TACDS®

CROSS DOMAIN SOLUTIONS BRINGING SAFE + SECURE INFORMATION SHARING TO THE TACTICAL EDGE

GENERAL DYNAMICS
Mission Systems

General Dynamics Mission Systems, a business unit of General Dynamics, designs, manufactures and delivers communication and electronic warfare, networked command and control products and systems, and trusted operational hardware to customers within the U.S. Department of Defense, the intelligence community and federal and civilian agencies, and to international customers.

GENERAL DYNAMICS
Mission Systems

WWW.GDMISSIONSYSTEMS.COM

TACDS® IS A PART OF GENERAL DYNAMICS MISSION SYSTEMS' TACTICAL CROSS DOMAIN PRODUCT FAMILY THAT ENABLES INFORMATION SHARING ACROSS DIFFERENT SECURITY DOMAINS.

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 unmanned aerial vehicle (UAV) or soldier warn application. TACDS works by executing programmable rule sets that filter information, 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.

TACDS

Mission success in today's battlespace is dependent on the timely sharing of actionable information between commanders and warfighters on the front line. Soldiers need to trust that their equipment and software systems can securely transmit communications from the battlefield to their commanders in real time. The key enabling technology for these missions is a cross domain solution (CDS).

A CDS acts as a guard between different network security levels, preventing classified data spillage or cyber attacks on the network. A high-quality CDS secures the networks through an inspection of the data using a pre-specified security policy rule set. The CDS can then transfer the data items unchanged, sanitize individual items or block the data flow entirely, if necessary. A secure CDS validates that the data flow content is well-structured and contains only good values for each individual data item to reduce the risk of covert channels or the transfer of malware content.

Now that soldiers rely on mobile devices as an essential part of their warfighter kit, CDS must also extend down to the individual soldier. The mobile CDS must withstand harsh environmental conditions and the physical constraints of a soldier kit or crowded vehicle while also providing an effective cyber defense mechanism at the far reaches of the network.

AT THE TACTICAL EDGE, A CDS MUST NOT ONLY PROTECT SENSITIVE SYSTEMS FROM CYBER THREATS, BUT IT MUST ALSO PROTECT ITSELF FROM COMPROMISE IN THE EVENT THAT IT FALLS INTO THE HANDS OF AN ADVERSARY. THE SOLUTION TO PROTECT THE MILITARY FROM ZERO-DAY ATTACKS IS TACDS, TACTICAL CROSS DOMAIN SOLUTION (CDS) PRODUCT LINE.

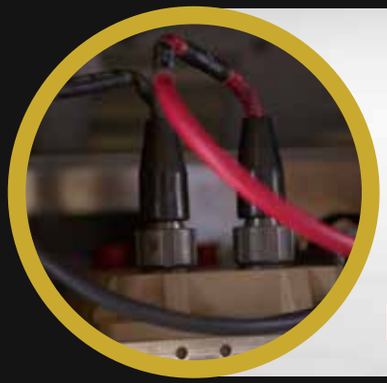
TACDS is a part of General Dynamics Mission Systems cyber security product line, enhancing General Dynamics' ability to deliver cyber-secure products that change the way threats are defeated across a diversified global market. General Dynamics has been at the cutting edge of cyber security and information assurance for over 50 years. Our industry-leading family of cyber security products protect information and networks against persistent threats, defending classified information as it moves throughout cyberspace from land, air, sea and space missions.

WITH ITS BROAD CAPABILITIES AND TACTICAL FOCUS, THE GENERAL DYNAMICS MISSION SYSTEMS TACDS PRODUCT FAMILY ADDRESSES THE DIVERSE TACTICAL REQUIREMENTS OF TODAY'S MODERN BATTLEFIELD.

TACDS can process numerous mission-enabling tactical data and message formats to provide instant, secure access to real-time information for all warfighters on the battlefield. With its broad capabilities, TACDS is well-suited for diverse applications on the modern battlefield.

TACDS

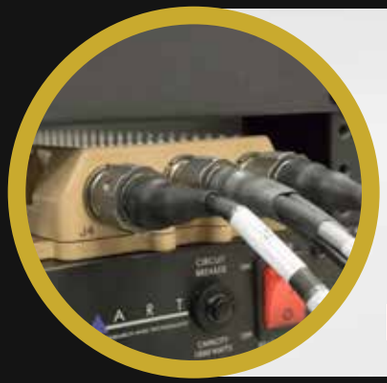
The TACDS product family is listed on the National Cross Domain Services Management Office (NCDSMO) Baseline List and has multiple Secret and Below Interoperability (SABI) certifications. The product family is specifically designed for deployment in tactical environments.



