GENERAL DYNAMICS
Mission Systems

TACLANE®-10G Encryptor (KG-175X)

High-Speed Enterprise Security Solution for High-Bandwidth Applications

Optional Agile VLAN & TACLANE Trusted Sensor Capabilities

HAIPE® v4.1 & IPMEIR 1.0 Compliant

NSA Certified for Top Secret/SCI and Below

Familiar TACLANE Ease-of-use

GEM™ One and GEM X Remote Management Capability

Overview

Utilizing the proven, reliable TACLANE cryptographic core technology, the new TACLANE-10G Encryptor is the only high speed HAIPE encryptor to offer simultaneous IP and Ethernet capabilities. Providing end-to-end 10 Gb/s throughput speed, the TACLANE-10G secures information classified Top Secret SCI and below over government and commercial networks. The TACLANE-10G is capable of accepting additional software to improve network efficiency and sensing capabilities.

Applications

Ideal for high-bandwidth applications, the TACLANE-10G can be used to protect cloud infrastructures and secure large image, data and video files, such as:

- Streaming high-definition video
- High-end enterprise database distribution
- Intelligence, Surveillance and Reconnaissance (ISR) data sharing

Features at a Glance

- HAIPE v4.1 / IPMEIR 1.0 compliant
- 20 Gb/s aggregate throughput
- Designed to secure information classified Top Secret/SCI and below
- Low latency
- Scalable IP security for cloud computing
- Optional Agile VLAN/Layer 2 Passthrough feature provides network flexibility, bandwidth efficiency and redundancy
- Optional Trusted Sensor software will provide packet inspection and monitoring
- Simultaneous Suite A/B, HAIPE/IPMEIR, & HAIPE/Layer 2 Ethernet non-IP traffic
- GEM X and GEM One Remote Management
- Rack mountable
- Field tamper recoverable
- Crypto Mod compliant
- Dual/redundant power supplies
- Supports Exclusion Keys
- Safe Keying Features (CDGSK and KMI OTNK*)
- ACC Upgradeable*

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

Network Encryption — Core to Edge

From 10 Mb/s to 10 Gb/s, the TACLANE family of network encryptors continues to grow with your expanding network needs. TACLANE-10G is the next-generation high-speed security solution expanding throughput performance to 10 Gb/s while maintaining the proven TACLANE security, reliability and ease of use.

Optional Feature Enhancement:

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
- Bandwidth efficiency
- Redundancy
- Load balancing

Optional Future Enhancement

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 will aid network administrators in understanding the overall health of the system.

Trusted cyber sensing will provide greater Defense-in-Depth and will give administrators the ability to fine 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**
  - 3.5" H x 19" W x 23" D
  - 2U (EIA Standard)

- **Weight**
  - <32 lbs

- **Power**
  - Redundant Internal Power Supplies
  - 210 Watts (Typical)
  - Lithium 3.6V for Configuration Retention

- **Performance**
  - 20 Gb/s Throughput (Aggregate)
  - Support for Jumbo Frames
  - 4096 Duplex Security Associations (SA)
  - 16,000 Simultaneous Destination Hosts

- **Environmental**
  - Operating Temp: 0°C to 50°C (32°F to 122°F)
  - Storage Temp: -41°C to 71°C (41°F to 160°F)
  - Humidity: 90% RH, Convection Cooled: 10-90% (non-condensing over operating temperature range)

- **EMI/TEMPEST**
  - NSTISAM TEMPEST/1-92 Level 1
  - Electromagnetic Interference (EMI) MIL-STD 461F

- **Interfaces**
  - TACLANE HMI via 10/100 RJ45 Ethernet
  - SNMPv3 via GEM X™ Encryptor Manager

- **Ethernet**
  - Primary PT and CT interfaces via operator replaceable Industry Standard SFP+ Modules
  - 2 SR transceivers and 2 fiber optic cables included
  - SFP+ LR provides up to 10km with single mode fiber

- **Standards Compliance**
  - HAIPE v4.1
  - IPMEIR v1.1
  - Crypto Modernization Compliant

- **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 v1.3.5 Secure Dynamic Discovery

- **Interoperability**
  - Interoperable with all HAIPE compliant encryptors

- **Foreign Interoperability**
  - Algorithm Agile – Simultaneous Suite A/B/AES EFF/IPMEIR without manual intervention P^3, S^2, Q^2

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

Ordering

- Available to order through IDIQ & General Dynamics
- NSN # 5810-01-645-5553

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