

# TACLANE<sup>®</sup>-1G (KG-175G) Encryptor

*The First Cyber Defense-Capable HAIPE<sup>®</sup> at Gigabit Speeds*



Cyber Defense & VLAN Agile Capable

NSA Certified for Top Secret and Below

Low Size, Weight and Power (SWaP)

Simultaneous HAIPE<sup>®</sup> / IPMEIR

## Overview

Networks today carry more traffic, are connected to more devices and are under siege from cyber attacks more than ever before. In response to these evolving cyber security threats, General Dynamics has developed a smaller, more power efficient high speed encryptor. The TACLANE-1G is capable of accepting additional software options such as agile VLAN and TACLANE Trusted Sensor Software to increase network efficiency and situational awareness.

## Network Security – Core to Edge

Increased end user processing speeds at the edge of the network (such as your desktop), drive the need for increased throughput at the network core or backbone. TACLANE-1G's robust encryption throughput and small size, provides a flexible solution for either application.

## Features at a Glance

- Simultaneous HAIPE v4.1 and IPMEIR 1.0 compliant
- Simultaneous Suite A/B without user intervention
- 2 Gb/s aggregate throughput
- MIL-STD ruggedized
- Low latency
- VLAN capable to support load balancing and redundant fail over
- Cyber defense-capable to support trusted packet sensing and reporting
- Suite B IPMEIR providing interoperability with commercial encryptors
- Supported by GEM X and GEM One remote management
- Familiar TACLANE user interface
- Rack mountable (2 across in standard 19" rack)
- Field tamper recoverable
- Supports Exclusion Keys
- Safe Keying Features (CDGSK and KMI OTNK\*)
- ACC Upgradeable\*

*\*General Dynamics is developing the KMI OTNK capability and ACC compliance to be available via software upgrade.*

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## Optional Features

### Agile Virtual Local Area Network (VLAN)

Enables use of HAIPE security features on Layer 2 VLAN tagged / Non-IP Ethernet traffic while simultaneously supporting standard HAIPE encryption of IP traffic. Benefits include:

- Elimination of GRE Tunnels
- Redundancy
- Load Balancing

### TACLANE Trusted Sensor Software:

The new Deep Packet Inspection (DPI) in-line sensing capability enables networks to filter for malicious data within the traffic. This in-depth inspection aids network administrators in understanding the overall health of the system. DPI filtering gives administrators the ability to tune their network filtering based on either open standard or Government classified rule sets and to issue Type 1 encrypted alerts to monitor any network point.

## Technical Specifications

- **Dimensions:**
  - 1.71" (1U) H x 8.6" W x 12.5" D
  - 19" Rack Mountable, 2 Across, 1U
- **Weight:** < 8 lbs
- **Power:** < 40 Watts
- **Performance:**
  - 2 Gb/s IP Throughput (Aggregate)
  - Supports Jumbo Packets
  - Supports 4096, duplex Security Associations
  - Supports 16,000, Remote Networks/Hosts
- **Environmental**
  - Operating Temp: -40°C to +52°C
  - Storage Temp: -40°C to +71°C
  - Humidity: 95% RH, Non-condensing, +30°C to +60°C
  - Shock/Vibration:
    - 20g shock, 11ms
    - Transportation Vibration
    - General Vibration, Category 4
  - Altitude:
    - Storage/transit: 1,500 ft, below sea level to 60,000 ft, above sea level
    - Operational: 1,500 ft, below sea level to 50,000 ft, above sea level
  - Sand: 20 mph winds
  - Dust: 40 mph winds
  - Rain: Drip, Flow Rate 280 liters/meter<sup>2</sup>/hour

- **EMI / TEMPEST:** In accordance with NSTISSAM TEMPEST/1-92 Level 1
- **Reliability:**
  - 250,000 Hrs Mean Time Between Failure (MTBF)
- **Interfaces: PT and CT Data Ports:**
  - 10/100/1000 Base-T (RJ-45)
  - 1000 Base-SX (LC) Standard KG-175GM (Multi-Mode optics)
  - 1000 Base-LX (LC) Optional KG-175GS (Single Mode optics, Intermediate Range)
- **Console:** 10/100 Base-T (RJ-45)
- **Standards Compliance:**
  - HAIPE v4.1
  - Crypto Modernization Compliant
  - IPMEIR v1.0
- **Management**
  - Perform locally via connected front console, or remote via CT or PT interface
- **Local Management**
  - Web-based using standard browser
  - Retains TACLANE menu structure and commands
- **Keying**
  - Supports Exclusion Key, HAIPE to HAIPE Keying, APPK/PPK, FIREFLY, Enhanced FIREFLY, Internet Key Exchange (IKE) v1/v2, Unclassified Device Generated Shared Key (DGSK)
  - Software upgradeable to support KMI OTNK, Classified DGSK, ACC
- **Network Protocols**
  - Ethernet
  - IPv4/IPv6 Dual Stack
  - Layer 2 Frame Encapsulation (VLAN Mode)
  - IPv6 neighbor discovery and address resolution
  - Address Resolution Protocol (ARP)
  - Internet Group Management Protocol (IGMP) (v1/v2/v3) Queries/Reports
  - Multicast Listener Discovery (v1/v2)
  - Internet Control Message Protocol (ICMP)
  - Path Maximum Transmission Unit (PMTU)
  - RIP Listener/Speaker
- **NAT Support**
  - NAT-T Automated Security Association Extension
- **Reachability**
  - Peer HAIPE Reachability Detection (PHRD)
  - Peer Destination Unreachability Notification (PDUN)

- **Discovery**
  - Generic Discovery Client
  - Static Routing
  - IM PEPD
  - HAIPE IS Secure Dynamic Discovery
- **Foreign Interoperability**
  - Algorithm Agile – Simultaneous Suite A/B/AES EFF/IPMEIR without manual intervention P<sup>3</sup>, S<sup>2</sup>, Q<sup>2</sup>

## Ease of Use and Management Tools

- **GEM X and GEM One Encryptor Management**
  - Manage a network of TACLANE encryptors remotely from a central location
- **Generic Discovery Server (GDS)**
  - Automatically discovers HAIPE devices
- **Quick Start Wizard**
  - Assists users with the initial configuration of the TACLANE device
- **TACLANE Configuration Tool**
  - Assists users with the software upgrade and configuration process

## Interoperability

Interoperable with all HAIPE compliant encryptors

## Ordering

- Available to order through IDIQ & General Dynamics
- **NSN #**
  - 5810-01-619-6583 (Multi-Mode)
  - 5810-01-628-7468 (Single Mode)

## GENERAL DYNAMICS Mission Systems

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D-TAC1G-09-0217

