

# TACLANE®-Nano Encryptor (KG-175N)

*Smallest, Lightest, Certified HAIPE® For Secure Tactical Communications*



Lowest Size, Weight, Power and Cost (SWaP-C)  
HAIPE Encryptor

NSA Certified for Top Secret/SCI and below

Fastest Small Form Factor Encryptor; 200 Mb/s Aggregate  
Throughput

Compact, Ruggedized for Mobile,  
Dismounted and Kitted Applications

Enhanced Features for Networking, SATCOM and  
Unattended Operations

GEM® One Remote Management

## Overview

Extremely compact and mobile, the new TACLANE-Nano provides end-to-end HAIPE encryption in the smallest, lightest and lowest power configuration than any HAIPE device available today. From battlefield to briefcase, the TACLANE-Nano is ruggedized to withstand the rigors of any mobile environment including tactical, mobile applications such as telework, dismounted deployments, and integration into mobile communications kits. The TACLANE-Nano is designed with the latest in crypto modernization technology to provide protection for information classified TS/SCI and below at 200 Mb/s aggregate throughput.

## Key Features

- NSA certified to protect information classified TS/SCI and Below
- Simultaneous HAIPE v4.2.5 and IPMEIR 1.0 compliant
- Simultaneous Suite A/B without user intervention
- Supports asymmetric traffic flows of 200 Mb/s aggregate throughput
- Small size (1.2"H x 3.5"W x 2.25"D)
- Low power (5 Watts typical)
- Hot swappable/redundant power from USB or Power over Ethernet (POE)
- Embedded Agile TCP Performance Enhancing Proxy (PEP) for disadvantaged networks
- Supports Agile VLAN feature for Layer 2/Layer 3 agility and advanced networking
- Render Useless Zeroize (RUZ) feature for unattended operations
- Safe keying features including Classified/Unclassified Device Generated Shared Key (DGSK) and Exclusion Keys (EKs)
- ACC and KMI OTNK compliant
- IPv4/6 Dual Stack
- MIL-STD-810G ruggedized / MIL-STD-461F EMI compliant
- Supported by GEM One Remote Encryptor Manager



Mobile Communications  
Telework, Travel, Field Agent,  
Covert Ops, Flyaway kits.

Dismounted, Tactical,  
Forward Deployed



Unmanned Systems and  
Intelligence, Surveillance,  
Reconnaissance (ISR) OPs.

Platforms



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## Improved Performance over Disadvantaged Networks

To increase network availability and accelerate performance in disadvantaged networks, the TACLANE-Nano includes the Agile Performance Enhancing Proxy (PEP) software feature. The TACLANE Agile PEP function works by hosting a specialized version of TCP resulting in better performance than an end-to-end standard TCP. Integrating this technology eliminates the need for external PEP devices. When the Agile PEP function is enabled, it uniquely provides simultaneous support for concurrent TACLANE Agile PEP, Standard TCP connections and all HAIPE traffic types on a per packet basis.

## Unattended Operations

The Render Useless Zeroize (RUZ) feature provides a fast, simple way to make the TACLANE inoperable and inaccessible by eliminating Critical Security Parameters like cryptographic keys and algorithms. Once the device is rendered useless, adversaries cannot access information, reconfigure or operate the device. This is ideal for unattended operations and other high risk, hostile environments that are susceptible to overrun or unplanned leave behind.

## Easy to Use, Deploy and Manage

The intuitive and familiar common TACLANE HMI can be used for local device configuration and management eliminating additional training for current TACLANE users. GEM One Encryptor Manager supports remote configuration and management to simplify operation and enable centralized secure management of all of your TACLANE devices on the network.