TACDS-VEHICLE MOUNTED (VM)

+ Widely deployed vehicle-mount form factor
+ Full military qualification history
+ Separate power, management, high and low connectors
+ Available in TACDS v2.1 or v3 configurations

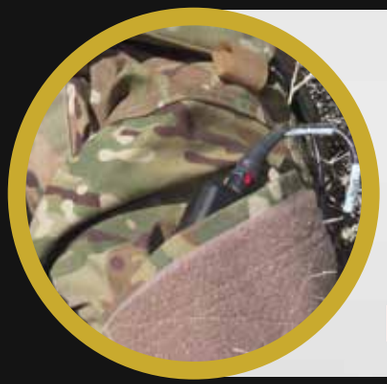
SIZE
7" x 4" x 1.75"
WEIGHT
1.75lb
POWER
12-33 VDC, 9 watts
INTERFACES
10/100 Ethernet or RS-232



TACDS-LOW PROFILE (LP)

+ Fits in a 1U rack height
+ Identical software, firmware, rule sets and mounting profile to TACDS-VM
+ Combined power/management connector, separate high and low connectors
+ Available in TACDS v2.1 or v3 configurations

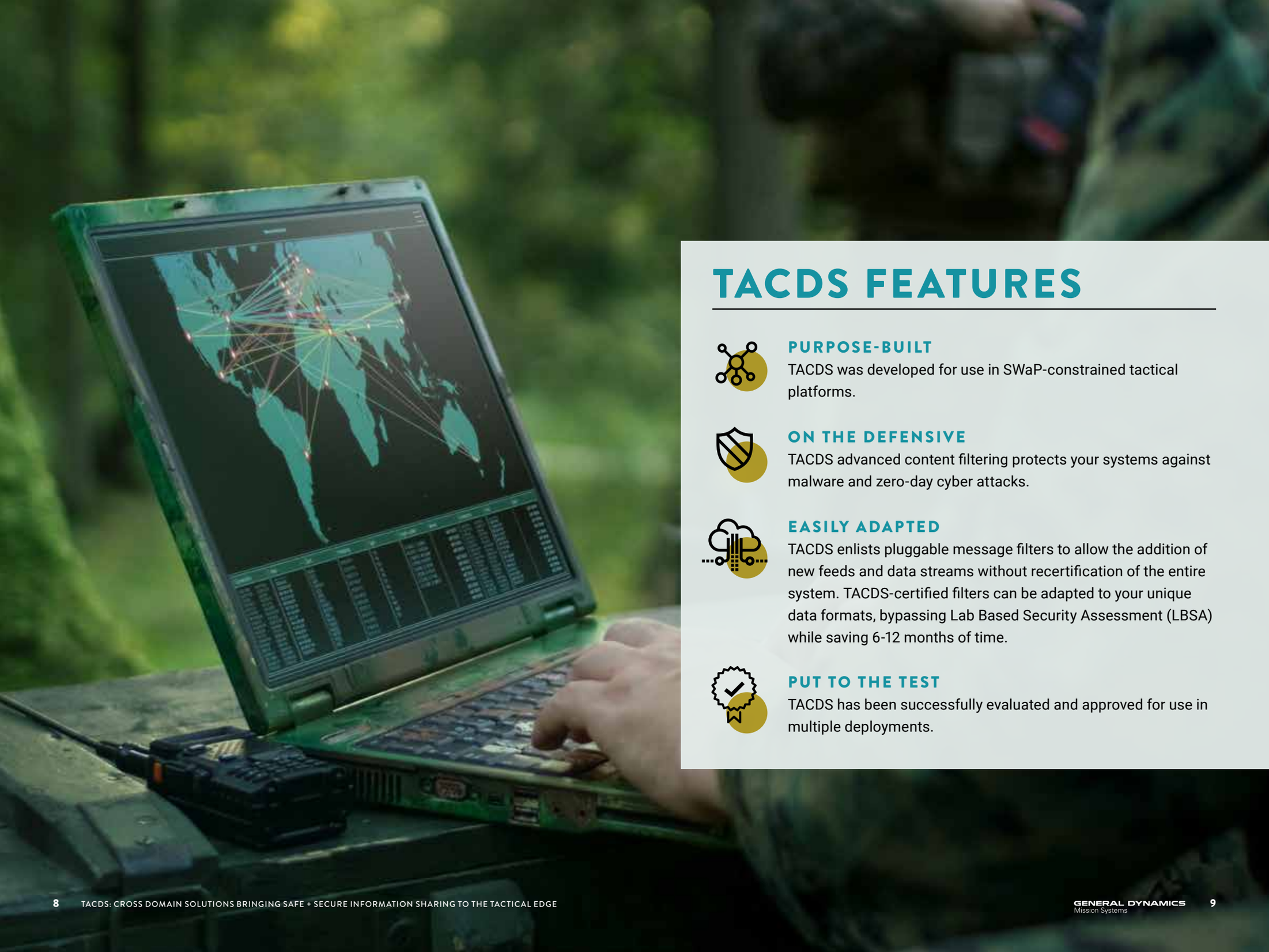
SIZE
7.6" x 5" x 1.6"
WEIGHT
1.75lb
POWER
12-33 VDC, 9 watts
INTERFACES
10/100 Ethernet or RS-232



