GENERAL DYNAMICS
Mission Systems

TACDS

Bringing Safe, Secure Information Sharing to the Tactical Edge

NSA certified for Secret and Below Interoperability (SABI)

On the UCDSMO Control List

Autonomous; no operator required

Robust security architecture

Small SWaP

TACDS is General Dynamics Mission Systems' tactical cross domain product that enables information sharing across different security domains in tactical vehicles, aircraft and dismounted solider systems. TACDS provides a low cost, small Size, Weight, and Power (SWaP), tamper-resistant cross domain solution that is ideal for almost any vehicle, mobile shelter, ground sensor system, aircraft or UAV. TACDS is ruggedized and has been proven in numerous military exercises, demonstrations and operations.

How does it work?

TACDS 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 automates the need for time consuming "man in the middle" screening of message exchanges.

What is a Cross Domain Solution?

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) acts as a guard between different network security levels, preventing classified data spillage from or cyber attacks on the classified portions of the network.

TACDS

Ease of Use

- Pluggable filter components for multiple message formats including:
  - VMF
  - XML
  - KLV-FMV
  - Binary
- 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
- FIPS 140-2 Level 4 anti-tamper with device zeroization built-in
- Full audit loging 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 and Maintainability
  - Predicted MTBF > 150,000 hours
  - Predicted MTTR 10 minutes
- Network Ports
  - 10/100 Ethernet
  - RS-232
  - Management Port - USB/Com
- Protocols Supported
  - TCP, UDP
  - Unicast, Multicast, Broadcast
  - PPP, IGMP, ARP
  - IPv4, IPv6
- Throughput/Latency
  - 12 Mbps for KLV Full Motion Video streams (4 SD or 2 HD 720p video streams)
  - Up to 400 messages per second for typical VMF messages
  - Typical latency < 10 msec for typical VMF messages
- Environmental Specification
  - Operational Temperature: -40°C to 70°C
  - Storage Temperature: -51°C to 85°C
  - Operational Altitude: 0 - 15,000 ft. above sea level
  - Mechanical Shock: 40g, 11 msec, each axis
  - Gunfire Shock: 5g, 20 msec, each axis
  - Ballistic Shock: 4,000g 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-1275D and MIL-STD-704F

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