

**NEW****SENETAS**  
**CypherNET**  
**CN7000**


We have extended our range to  
**extend your range**

**EXTENDING MILITARY-GRADE ENCRYPTION IN-THE-FIELD**

CypherNET's world-leading network encryption now delivers secure communications 'in-the-field' – from the server room to the last mile of defence operations. The innovative CN7000 protects 'in-the-field' communications with alternative form factors for defence applications - land sea and air. Whatever the environment requires, the CN7000 performance and form factors meet most application needs whether exposed to heat, vibration, dust or water; on land, in the air, on the move or stationary.

Today's defence forces depend as much on a secure 'last mile' of communications 'in-the-field' as on secure core network infrastructures from the server room. The CN7000 takes CypherNET's trusted network encryption security to that critical last mile.

Today digital communications are now as common in the battle-field and critical

infrastructure operations as in commercial business operations.

Having protected the world's most sensitive data for more than 25 years in more than 50 countries – from defence and critical infrastructure to global cloud, data centre and commercial high-speed networks – you'd expect Senetas to take this lead.

Defence forces' military assets use mission critical communications that are increasingly under attack. And the bad actors are very sophisticated – from state-sponsored to well-resourced criminal syndicates. Whatever communications network protocols are used, they demand proven military-grade encryption security. That's why we've extended the CypherNET range of proven high-assurance hardware network encryptors with the CN7000 Series of in-the-field encryptors.

Significantly, the CN7000 also supports cryptographic customisation - custom algorithms and entropy.



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**PLATFORM AGILITY**

CypherNET is the most agile network encryption security platform offering leading security certifications; maximum security without compromising performance, and state-of-the-art encryption key management and security. Its cryptographic agility provides resistance to future Quantum computing threats and support for custom algorithms and entropy.

**CRYPTO AGILITY**

Customers requiring the use of custom algorithms and entropy may take advantage of the CN7000's designed-in cryptographic agility. Using Cipher Software Development Kit customers may load their own encryption algorithms and entropy.

Like all CypherNET encryptors, the CN7000 comes Quantum resistant out of the box. It provides Quantum resistant encryption today so that long-life data is protected against future Quantum computing threats.

Now CypherNET also extends its platform agility through the CN7000 Series encryptors. We've extended our range as you extend your's.

**NETWORK AGILITY**

Like all CypherNET encryptors, the CN7000 comes Quantum resistant out of the box. It provides Quantum resistant encryption today so that long-life data is protected against future Quantum computing threats.

The CN7000 offers various form factors for specialised in-field purposes, e.g.: fan-less extreme ruggedised, in-vehicle, Milspec (-40C to 70C), IP67 dust and water proof; 19" enterprise hub rack mounted; and edge industrial control.

**NOW DEFENCE-GRADE NETWORK ENCRYPTION WHEREVER DUTY CALLS**

From submarine depths to aerial heights, the CN7000 is designed to protect military operations in the field. Based on 25 years' experience with defence and military customers around the world, our R&D team took the CypherNET platform agility to new heights (and depths) to provide the same security and performance capabilities in challenging environments and applications. That required a 100% appliance compatibility with the CypherNET range of network encryptors used to protect core network links from server rooms.



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**SEA** RUGGEDISED **ENCRYPTION** FLEXIBLE DEPLOYMENT  
**LAND** QUANTUM **IN THE FIELD**  
**AIR** RESISTANT **HIGH PERFORMANCE**  
**LAST MILE**

**CERTIFIED**

The CN7000 reflects Senetas's commitment to security certifications. Like all CypherNET products, the CN7000 is FIPS 140-2 (US) and Common Criteria (international) certified\*

Because CN7000 'in-the-field' applications typically involve high volume deployments, it has been engineered to be a cost-effective customer solution. It provides a single platform security solution enabling military 'in-the-field' applications to be as secure as their core network infrastructures.

**COST-EFFECTIVE**

Based on the CypherNET network encryption security platform, and providing seamless integration with other CypherNET appliances, there are no hidden deployment, management and integration costs.

