

# TACDS®-Low Profile (LP) v3

*Enabling Secure Cross Domain Information Sharing at the Tactical Edge*



## TACDS®

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

Approved for Use between Security Domains,  
including Top Secret  $\rightleftharpoons$  Secret  
and Secret  $\rightleftharpoons$  Unclassified

Approved for Bi-Directional Use between Security  
Domains, including between Top Secret and Secret,  
or Secret and Unclassified

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®-Low Profile (LP) is General Dynamics Mission Systems' 1U form factor tactical cross domain product that enables information sharing across different security domains at the tactical edge. TACDS-LP provides a low cost, small Size, Weight, Power, and Cost (SWaP-C), tamper-resistant CDS that is ideal for rack mounted and embedded configurations in ships and wheeled/tracked vehicles, mobile command centers, ground sensor systems, aircraft or unmanned vehicle systems. In addition, TACDS-LP can be customized to fit in a molle pouch or pack for missions that require it to be soldier carried.

### How does it work?

TACDS-LP 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.

# TACDS®-Low Profile (LP) v3

## Ease of Use

- Raise the Bar Compliant
- Pluggable filter components for multiple message formats
- Raise the Bar compliant filters include: Configurable Binary with Simple Binary, PNC and UTAMS Front Ends; XML, VMF; SNMP; MISD-C; SSL
- Additional filters planned or in development include: Full Motion Video/Key-Length-Value (FMV/KLV); USMTF; FDMP; FTP; SMTP; Google Protobuf; STANAG 4586
- 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 with a combined power and management port
- 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 management port

## Professional Services

- Achieve **Confidence in your Digital World** through our architecture, integration and certification professional services, enabling you to rapidly enhance and achieve your mission.

## Technical Specification

- **Physical Characteristics**
  - Dimensions: 7.6 in. x 5 in. x 1.6 in
  - Fits 1U Rack Space.
  - 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**
  - Message type and size dependent
- **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



\*Molle pouch configuration requires custom back plate. Please ask for details.

## GENERAL DYNAMICS

Mission Systems

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# TACDS®-Vehicle Mount (VM) v3

*Enabling Safe, Secure Information Sharing at the Tactical Edge*



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and Secret  $\rightleftharpoons$  Unclassified

Approved for Bi-Directional Use between Security  
Domains, including between Top Secret and Secret,  
or Secret and Unclassified

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.



# TACDS®-Vehicle Mount (VM) v3

## Ease of Use

- Raise the Bar Compliant
- Pluggable filter components for multiple message formats
- Raise the Bar compliant filters include: Configurable Binary with Simple Binary, PNC and UTAMS Front Ends; XML, VMF; SNMP; MISD-C; SSL
- Additional filters planned or in development include: Full Motion Video/Key-Length-Value (FMV/KLV); USMTF; FDMP; FTP; SMTP; Google Protobuf; STANAG 4586
- 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

## Professional Services

- Achieve **Confidence in your Digital World** through our architecture, integration and certification professional services, enabling you to rapidly enhance and achieve your mission.

## 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**
  - Message type and size dependent
- **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
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  - 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



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