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
- 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
- 40Gbps 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
  - NSN 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 remotely 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, FIRELY, Enhanced FIRELY, 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-F Automated Security Association Extension
- Reachability
  - Peer HAIPE Reachability Detection (PHRD)
  - Peer Destination Unreachability Notification (PDUN)
- Discovery
  - Generic Discovery Client
  - Static Routing
  - IP PEO
  - 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
d
- 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

TACLANE-10G Encryptor (KG-175X)