

TACDS[®]-Vehicle Mount (VM) v3

Enabling Safe, Secure Information Sharing at the Tactical Edge



Lowest SWaP-C Tactical Hardware CDS
in Production Today

Meets NSA's Phase 1 Raise the Bar Requirements

Robust Security Architecture with
Hardware Enforced Domain Separation

Ruggedized for Tactical Platforms

Supports Dozens of Tactical Message Formats

Secret and Below Interoperability (SABI) certified

Cyber Guard - Protects Against Zero Day Attacks

Mission success in today's battlespace is dependent on the timely sharing of actionable information between commanders and warfighters on the front line. A Cross Domain Solution (CDS) ensures the exchange of reliable information while acting as a guard between different networks or enclaves, often at different security levels. A CDS can prevent data spillage as well as preventing malicious network traffic from crossing its boundary.

TACDS[®]-Vehicle Mount (VM) is General Dynamics Mission Systems' tactical cross domain product that enables information sharing across different security domains at the tactical edge. TACDS-VM provides a low cost, small Size, Weight, Power, and Cost (SWaP-C), tamper-resistant Cross Domain Solution (CDS) that is ideal for almost any vehicle, mobile shelter, ground sensor system, aircraft or unmanned vehicle system (UVS). TACDS-VM is ruggedized and has been proven in numerous military exercises, demonstrations and operations.

How does it work?

TACDS-VM works by executing programmable rule sets that filter information (messages), allowing individual messages or data fields within them to be selectively passed, blocked, or changed. This method ensures data security on both networks and eliminates the need for time consuming "man in the middle" screening of message exchanges.

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Ease of Use

- Raise the Bar Compliant
- Pluggable filter components for multiple message formats
- Raise the Bar compliant filters include: VMF, Configurable Binary, XML, SNMP, ICMP, MISD-C2 and SSL
- Additional filters planned or in development include: Full Motion Video, Link 16/JREAP-C, USMTF, FDMP, FTP and SMTP
- Custom filter components available upon request
- User programmable rule sets
- Autonomous; no operator required

Robust Security Architecture

- Hardware Enforced domain separation
- Separate high and low data ports
- Anti-tamper with device zeroization built-in
- Full audit logging for all system, security and message events
- Encrypted storage of rule sets and audit logs
- Secure boot and trusted platform verification upon power up
- Authenticated, role-based device administration through separate management port

Technical Specification

- **Physical Characteristics**
 - Dimensions: 7 in. x 4 in. x 1.75 in.
 - Weight: 1.75 lb.
 - Power: 12 - 33 VDC, 9 watts
- **Reliability**
 - Predicted MTBF >150,000 hours
- **Network Ports**
 - 10/100 Ethernet
 - RS-232
 - Management Port - USB/Com
- **Protocols Supported**
 - TCP, UDP
 - Unicast, Multicast, Broadcast
 - PPP, IGMP, ARP
 - IPv4, IPv6
- **Throughput and Latency**
 - Capable of data rates up to 35 MBps
 - Latency of 2ms pending message format
- **Environmental Specification**
 - Operational Temperature: -40°C to 70°C
 - Storage Temperature: -51°C to 85°C
 - Operational Altitude: 0 - 65,000 ft. above sea level
 - Mechanical Shock: 40g, 11 msec, each axis
 - Vibration: Tracked and Wheeled Vehicle, Fixed and Rotary Wing Aircraft, and Gunfire
 - Fluid Contaminations: Diesel, Hydraulic, Oil, Bleach
 - Relative Humidity: 10 - 95%
 - EMI/EMC: MIL-STD-461F, RE102, CE102, CS101, CS114, CS115, CS116, RS103
 - Power: 28 VDC, MIL-STD-1275E and MIL-STD-704F



GENERAL DYNAMICS

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