gemalto
security to be free

CN4020 Ethernet Encryptor
Cost Effective, High-Performance Encryption

The newest appliance in the CN4000 series of desk-top encryptors, the SafeNet Ethernet Encryptor CN4020 (CN4020) provides optical Ethernet interface encryption in a cost effective value proposition. The CN4020 is a versatile and simple to use platform that is user configurable to provide highly secure, full line rate encryption over Ethernet for a range of Fibre to the x (FTTx) configurations. A purpose built hardware encryption solution, it ensures low cost, high-efficiency Ethernet encryption, utilizing cutting edge high performance, optical interface connectivity, low voltage electronics to provide wire speed encryption of all voice, video and data communications. In a compact desktop profile, the CN4020 is designed as an entry-level High Speed Encryption (HSE) solution for commercial Small to Medium Enterprise (SME) sector customers or larger organizations with optical interface network needs up to 1 Gbps; and is also suited to widely distributed computing environments and multiple branch office locations.

CN4020 is versatile

The CN4020 provides highly secure, full line rate encryption over Ethernet networks in point-point, hub & spoke or meshed environments - 100 Mbps to 1000 Mbps Ethernet layer 2 encryption for LAN/MAN/WAN.Augmenting its desk-top profile, the CN4020 is also delivered with an optional rack-mount conversion kit.

In addition to the CN4020's optical interface, it also includes an optional electrical (copper) interface converter to provide a future-ready solution for customers current using copper, to meet a broad range of FTTx scenarios.

CN4020 is scalable

The 'Bump in the Wire' design and variable speed licenses up to 1 Gbps Ethernet make the CN4020 easy to install and highly cost-effective. "Set and forget" simplicity and network transparency are underlying design themes, ensuring easy implementation, operation and management, and minimal resource requirements.

The CN4020 is full interoperable with the CN and CS series of encryptors, enabling customers to standardize on one platform to secure data in motion networks.

CN4020 is secure

Designed to be certified Common Criteria & FIPS 140-2 L3, the CN4020 is tamper resistant, employs automatic key management and utilizes robust AES 256-bit algorithms.

Why CN4020 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 Government, financial, and large commercial enterprises in more than 30 countries

Metro Ethernet or Wide Area Ethernet Services

With the pervasive growth of Ethernet FTTx services, CN4020 is the ideal solution for all organizations with branch and remote locations from small to large enterprises and government or service provider clouds.

The CN4020 addresses the need for high security assurance, highly resilient line-rate encryption of Ethernet traffic across both dark fiber and metro or wide (MAN and WAN) area Ethernet services. Its cut-through architecture processes data frames as they are received to ensure consistent low latency.

Supporting over 500 concurrent encrypted connections, the CN4020 operates at full line speed without packet loss to ensure the confidentiality of encrypted data regardless of frame size or application.

Encryption Key Generation and Management

The CN4020 Ethernet encryptor adopts the same class leading encryption key management as all SafeNet High Speed Encryptors. Your encrypted data's encryption keys are only stored securely on premises and only accessible by you. The intrinsic key generation and distribution capability in CN4020 removes reliance on external key servers and provides robust faulttolerant security architecture, whilst its rugged tamper resistant chassis gives uncompromising protection to key material held in the encryptor.

Network and Management

Gemalto offers two management options. SafeNet Security Management Center (SMC) is an enterprise manager and SafeNet Encryptor Manager CM7 (CM7) is an "element manager" more suited for smaller 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, multimode fiber or over WDM services by choosing an appropriate wavelength. Optional RJ45 electrical (copper) interface adapters are available if required.

Ethernet standards compliant, the CN4020 is fully interoperable with industry standard network equipment from leading vendors.

CN4020 Encryptor At-A-Glance

MODEL	CN4020
Protocol	Ethernet
Speed	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
> IPv4 & IPv6 capable
> Supports Syslog, NTP
> Alarm, event & audit logs
> Command line serial interface

Installation
> Desktop and rackmount kit included
> Size: (WxHxD) - (W:180mm/7.1", D:126mm/5.0", H:32mm/1.3")
> Weight: 0.5kg /1.1 lbs.

Interfaces
> SFP interfaces
> Front panel LED display status indications
> Serial console at 8-pin Modular Jack
> RJ45 LAN connectors

Power Requirements
> DC input 12V DC, 7W consumption
> AC plug pack 100-240V AC; 60-50Hz; 0.7A

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 (RCM)
> EN 61000-3-2 (CE)
> EN 61000-3-3 (CE)
> EN 55024 (CE)

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

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

Contact Us: For all office locations and contact information, please visit www.safenet-inc.com

Follow Us: data-protection.safenet-inc.com

GEMALTO.COM

gemalto
security to be free