TACDS-MOBILE (M)

+ Ultra-low power and ultra-lightweight form factor designed for dismounted soldier environment
+ USB data interfaces and built-in USB expansion hub for soldier kit compatibility
+ Built off of TACDS v3 common hardware platform
+ Software, firmware and rule set compatible with TACDS v3 configuration

SIZE
4.1" x 3.1" x 0.8"
WEIGHT
8oz
POWER
5-16 VDC, 5W
INTERFACES
USB2 or GbE



TACDS FEATURES

PURPOSE-BUILT

TACDS was developed for use in SWaP-constrained tactical platforms.

ON THE DEFENSIVE

TACDS advanced content filtering protects your systems against malware and zero-day cyber attacks.

EASILY ADAPTED

TACDS enlists pluggable message filters to allow the addition of new feeds and data streams without recertification of the entire system. TACDS-certified filters can be adapted to your unique data formats, bypassing Lab Based Security Assessment (LBSA) while saving 6-12 months of time.

PUT TO THE TEST

TACDS has been successfully evaluated and approved for use in multiple deployments.

TACDS APPLICATIONS

CONDITION-BASED MAINTENANCE

Keeping near real-time track of the health and usage status of the combat vehicles greatly reduces the size and cost of the logistics footprint. TACDS allows data from unclassified subsystems to be shared across the classified tactical network for a more comprehensive and accurate view of the fighting effectiveness of the vehicle and its appropriate and accurate resupply/ repair activities.

USE CASES:

+ **Vehicle Health & Status Monitoring**
+ **Remote Maintenance & Vehicle Diagnostics**
+ **Fuel & Ammunition Level Monitoring**

REAL-TIME VIDEO + IMAGERY

Sharing live video among all levels of a combat force is a force multiplier. TACDS can securely distribute video and voice at the forward edge of the battlefield. Soldiers can remotely control sensors and other intelligence, reconnaissance and surveillance (ISR) assets and review them in real time while maintaining a strong cyber defense. This results in more timely assessments of intelligence that can impact the outcome of an engagement or more secure force protection posture for a perimeter.

USE CASES:

- **UAV Video**
- **Unmanned Ground Sensors**
- **Remote Sensor Video**
- **Every Solider Is A Sensor**
- **Video-Mounted Cameras**
- **Soldier-Carried Cameras**

COALITION INTEROPERABILITY

Information sharing between coalition partners is sometimes limited due to the incompatibilities between individual nations' networks and communications as well as the sensitivities of the data within each country's networks. TACDS addresses this with a NATO STANAG 4677-compliant Coalition Interoperability Gateway that translates between a nation's C2/SA network and a STANAG 4677 common messaging format/protocol while also applying rule-based filtering of the data being shared. For the United States, that means translation between VMF and STANAG 4677 messages.

USE CASES:

- **STANAG 4677**
- **Real-Time C2 & SA**
- **ISR Video Collaboration**

SITUATIONAL AWARENESS

The ability to exchange tactical situational awareness (SA) and command and control (C2) data in real time greatly enhances mission success on the battlefield. Providing warfighters access to mission-critical data improves the warfighters' and commanders' comprehension of the battle space, decreases decision cycles, ensures timely and effective support and reduces the chance of fratricide. When TACDS is installed in vehicles or carried by dismounts, it maintains network cyber security while allowing information flow bi-directionally between combatants and commanders.

