Cybersecurity

EtherCrypt U1000 QR

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High Performance L2 Encryptor

EtherCrypt U1000 QR is a layer-2 encryptor that protects the transmission of sensitive data over 1Gbps ethernet and metro-ethernet networks. It offers full duplex encryption up to 1Gbps using the AES-256-CFB algorithm, and is suitable for point-to-point, point-to-multipoint and fully-meshed ethernet networks.
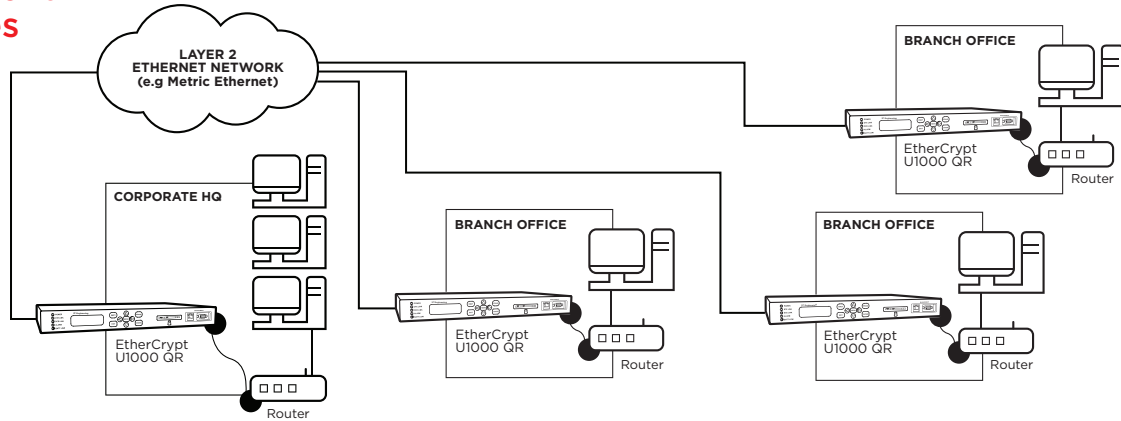
EtherCrypt U1000 QR can be easily deployed into existing networks without any need to change the network configuration. It supports unicast, multicast and broadcast ethernet frames. Designed to the strictest security standards, EtherCrypt U1000 QR includes a tamper-resistant chassis, emergency erasure and active zeroisation. In addition, it comes with in-built over temperature detection.

EtherCrypt U1000 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

• 1Gbps throughout

• Over temperature detection

• Emergency erasure button

ST Engineering

Deployment Use Cases

Specifications

Performance	Full duplex operation at speeds up to 1Gbps
Network Interfaces	Network: Ethernet II, IEEE 802.3 Gigabit ethernet ports with SFP interface (single mode, multi mode and copper)
Cryptography	AES 256 CFB mode Supports customised algorithm Support for QKD
Key Management	Proprietary key management Parameter loading using smartcard Automatic and transparent session key negotiation
Device Management	Local console port (9 pins D serial port) 100 Base-T RJ45 Ethernet port – for remote monitoring SNMP V2c (operates with standard SNMP network management station)
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 function
Operating Environment	Operating temperature: 0°C to 40°C Relative humidity: 0 to 90% Storage temperature: -20°C to 65°C Meets FCC Part 15, Class B EMI/RFI requirements
Physical Characteristics	Dimension: 420mm (W) x 270mm (D) x 44mm (H) Weight: 3Kg Redundant hot-swap PSU module options: 1) 100-240V AC @ 50/60Hz 2) 36-72V DC, 300W
Networking Features & Protocols	Supports Ethernet Layer 2 encryption Point-to-point, point-to-multipoint, multipoint-to-multipoint meshed networks Unicast, multicast and broadcast ethernet frames
Security/Configuration	Automated power-up self tests Alarm/Audit log messages stored in memory with date and time LED indicators for link status monitoring Front panel menu-driven setup Battery backup of cryptographic variables
Optional	
Key Management System (KMS)	Windows-based software system for key exchange parameter generation
Smartcard	Configuration card for user authentication and cryptographic key parameters
Feature	Supports customised algorithm loading feature

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