



# High-Speed, Quantum-Ready Encryption

The CN6010 is a high-assurance platform providing transparent, FIPS, Common Criteria and PKTN certified encryption at line-rate speeds up to 1 Gbps. It safeguards critical data without compromising network performance.

## Transport Independent Mode (TIM)

Senetas introduces Transport Independent Mode—the first network layer independent (Layers 2, 3, and 4) and protocol-agnostic encryption. By supporting Layer 3, the CN6010 offers flexible configuration using TCP/IP routing to secure data in motion across diverse architectures.

## Optimized Performance & Scalability

Powered by FPGA technology, the CN6010 delivers real-time processing with ultra-low microsecond latency. Its “bump-in-the-wire” design and variable licensing allow you to scale bandwidth seamlessly. The “set and forget” simplicity ensures minimal management across point-to-point, hub-and-spoke, or fully meshed topologies.

## Trusted Security

Certified to FIPS 140-3 Level 3 and PKTN Secret, this tamper-resistant appliance utilizes AES-256 algorithms and automated key management. Future-proofed and supports NIST standard Post Quantum Cryptography with Quantum Key Distribution (QKD) compatibility and optional Quantum Random Number Generator (QRNG)\*.

## Resilient Connectivity

Ideal for Ethernet and IP transport networks in point-point or meshed topologies. Supports 500+ concurrent connections without packet loss. Its intrinsic key generation provides a fault-tolerant architecture, removing reliance on external servers.

## Product highlights

- **High-Speed, Low-Latency Performance:** Provides full line-rate encryption up to 1 Gbps with microsecond latency.
- **Certified High-Assurance Security:** Certified to meet stringent requirements including FIPS 140-3 Level 3, Common Criteria, NATO, DODIN APL and PKTN Secret.
- **Quantum-Ready Future-Proofing:** Supports NIST Post Quantum Cryptography, optional internal QRNG and interfaces with external ETSI compliant QKD appliances.
- **Robust Key Management:** Eliminates reliance on external servers with state-of-the-art, automatic zero-touch key management and secure hardware-based storage.

### Providing three key pillars of high assurance:

- **Crypto Agility:** Supports evolving encryption standards.
- **Platform Agility:** Flexible deployment across IT/OT and rugged environments.
- **Network Agility:** Low-overhead encryption across layers 2-4 for any network topology.

# Key specifications

## PROTOCOL AND CONNECTIVITY

- Maximum Speed: 1 Gbps
- Support for Jumbo frames
- Protocol and application transparent
- Encrypts Unicast, Multicast and Broadcast traffic
- Automatic network discovery and connection establishment

## SECURITY

- Tamper resistant and evident enclosure, anti-probing barriers
- Flexible encryption policy engine
- Per packet confidentiality and integrity with AES-GCM encryption
- Automatic key management

## CRYPTOGRAPHIC SECURITY AND POLICY

- X.509 RSA/EC and PQC certificate support
- Policy based on MAC, VLAN ID or 5-tuple IP rules
- AES 128/256 bit keys, CFB, CTR or GCM Encryption modes
- Quantum random generator\*
- Supports optional 3rd party quantum key distribution (QKD)
- Self-healing key management in the event of network outages
- Certifications: Common Criteria, FIPS, DoDIN APL, PKTN Secret

## PERFORMANCE

- Low overhead full duplex line-rate encryption
- FPGA based architecture
- Latency (microseconds per encryptor)

## MANAGEMENT

- Centralized configuration and management using Senetas CM7
- Support for external (X.509v3) CAs
- Remote management using SNMPv3 (inband and out-of-band)
- NTP (time server) support
- CRL and OCSP (certificate) server support
- Dedicated management interface (out-of-band) or via the encrypted interface (in-band)
- SNMPv3 remote management
- SNMPv2c traps

- SNMPv1 read only monitoring
- IPv4 & IPv6 capable
- Supports Syslog
- Alarm, event & audit logs
- Command line serial interface

## MAINTABILITY/INTEROPERABILITY

- In-field firmware upgrades
- Dual hot-swappable AC/DC power supplies
- Pluggable optical SFP

## PHYSICAL

- Size: 447mm, 43mm (1U), 328mm / 17.6", 1.7", 12.9" (WxHxD)
- 19" rack mountable
- Weight: 8.5kg / 18.7 lbs.

## PANELS

- Front panel access for all interfaces
- SFP and RJ45 interfaces, RJ-45 serial console and RJ45 LAN/AUX connectors
- Front panel network connections and LED display status indications
- Color backlit LCD display
- Dual USB ports

## POWER

- AC Input: 100 to 240V AC; 1.5A; 60/50Hz
- DC Input: 40.5 to 60 VDC, 2.0A
- Power Consumption: 14W Max Physical Security
- Active/Passive tamper detection and key erasure
- Tamper evident markings
- Anti-probing barriers

## ENVIRONMENTAL

- Max operating temperature: 50°C / 122°F
- 0 to 80% RH at 40°C/104°F operating

\* QRNG support requires a special order, MOQs apply

## CN6010



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