USE CASES:

- **STANAG 4677**
- **Real-Time C2 & SA**
- **ISR Video Collaboration**

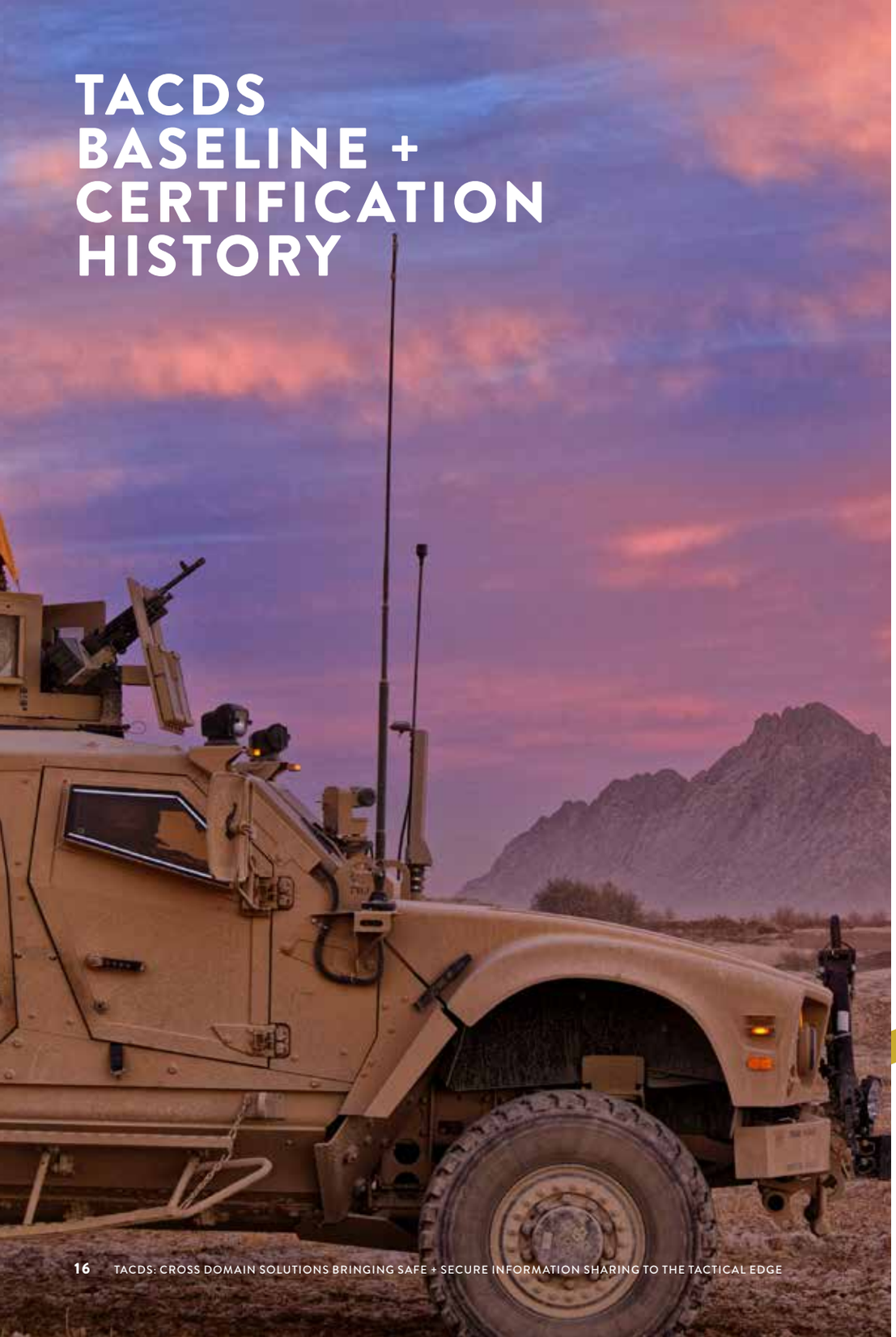
UNMANNED VEHICLE CONTROL

Unmanned Vehicle Systems (UVS) have become an integral part of the modern battlefield. TACDS supports UVS deployment by controlling transmitted information and preventing classified data from spilling to the unclassified side while also protecting against hostile takeover attempts or corruption of the platform's sensitive subsystems from malware.

