gemalto
security to be free

CN4010 Ethernet Encryptor
Cost Effective, High-Performance Encryption

Setting a new benchmark for price and performance, the SafeNet CN4010 High Speed Encryptor from Gemalto is a versatile, cost-effective and simple to use platform that is user configurable to provide highly secure, full line rate transparent encryption over Ethernet. The CN4010 is a purpose built hardware encryption solution that ensures low cost, high-efficiency Ethernet encryption, utilizing cutting edge high performance, low voltage electronics to provide wire speed encryption of all voice, video and data communications.

The CN4010 provides optimal defense-grade security in a cost effective value proposition. A desktop device, the CN4010 is designed as an entry-level HSE solution for commercial Small to Medium Enterprise (SME) sector customers or larger organizations with modest network needs; and is also suited to widely distributed computing environments and multiple branch office locations.

CN4010 is versatile

The CN4010 provides a highly secure, full line rate transparent encryption over Ethernet networks in point-point, hub & spoke or meshed environments - 10/100/1000 Mbps Ethernet layer 2 encryption for LAN/MAN/WAN.

CN4010 is scalable

A 'Bump in the Wire' design and variable speed licenses up to 1 Gbps Ethernet make the CN4010 easy to install and highly cost-effective. "Set and forget" and transparency are underlying design themes, helping to ensure simplicity of implementation, operation and management, and reducing resource requirements to a minimum.

CN4010 is secure

Designed to be certified Common Criteria & FIPS 140-2 L3, the CN4010 is tamper resistant, employs automatic key management and utilizes robust AES 256-bit algorithms.

Why CN4010 Encryptors?

No-compromise performance:
> Low latency
> Minimal to no overhead
> Flexible
> Simple to manage
> Secure transmission of data through Layer 2 networks
> Defense-grade and ultra-reliable 99.999% up-time data network security

FPGA flexibility:
> Field Programmable Gate Array chip technology
> Provides cut-through architecture
> Enabling customization
> Hardware flexibility

Our high-speed encryptor technology is used by governments, defense forces and commercial organizations in more than 25 countries.

Metro Ethernet or Wide Area Ethernet Services

With the pervasive growth of Ethernet services, CN4010 is the ideal solution for all organizations with branch and remote locations from small to large enterprises and government or service provider clouds.

The CN4010 provides exceptional cost benefits to any organization needing to secure modest data volumes from speeds of 10 Mbps to 1 Gbps.

The CN4010 addresses the need for highly secure, highly resilient wire speed encryption of Ethernet traffic across both dark fiber and metro or wide area Ethernet services.

Supporting over 500 concurrent encrypted connections, the CN4010 operates at full line speed without packet loss to ensure the confidentiality of encrypted data regardless of frame size or application.

The intrinsic key generation and distribution capability in CN4010 removes reliance on external key servers and provides robust fault-tolerant security architecture, whilst its rugged tamper resistant chassis gives uncompromising protection to key material held in the encryptor.

Full interoperability with the CN and CS series of encryptors means customers can standardize on one platform to secure data in motion across large hub & spoke or meshed networks from the branch to head office.

Network and Management

SafeNet offers two management options. Security Management Center (SMC) is an enterprise manager and CM7 is an "element manager" more suited for small deployments. Both offer a simple to use local and remote encryptor management application that provides users with comprehensive and intuitive management functionality. They provide simple, secure remote management either out-of-band – using a dedicated Ethernet management interface or in-band - using the encrypted Ethernet port.

Local management using a command line interface is available via a serial console connector.

SFP interfaces allow operation over single mode fiber, multi-mode fiber or over WDM services by choosing an appropriate wavelength. Ethernet standards compliant, the CN4010 is fully interoperable with industry standard network equipment from leading vendors.

CN4010 Encryptor At-A-Glance

MODEL	CN4010
Protocol	Ethernet
Speed	10/100/1000 Mbps
Protocol and application transparent	✓
Common Criteria certified	✓
FIPS certified	✓
Low overhead full duplex line-rate encryption	✓
Ultra low latency for high performance	✓
Support for external (X.509v3) CAs	✓
Robust AES encryption algorithm	✓
CRL and OCSP server support	✓
Automatic key management	✓
Flexible encryption policy engine	✓
Encrypts Unicast, Multicast and Broadcast traffic	✓
Policy based on MAC address or VLAN ID	✓
Support for Jumbo frames	✓
Self-healing key management in the event of network outages	✓
Per packet confidentiality and integrity with AES-GCM encryption*	✓
Smart network discovery and automatic connection establishment	✓
Centralized configuration and management using CM7 or SMC	CM7/SMC
Remote management using SNMPv3 (in-band and out-of-band)	✓
FPGA based cut-through architecture	✓
Tamper resistant and evident enclosure	✓
Fully interoperable with related CN/CS models	✓

Specifications

Cryptography
> AES 128 or 256 bit key X.509 certificates
> CTR, CFB or GCM modes*
> Fully compliant with Public Key Infrastructure (PKI)

Performance
> Upto 1 Gbps full duplex Ethernet encryption - (< 10µs latency at 1 Gbps)

Device management
> 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, NTP
> Alarm, event & audit logs
> Command line serial interface

Installation
> Size: (WxHxD) - (W:180mm/7.1˝, D:126mm/5.0˝, H:32mm/1.3˝)
> Weight: 0.5kg /1.1 lbs.

Interfaces
> RJ45 interfaces
> Front panel LED display status indications
> RJ-45 serial console
> Dual USB ports
> RJ45 LAN/AUX connectors

Power Requirements
> DC input 9-15V DC, 6W consumption
> AC plug pack 100-240V AC; 47-63Hz

Physical Security
> Active/Passive tamper detection and key erasure
> Tamper evident markings
> Anti-probing barriers

Regulatory
> EN 60950-1 (CE)
> IEC 60950-1 Second Edition
> AS/NZS 60950.1
> UL Listed
> EMC (Emission and Immunity)
> FCC 47 CFR Part 15 (USA)
> ICES-003 (Canada)
> EN 55022 (CE)
> AS/NZS CISPR 22 (C-Tick)
> EN 61000-3-2 (CE)
> EN 61000-3-3 (CE)
> EN 55024 (CE)
> EN 61000-3-3 (CE)
> EN 55024 (CE)

Environmental
> RoHS Compliant
> Max operating temperature: 50°C /122°F
> 0 to 80% RH at 40°C/104°F operating

* Pending firmware release

All specifications are accurate as at the time of publishing and are subject to change without notice.

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