

XIPHRA

CORE ENCRYPTOR 10G

LOW-LATENCY LAYER 2 & LAYER 3 NETWORK ENCRYPTOR

Overview

Xiphra Core Encryptor 10G provides secure connectivity between customer's premises while isolating them from the internet.

The encryptor establishes Layer 2 (data link) VPN tunnels over IP wide area network, thereby ensuring fully transparent operation to customer's applications and consistent IP subnets across the sites. The encryptor can also establish Layer 3 tunnels when filtering on the network layer is required or when used as a drop-in replacement for existing deployments.

The encryptor implements protection mechanisms of highest security strength and utilises AES-GCM-256 for traffic protection.

The encryptor is approved for the protection of classified information up to and including NATO SECRET.

Key Benefits

- Seamless network connectivity between customer's premises
- Simplified configuration and monitoring through standalone management centre
- Simplified network management due to Layer 2 connectivity across sites
- Full user control of cryptographic material
- Quantum-resistant without relying on unproven algorithms

Applications

- Scalable data link layer encryption for organisations
- Designed for data centres and critical infrastructure facilities
- Suitable for high-volume, low-latency traffic (videoconferencing, VoIP, ...)
- Secures any application operating on top of data link layer



XCE-1XG-B1A

XIPHRA CORE ENCRYPTOR 10G (XCE-1XG-B1A)

TECHNICAL SPECIFICATIONS

Interfaces

- Network ports: 10 Gbit SFP+
- USB port: USB 2.0 Type A

Traffic Encryption

- Algorithm: AES with 256-bit key
- Encryption mode: GCM
- Replay protection

Other Security Features

- Hardware-based random number generator
- Tamper detection and protection
- Zeroise button for quick initiation of erase procedures

Performance

- Security associations: >200
- Maximum throughput: 20 Gbit/s (1300-byte frames, measured on the ciphertext side)
- Maximum latency: 17 μ s (1300-byte frames), 8 μ s (300-byte frames)
- Power-efficient operation: up to approx. 760 Mbps/W

Device Management

- Standalone Xiphra management centre software: Crypto Station, Management Station
- Supported both offline and online (remote) management operations
- Future-proof: firmware upgrades

Certifications

- NATO SECRET
- TEMPEST (SDIP-27) Level A

Networking Functionality

- VLAN support (up to 4096 tags) and double tagging (Q-in-Q)
- Jumbo frame support (up to 12000 bytes)
- High availability: hot standby and active load balancing possible

Physical

- Enclosure: 1U 19", aluminium
- Dimensions (W $\times$ H $\times$ D): 483 $\times$ 44 $\times$ 262 mm
- Mass: 3.0 kg

Power

- Operating voltage: 90 - 264 V AC, 47 - 63 Hz
- Dual redundant internal power supply unit, hot-swappable
- Operating steady-state power: 26 W

Environment

- Temperature: 0 - 60 $^{\circ}$ C (operating), -20 - 70 $^{\circ}$ C (storage)
- Relative humidity: 5 - 95% (noncondensing)
- Altitude: up to 5000 m (operating), 13000 m (storage)
- Silent operation (passive cooling)

Regulatory

- Approval: CE (EU), RoHS
- Safety: EN 62368
- EMC emissions: EN 55032, EN IEC 61000, CISPR 32
- EMC immunity: EN 55035, CISPR 35
- Shock and vibration: EN IEC 60721 class 2M4, 3M12

BEYOND 
SEMICONDUCTOR

Beyond Semiconductor d.o.o.
Brnčičeva ulica 41G
1231 Ljubljana
Slovenia

www.xiphra.com
sales@xiphra.com
+386 5 90 90 100