## Applications

The TACLANE-Nano supports the bandwidth needed to support voice, video and data applications (such as real time video and data analytics) in mobile environments including:

- Mobile Communications - Telework, Travel, Field Agent, Flyaway Kits
- Dismounted, Tactical Forward Deployed
- Unmanned Systems and Intelligence, Surveillance, Reconnaissance (ISR) Operations

- Covert Operations
- Embedment into Deployable Communication Kits and Platforms

## Certifications

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

## Technical Specifications

- **Size**
  - 1.2"H x 3.5"W x 2.25"D
  - 19" Rack mountable, 4 Across, 1U
  - Weight: <8 Oz
- **Power**
  - 5 Watts (Typical)
  - Battery: Coin-Cell Battery (CR2450N or CR2450HR)
  - MIL-STD 461F compliant USB power supply
- **Performance**
  - Supports asymmetric traffic flow of 200 Mb/s aggregate throughput
- **Reliability**
  - 229,000 Hrs Mean Time Between Failure (MTBF)
- **Environment**
  - MIL-STD-810G compliant
  - Operating Temp: -40° to +60°C
  - Storage Temp: -40°C to +85°C
  - Humidity: 95% RH, Non-condensing
  - Altitude:
    - Operational: 1,500 ft below sea level to 50,000 ft above sea level
    - Storage/transit: 1,500 ft below sea level to 70,000 ft above sea level
  - Shock/Vibration: 40g shock, 11ms Transportation Vibration, General Vibration, Category 4
  - Sand: 40 mph winds
  - Dust: 20 mph winds
  - Rain: Drip, Flow Rate 280 liters/meter<sup>2</sup>/hour
  - Drop Test: 48" High Drop
  - EMI / TEMPEST: In accordance with NSTISSAM TEMPEST/1-92 Level 1
- **Standards Compliance**
  - HAIPE v4.2.5
  - ACC and KMI OTNK
  - HAIPE VLAN
  - IPMEIR v1.0
- **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>

- **Power Options**
  - Supports three hot-swappable power options including front/rear panel USB-C connectors and Ciphertext RJ45 Power Over Ethernet (PoE)
- **Warranty**
  - 3 year hardware and software warranty
- **Keying:**
  - Supports HAIPE to HAIPE Keying, APPK/ PPK, FIREFLY, Enhanced FIREFLY, Internet Key Exchange (IKE) v1/v2, Unclassified/Classified Device Generated Shared Key (DGSK), ACC, OTNK (KMI enabled)
- **Networking Features & Protocols**
  - Protocols Supported: TCP, UDP, IPv4/IPv6 Dual Stack, ICMP, IGMP, ARP, DHCP, MLD, TFTP, HTTPS, HTTP, RIP, RIPv2, RIPng, NDP, IKE, IKEv2, HAIPE, IPMEIR, OTNK, CMS, XML, non IP with VLAN, TCP PEP
  - Networking Features: Dynamic IP addressing, dynamic key management (key distribution through H-to-H key transfer and KMI enabled, red address confidentiality and selectable dynamic discovery via Generic Discovery/Secure Dynamic Discovery or IMPEPD, dynamic routing updates through RIP and discovery protocols, support for route of last resort, support for VLAN and layer 2 traffic
  - Management: Full SNMPv3 management and HTTP browser based management, GEM One Manager
  - Multicast: IGMP and MLD on Red and Black networks
  - Quality of Service: Type of Service Octet bypass, PCP to TOS mapping for VLAN traffic, ECN congestion control bypass
  - Fragmentation: Support for fragmentation and reassembly on Black network traffic and fragmentation of Red IP traffic
- **Network Interfaces**
  - Plaintext Data Interface
    - Electrical / Mechanical: IEEE 802.3/Ethernet2; copper RJ-45 10/100 Base-T
  - Ciphertext Data Interface
    - Electrical/Mechanical: IEEE 802.3/Ethernet2; copper RJ-45 10/100 Base-T
  - Console Management Interface
    - Electrical/Mechanical: USB 2.0; USB-C connector
  - Standard DS-101 key fill port; Micro USB connector
  - Remote zeroize input; Micro USB connector
  - Primary power 5VDC; USB Type-C connector
- **Ordering**
  - Available to order through IDIQ and General Dynamics
  - NSN#: 5810-01-689-0857



## GENERAL DYNAMICS

Mission Systems

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