Product Brief

Thales CN7108 Network Encryptor

Engineered for Extreme Environments: Ruggedized Encryption for the Tactical Edge

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The Thales CN7108 Network Encryptor (CN7108) extends the Thales High Speed Encryptor (HSE) network encryption portfolio to new frontiers, to tactical, industrial, IoT, and remote edge deployments. Purpose-built on ruggedized industrial-grade hardware, the CN7108 delivers FIPS 140-3 certified, quantum-resistant, crypto-agile data in motion encryption at up to 1 Gbps. With MIL-STD-810G compliance, extended temperature resilience, and optimization of footprint, power and cost, it ensures trusted security for mission-critical operations in the harshest environments.

Certified Security and Crypto-Agility

The CN7108 delivers **FIPS 140-3 Level 1 certified encryption** with AES-128/256 keys, X.509 RSA/ECC authentication, and authenticated GCM/CTR modes. It is **quantum-ready**, supporting NIST PQC standards and hybrid cryptography, and enables sovereign or custom ciphers through a Cryptographic SDK (CSDK).

Maximum Network Performance

With up to 1 Gbps encrypted throughput, the CN7108 ensures secure, real-time protection for data in motion. Its **Transport Independent Mode (TIM)** delivers tunnel-free, low-overhead encryption at Layer 2, 3, or 4 across Ethernet, MPLS, satellite, cellular, and Internet transport.

Scalability and Flexibility

Compact and ruggedized, the CN7108 measures 132.8 × 100 × 34.8 mm (5.2 × 3.9 × 1.4 in) and weighs ~420 g (0.93 lbs). Its tamper-evident enclosure ensures physical security in the field. It operates across –40 °C to +85 °C (–40 °F to +185 °F), is MIL-STD-810G compliant for shock and vibration, and features fanless, solid-state construction for silent, reliable operation. It supports point-to-point, hub-and-spoke, and full mesh topologies, and is optimized for deployment in size, weight, and power-constrained environments. It is fully interoperable with all Thales High Speed Encryptors for seamless integration into existing networks.

Why CN7108 Encryptors?

- FIPS 140-3 certified, quantum-ready encryption
- Ruggedized industrial-grade hardware, MIL-STD-810G compliant
- Tamper-evident enclosure for enhanced physical security
- High assurance design for maximum uptime in harsh environments
- Operates from –40 °C to +85 °C (–40 °F to +185 °F)
- Optimized for remote edge, IoT, and tactical use cases
- Automated zero-touch key management
- Fully interoperable with the Thales High Speed Encryptor portfolio

Advanced Encryption and Key Management

The CN7108 employs **X.509 certificates with RSA/ECDH exchanges** in Ethernet encryption modes. In Transport Independent Mode (TIM) it uses **NIST-validated key generation ensuring robust, quantum-safe data protection with perfect forward secrecy.** It also integrates with external Key Servers, including Thales CipherTrust Data Security Platform.

LINE & VLAN modes allow encryption across any Ethernet service for unicast, multicast, and broadcast traffic, with unique encryption keys to ensure cryptographic isolation per VLAN.

User-Friendly Management

With intuitive, **centralized management**, the CN7108, like the rest of the Thales High Speed Encryptor product suite, offers set-and-forget simplicity with protocol and network transparency. The CN7108 supports Syslog, NTP, SNMPv3, alarm and event logging, and secure management channels. Firmware upgrades are enabled through USB, and local configuration is available via serial console with SSH.

CN7108 At-a-Glance

Performance	Up to 1 Gbps encrypted throughput
Crypto	AES-128/256, RSA/ECC certificates, GCM/CTR, PQC support, sovereign/custom ciphers via CSDK
Interfaces	2 × Gigabit Ethernet traffic, 2 × Gigabit management, USB, serial console
Management	CM7, SMC, Syslog, SNMPv3, NTP
Environmental	–40 °C to +85 °C (–40 °F to +185 °F), MIL-STD-810G shock & vibration, fanless
Form Factor	132.8 × 100 × 34.8 mm (5.2 × 3.9 × 1.4 in), ~420 g (0.93 lbs)
Power	9–42 V DC input, optional PoE
Certifications	FIPS 140-3 Level 1, MIL-STD-810G

Specifications

Performance

- Throughput: 1 Gbps full duplex line-rate encryption

Cryptographic Security

- AES-128/256 encryption, GCM/CTR modes
- X.509 RSA/ECC certificates
- FIPS 140-3 Level 1 certified crypto module
- Quantum-ready (NIST PQC standards)
- Custom ciphers with CSDK

Interfaces

- 2 × RJ45 Gigabit Ethernet (Local/Network)
- 2 × RJ45 Gigabit Ethernet (Management)
- USB ports (firmware upgrade, debug)
- Serial console with SSH

Environmental

- Operating: –40 °C to +85 °C (–40 °F to +185 °F)
- Humidity: 5% – 95% non-condensing
- MIL-STD-810G shock & vibration
- Fanless, solid-state housing

Physical

- Dimensions: 132.8 × 100 × 34.8 mm (5.2 × 3.9 × 1.4 in)
- Weight: ~420 g (0.93 lbs)
- Tamper-evident enclosure for enhanced physical security

Power

- Input: 9–42 V DC, up to 3.33 A (30–155 W depending on load)
- Optional PoE

Management

- Centralized management - CM7 and SMC support
- SNMPv3, Syslog, NTP, audit/event logging
- Alarm and event notifications

SWaP

- Optimized for size, weight and power.

Regulatory Safety and Compliance

- CE (Conformité Européenne)
- FCC Part 15 (USA)
- ICES-003 (Canada)
- EMC (emission and immunity)
- IEC/EN 62368-1 (safety of information technology equipment)
- RoHS, WEEE, and REACH environmental compliance

About Thales Trusted Cyber Technologies

Thales Trusted Cyber Technologies, a business area of Thales Defense & Security, Inc., is a trusted, U.S. provider of cybersecurity solutions dedicated to U.S. Government. We protect the government's most vital data from the core to the cloud to the edge with a unified approach to data protection. Our solutions reduce the risks associated with the most critical attack vectors and address the government's most stringent encryption, key management, and access control requirements.

Contact us – For office and contact information, please visit thalestct.com/contact-us

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