Like all CypherNet encryptors, the CN7000 offers high ROI and low TCO. Their high performance saves costs of additional bandwidth; management simplicity saves staffing overhead costs; their crypto, network and platform agility save redundancy costs; and their advanced dedicated security function prevents costs of potentially catastrophic data breaches.

Simplified 'set-and-forget' deployment and management of CN7000 appliances uses the same Senetas CypherManager (CM7) application used for all other CypherNET encryptors.

\* In progress



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# SENETAS CypherNET CN7000



**TRUSTED SECURITY**  
Quantum Resistant  
Built to FIPS & Common  
Criteria Certifications



**MAXIMUM PERFORMANCE**  
Superior Bandwidth  
& Overhead  
Performance\*



**OPTIMAL FLEXIBILITY**  
Bump in the Wire  
Simplicity & Supports  
all Modern Networks

## HIGH ASSURANCE

The CN7000 is a purpose built high-speed dedicated encryption platform. It uses state of the art zero-touch key management and end-to-end encryption.

CN7000 uses authenticated standards-based encryption algorithms with X.509 certificate based authentication or NIST approved derived keys for simplified key management.

## BEST PERFORMANCE

The CN7000 is purpose built for next generation access networks and protects data at rates up to 10Gbps.

Using a DPDK accelerated packet processing engine and built-in encryption acceleration; the CN7000 encrypts data in real-time and ensures lowest latency across all packet sizes for optimal performance.

## VERSATILE & SIMPLE

Senetas CypherNET encryptors are equipped with Transport Independent Mode (TIM), a new approach that allows encryption over any network (e.g. layers 2, layer 3 and 4). TIM allows for easy movement between layers, and meets the requirements for Quantum resistant security, near-zero video jitter and latency at up to 98% network efficiency.

TIM offers tunnel-less encryption eliminating the complexity of legacy encryption and providing the CN7000 with up to 10Gbps full line rate transparent encryption for all voice, video and data communications moving across the Internet and metro or wide area service provider networks.

## GLOBALLY CERTIFIED

Preferred by the world's most secure organizations, the CN7000 is built to Common Criteria and FIPS certification requirements.

Senetas high-assurance network encryptors provide state-of-the-art cryptography and encryption key management meeting the broadest range of international certification standards.

## CRYPTO-AGILE

CN7000 is fully crypto-agile. It enables Quantum resistant encryption ensuring today's long-life data is protected against future Quantum computing threats.

Using the Cipher Software Development Kit, customers may develop and load their own encryption algorithms and entropy.

Crypto-agility ensures a future-proof investment and the responsive deployment of next-gen or custom algorithms.

## LOW COST, HIGH EFFICIENCY

Set and forget simplicity and transparency ensure ease of implementation, operation and management.

CN7000 is easily managed through a simple to use encryptor management application (Cypher Manager CM7), with local and remote access capabilities, that provides users with centralised, comprehensive and intuitive management functionality.

\* Compared to IPSec and other software encryption solutions.



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**CN7000 example**  
Milspec - Fanless, ruggedised IP67 form factor.

## SPECIFICATIONS

### Cryptography

- AES-128 or AES-256 bit keys
- GCM (authenticated), CFB & CTR encryption modes
- X.509 RSA and ECC certificates
- Quantum Resistant Hybrid Encryption
- NIST approved KDF (Network Independent Encryption)
- Automatic key management

### Hardware Form Factors

- Rack mounted 'bare metal' 19 inch
- Ruggedised (in field) fanless, IP67
- Edge industrial control

### Custom Ciphers

- Supports Customer loadable ciphers via Cipher Software Development Kit
- GCM (authenticated), CFB & CTR encryption modes

### Policy

- VLAN mode
- Layer 2 Ethernet encryption only
- Policy based on VLAN ID
- Transport Independent Mode (TIM)
- Layer 2 Ethernet or Layer 3 IP or Layer 4 TCP UDP encryption
- Policy based on IP address and /or port numbers

### Networks and Topologies

- Point-point, Point-multipoint, Multipoint-multipoint

- Metro or Wide Area networks
- Internet
- Layer 2/3 MPLS
- Ethernet circuits

### Performance

- Wire speed encryption up to 10Gbps
- AES hardware accelerated encryption (AES-NI)
- DPDK accelerated data plane processing

