Secure Networks

Cybersecurity
EtherCrypt U2000 QR

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High Performance L2 Encryptor

EtherCrypt U2000 QR is a layer-2 encryptor that protects the transmission of sensitive data over 10Gbps ethernet and metro-ethernet networks. It offers full duplex confidentiality, integrity and replay protections using AES-256 Galois Counter Mode (GCM) encryption algorithm, and is suitable for point-to-point, point-to-multipoint and fully-meshed ethernet networks.
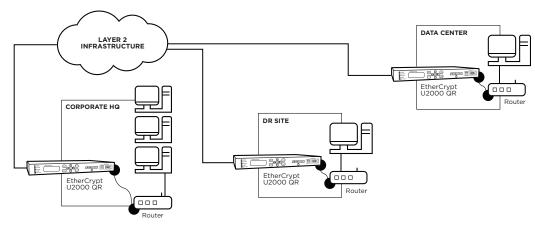
EtherCrypt U2000 QR can be deployed easily into existing networks without any need to the network configuration. It supports unicast, multicast and broadcast ethernet traffic. Designed to the strictest security standards, EtherCrypt U2000 QR includes a tamper-resistant chassis, emergency erasure and active zeroisation of encryption key. In addition, it comes with in-built over temperature detection. EtherCrypt U2000 QR may also be upgraded to quantum cryptography through the addition of a quantum key distribution (QKD) server that is based on ETSI standards. The solutions are quantum-safe for the long-term protection of sensitive and high-value data.

Key Features

- High-assurance encryptor

- Low overhead line-rate encryption at 10Gbps

- Supports AES-GCM algorithm for data confidentiality, integrity and anti-replay

- Redundant power supplies

- Over temperature detection

- Emergency erasure button

ST Engineering

Deployment Use Cases

Specifications

Performance	Low overhead line-rate encryption at 10Gbps
Network Interfaces	2 x 10 Gigabit ethernet ports (Trusted, External) with SFP+ interfaces - Fiber optic: LC connector, multi-mode/single mode - Copper: RJ45
Cryptography	Confidentiality, integrity and replay protections with Advanced Encryption Standard (AES-256) Galois Counter Mode (GCM) encryption algorithm Hardware Random Number Generator (HRNG) Supports QKD
Key Management	Proprietary key management system Parameter loading using smartcard
Device Management	Local console port (9-pin serial port) SNMP Port: 1 x 10/100 Mbps Ethernet RJ45 for remote monitoring
Physical Security	Tamper resistant chassis Tamper detection and response Active zeroisation of cryptographic data upon tamper detection User PIN protected front panel menu High temperature detection Emergency erasure button
Operating Environment	Storage temperature: -20°C to 70°C Operating temperature: 0°C to 40°C Humidity: Relative 10% - 95%, non-condensing EMC/EMI: FCC Part 15 Class B
Physical Characteristics	Dimension: 430mm (W) x 355mm (D) x 44mm (H) Weight: 5.25Kg Redundant hot-swap PSU module options: 1) 100-240V AC @ 50/60Hz 2) 36-72V DC, 300W
Networking Features & Protocols	Support Ethernet Layer 2 encryption Support for jumbo frames up to 8000 bytes Point-to-point, multipoint-to-multipoint
Security/Configuration	Audit logging Alarm detection and reporting SNMP v2c network management (operates with standard SNMP network management station)
Optional	
Key Management System (KMS)	Windows-based software system for key exchange parameter generation
Smartcard	Configuration card for users authentication and cryptographic key parameters
Feature	Supports customised algorithm loading feature

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