



CN6100 10 Gbps Ethernet Encryptor

Scalable, efficient data encryption for high-speed network data security without compromise

PRODUCT BRIEF

Why CN6100 Encryptors?

No-compromise performance:

- Near-zero latency
- Maximum bandwidth
- Minimum overhead
- Scalable and flexible
- Simple to manage
- Secure transmission of data through Layer 2 networks
- Defense-grade and ultra-reliable 99.999% up-time data security
- Certified FIPS and Common Criteria

FPGA flexibility:

- Field Programmable Gate Array chip technology
- Provides cut-through architecture
- Enabling customization
- Hardware flexibility not enabled by ASICs
- High-speed encryptor technology is used by governments, defense forces and commercial organizations in more than 25 countries.

The CN6100 is a versatile, simple to use platform designed to provide highly secure, full line rate transparent encryption over Ethernet networks in point-point, hub & spoke or any meshed environment.

CN6100 is more efficient

Preferred by many of the world's most secure organizations, the CN6100 high-speed data encryptors are high-performance, operating in full-duplex mode at full speed without loss of packets. Latency is not affected by packet size ensuring maximum throughput with zero protocol overhead. By using Field Programmable Gate Array (FPGA) technology, our encryptors' outstanding latency performance is predictable and dependable. A 1U unit, it operates with 30–60% less power consumption than typical 10 Gbps encryptors and occupies only a third of the rack space of 3U 10 Gbps.

CN6100 is scalable

With a variable speed license up to 10 Gbps as the network grows and the 'Bump in the Wire' design make the CN6100 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.

CN6100 is secure

Certified Common Criteria & FIPS 140-2 L3, the CN6100 is tamper resistant, employs automatic key management and utilizes robust AES 256-bit algorithms.

Metro Ethernet or Wide Area Ethernet Services:

With the pervasive growth of 10 Gbps Ethernet services, CN6100 is the ideal solution for all organizations from small to large enterprises and government or service provider clouds.

The CN6100 addresses the need for highly secure, full line rate transparent encryption for data moving across both dark Fibre and metro, or wide area Ethernet networks in point-point, hub & spoke, or any meshed environment.

Supporting over 500 concurrent encrypted connections, the CN6100 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 CN6100 removes reliance on external key servers and provides a robust fault-tolerant security architecture, while its rugged tamper resistant chassis gives uncompromising protection to key material held in the encryptor.

Full interoperability with the CN & CS series of encryptors means customers may standardize on one platform to secure data in motion across large hub and spoke or meshed networks, between locations.

Specifications

Cryptography

- AES 128 or 256 bit key X.509 certificates
- CFB, CTR or GCM modes*

Performance

- 10 Gbps full duplex encryption (5µs latency)

Device management

- Dedicated management interface (out-of-band)
- 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: 447mm, 43mm (1U), 328mm /17.6", 1.7", 12.9" (WxHxD)
- 19" rack mountable
- Weight: 8.5kg /18.7 lbs

Interfaces

- XFP interfaces
- Front panel network connections
- Front panel LED display status indications
- Color backlit LCD display
- RJ-45 serial console
- Dual USB ports
- RJ45 LAN/AUX connectors

Power Requirements

- AC Input: 100 to 240V AC;1.5A; 60/50Hz
- DC Input: 40.5 to 60 VDC, 2.0A
- Power Consumption: 50W typical

Physical security

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

Regulatory Safety

- 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)

Environmental

- RoHS Compliant
- Max operating temperature: 50°C /122°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.

Network and Management:

CypherManager (CM7) provides 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.

Optical interfaces allow operation over single mode Fibre, multi-mode Fibre or over WDM services by choosing an appropriate wavelength.

Ethernet standards compliant, the CN6100 is fully interoperable with industry standard network equipment from leading vendors.

CN6100 Encryptor At-A-Glance

MODEL	CN6100
Protocol	Ethernet
Speed	10 Gbps
Protocol and application transparent	✓
Common Criteria certified	✓
FIPS certified	✓
Low overhead full duplex line-rate encryption	✓
Front panel access for all interfaces	✓
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	✓
Remote management using SNMPv3 (in-band and out-of-band)	✓
FPGA based cut-through architecture	✓
Tamper resistant and evident enclosure	✓
Dual swappable AC or DC power supplies	✓
User replaceable fans and battery module	✓
Fully interoperable with related CN/CS models	✓

*Pending firmware release

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