### ENCRYPTOR MANAGEMENT

- Central configuration and management using Senetas CM7 and SNMPv3
- SNMPv1 read only monitoring SNMPv3Q for quantum safe management
- Supports Syslog, NTP
- Alarm, event and audit logs
- Serial console port (with SSH access)
- USB port (firmware upgrades)

### Interfaces

- RJ45 1Gbps Ethernet Local, Network and Management ports
- Front panel LED display status

### Physical Security

- Tamper-evident markings

### Conformity

Complies with the requirements of the EMC directive 2014/30/EU, the RoHS directive 2011/65/EU and carries the CE marking



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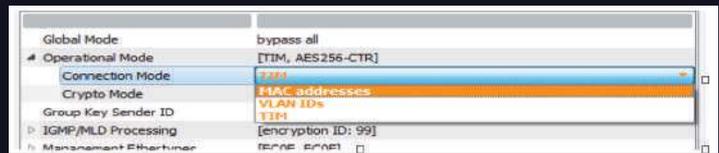
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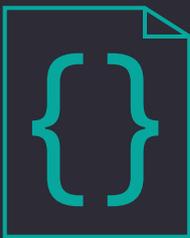
**CM7**  
CypherNET encryptors' management software

**CM7 ILLUSTRATION**

Transport Independent Mode of operation



**CSDK BUILD PROCESS CSDK BUILD PROCESS**



CSDK\_asymmetric



CSDK\_asymmetric



Known Answer Tests (KATs)  
Unknown Answer Tests (UKATs)

custom\_cipher.tar.gz.csdk

**CSDK CIPHER DEVELOPMENT PROCESS**



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## GLOBAL SUPPORT

Senetas encryption solutions are distributed and supported internationally (outside Australia and New Zealand) by Thales and within government & defence sectors by Thales Defense & Security Inc.



Thales is the world leader in digital security and defence, servicing over 30,000 customers across 180 countries.

## ANZ PARTNER COMMUNITY

Senetas works directly with customers and their service providers across Australia and New Zealand. We provide technical advice and support to data networks providers, systems integrators and cloud service providers. For a current list, visit our ANZ Partner Community Page.

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Senetas is the leading developer of end-to-end encryption security solutions; trusted to protect the world's most sensitive data, from enterprise, government, defence, to Cloud and service provider network data in over 50 countries.

From certified high-assurance hardware and virtualised encryption, to secure file sharing and collaboration with data sovereignty control, all are based on the same crypto-agile platform and deliver security without compromise.



## GET IN TOUCH

Are you looking for a service provider to help you select and implement a network data encryption or secure file sharing and collaboration solution? Contact Senetas and we'll help you find the right one.

Senetas works with IT infrastructure service providers and systems integrators across the globe, to help specify the optimal cybersecurity solution for their customers' needs.

Customers may contact Senetas directly to discuss their requirements; or ask their service provider to speak to us on their behalf.

## NETWORK DATA SECURITY WITHOUT COMPROMISE

Whatever your network security needs, Senetas has a network independent encryption solution to suit all network types. Our multicertified high-assurance encryptors protect data across networks operating at speeds from modest 100Mbps to ultra-fast 100Gbps and support all network topologies.

Our virtualised encryption solution, for virtual CPE and virtualised WAN, supports bandwidths of up to 15Gbps. It provides policy-based, end-to-end encryption across multi-Layer networks.

Senetas encryptors are Quantum resilient and recognised globally for delivering maximum data security and crypto-agility, without compromising network or application performance.

They are trusted to protect the world's most sensitive government, defence and commercial data.

## SECURE COLLABORATION

SureDrop offers all the flexibility of a drop-box style solution, with the added benefits of best-in-class encryption security and 100% control over data sovereignty.

## DISARM MALICIOUS CONTENT

Votiro Zero Trust leverages patented Content Disarm & Reconstruction (CDR) technology to protect your files from the most advanced, signatureless, persistent cyber-attacks. It sanitises incoming files, eliminating the risks associated with zero-day or undisclosed attacks, whilst preserving 100% file functionality.

## Regional Contacts:

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