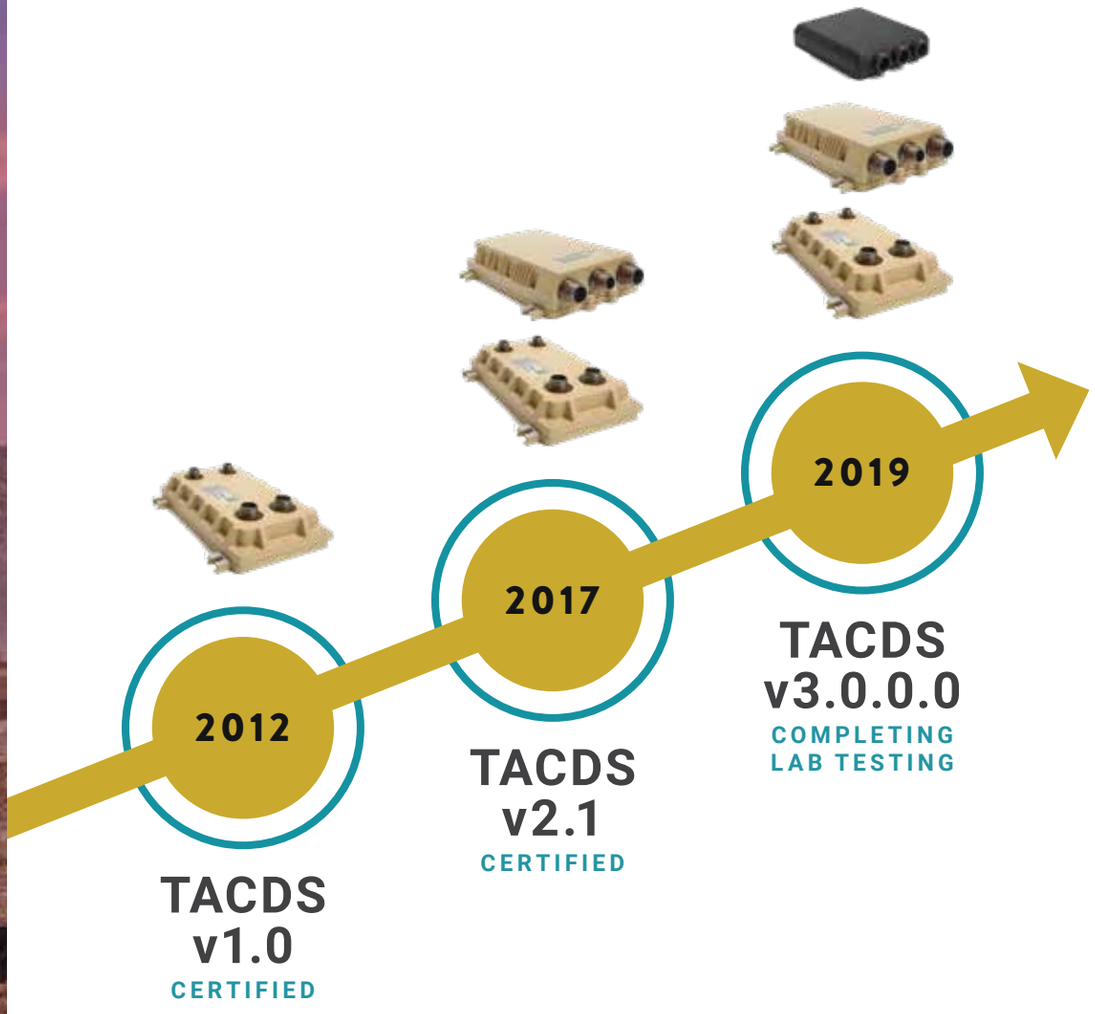
USE CASES:

- **STANAG 4586 – UAV Platform & Payload Control**
- **Cursor On Target (COT)**
- **STANAG 3277 – Air Reconnaissance**
- **Text-Based Sensor Cueing Messages**

TACDS BASELINE + CERTIFICATION HISTORY



TACDS WAS ADDED TO THE NATIONAL CROSS DOMAIN SERVICES MANAGEMENT OFFICE (NCDSMO) BASELINE LIST OF VALIDATED SOLUTIONS IN 2012 AND 2017, AND IS ACCREDITED FOR SECRET AND BELOW INTEROPERABILITY (SABI).



NOTES

OUR VISION

REINVENT THE BOUNDS OF INNOVATION TO ADVANCE OUR CUSTOMERS' MISSIONS.

OUR MISSION

DISCOVER NEW WAYS TO RAPIDLY DELIVER A FULL SPECTRUM OF MISSION-CRITICAL SOLUTIONS BY PARTNERING WITH OUR CUSTOMERS, TEAMMATES, SUPPLIERS AND COMMUNITIES.

GENERAL DYNAMICS
Mission Systems

CONTACT US

If you have any questions, please contact us by email or phone.

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Phone | 1-877-449-0600

If you want to learn more information about General Dynamics Mission Systems and TACDS please visit: **GDMissionSystems.com/TACDS**