

# TACLANE®-Micro (KG-175D)

*The World's Most Widely Deployed HAIPE® Encryptor*

Remotely Managed by: **GEM X**



Front View



Rear View

Seamless Foreign Interoperability

Small Size, Lightweight (4.25 lbs), and Low Power

Remote HAIPE to HAIPE Keying

Optional Agile VLAN Software

## Overview

TACLANE-Micro is the most widely deployed High Assurance IP Encryptor (HAIPE) and Crypto Modernization Compliant encryptor. The Micro is field proven and reliable to withstand both tactical and strategic environments. Optimized for both tactical and strategic environments, the TACLANE-Micro is high speed, compact and mobile.

## Features at a Glance

- Simultaneous HAIPE v4.1 and IPMEIR1.0 compliant
- IPv4/IPv6 dual stack
- 200 Mb/s aggregate throughput
- Foreign interoperable
- Suite A/Suite B/IPMEIR algorithm agility (per packet basis) - no manual intervention required
- HAIPE to HAIPE keying – keeps warfighters out of harm's way
- Supports Exclusion Keys
- Field tamper recoverable
- Both copper & fiber interfaces
- Remote zeroize
- Low power (<22 watts)
- Low latency
- NAT-T extension enables users to securely communicate where Network Address Translation is present (hotel rooms or remote offices)
- GEM™ X and GEM One Remote Management
- Web-based user interface makes configuration and use easier
- 1U small form factor – rack mountable
- Supernet static route support
- External power supply (included with unit)
- Safe Keying Features (CDGSK and KMI OTNK\*)
- ACC Upgradeable\*
- Free 24/7 technical help desk support

## 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

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

# TACLANE-Micro (KG-175D)

## TECHNICAL SPECIFICATIONS

(Based on Hv4.1)

### COMPACT SIZE

- 1U (EIA Standard)
- 1.6"H X 5.5"W x 10.85"D
- Up to 3 units mounted side-by-side in 19" rack
- Weight: 4.25 lbs

### POWER

- <22 Watts
- Lithium 3.6V for extreme environments
- User Replaceable Battery
- Standard Alkaline AA Battery for benign environments
- Passively cooled via natural convection
- MIL-STD 461E EMI Compliant power supply included

### SPEED

- Full bandwidth, 200 Mb/s aggregate
- 10/100 Mb/s auto negotiation (full/half duplex)

### STANDARD COMPLIANCE

- Hv4.1
- Suite A/ Suite B / IPMEIR
- Crypto Modernization

### INTERFACES

- Cipher-Text (CT) and Plain-Text (PT)
- 10/100 Base-T electrical, RJ-45 connector
- 100 FX, 1300nm Optical short reach (Multimode Only)
- Standard DS-101 Key Fill Port
- Key Fill Bus Capability 1
- Primary Power 12VDC
- Remote zeroize input

### ENVIRONMENTAL

- Operating Temperature: -40°C to 60°C (-40°F to 140°F)
- Storage Temperature: -40°C to 71°C (-40°F to 160°F)
- Humidity: 95% non-condensing
- MIL-STD 810 (Sand/Dust, Rain, Altitude, Shock, Vibration)
- MIL-STD 167-1 (Vibration)
- MIL-STD 901D (Navy Hammer Shock)
- MIL-STD 461E (Electromagnetic Compatibility)

### TEMPEST

- In accordance with NSTISSAM TEMPEST/1-92 Level 1

### ALTITUDE

- Storage: Sea level up to 60,000 ft
- Operating: Sea level up to 50,000 ft

### RELIABILITY

- 320,000 Hrs Mean Time Between Failure (Ground fixed benign)

### SECURITY ASSOCIATIONS (SAs)

- Supports large networks with 512 fully meshed nodes simultaneously
- Existing connections replaced as needed
- 8,000 Hosts allocated over active security associations

### KEYS

- 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

### LOW LATENCY

- Ideal for time delay critical applications (VoIP and satellite)
- Does not exceed 59 microseconds for <= 46 byte packet (IPv4)
- Does not exceed 73 microseconds for <= 64 byte packet (IPv6)

### 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

### OPTIONAL REMOTE MANAGEMENT

- Standards-based SNMP v3
- HAIPE IS, Standard and Enterprise MIBs supported
- Up to 12 simultaneous remote managers
- Over the Network Software Upgrade Reprogram algorithms, protocols and interfaces

### NETWORK PROTOCOLS

- Ethernet
- IPv4/IPv6 Dual Stack
- 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

### CERTIFICATIONS

- TACLANE-Micro is NSA Certified to protect information classified Top Secret/SCI and below.

### INTEROPERABILITY

- Interoperable with all HAIPE compliant encryptors

### 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

## Ordering

- Available to order through IDIQ & General Dynamics
- NSN # 5810-01-547-4520

## GENERAL DYNAMICS

Mission Systems

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Phone: 781-410-9400 • Toll-free: 888-Type1-4-U (888-897-3148) • Fax: 781-410-9863

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