform support, planned data type support includes Two-Way TAK Federation and FIRES/VMF messaging, AI/ML outputs and autonomous system data, drone integration and Uncrewed Aircraft System(s) (UAS) telemetry, and enterprise services configured for tactical use – extending high-assurance cross-domain capability to the data types and platforms that define tomorrow's battlefield.

A Growing Set of Validated Rugged Platforms: Powered by a Robust Partner Ecosystem

Our mission is to ensure Owl Rugged CDSs can be deployed across a range of low-SWaP rugged platforms, all tested against U.S. Government standards and proven to withstand the harsh conditions of deployed operations. By partnering with leading rugged hardware vendors, Owl Rugged CDSs deliver real-time, high-assurance data exchange across the most demanding environments, with the hardware flexibility to match any mission form factor. Further, by using a single validated integration template, missions can deploy any compliant low-SWaP platform with no re-certification required and no wasted hardware investment.



Curtiss-Wright PacStar 400 Series

PacStar's 400-Series hardware provides a compact, ruggedized foundation for tactical communications at the edge, a natural fit for forward-deployed cross-domain operations where space and power are at a premium.



Curtiss-Wright CHAMP-3U VPX*

Curtiss-Wright's CHAMP-3U VPX delivers high-performance processing in the widely adopted VPX form factor — optimized for airborne, ground, and shipboard integration across defense programs.



Trenton Systems Dual Node Server*

Trenton Systems' Dual Node Server brings high-density compute to deployed environments, purpose-built for U.S. defense programs. Its rugged design & domestic manufacturing pedigree align with requirements for supply chain integrity and operational durability.



KLAS VoyagerVM4.0 and VoyagerGPU4.0*

The VoyagerVM 4.0 delivers enterprise-grade virtualization in an ultra-compact, MIL-STD-tested form factor. The VoyagerGPU 4.0 extends that platform with NVIDIA Ampere GPU capability, enabling AI/ML and ISR workloads to cross classification boundaries at the tactical edge.

Ready to Secure Your Mission at the Edge?

Owl brings three decades of cross-domain security expertise to the platforms and environments where it's needed most. Additional platform integrations are currently underway today. Contact us for the latest validated hardware list and visit us online to learn how Owl can support your program.



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.

