



Ethernet Encryption HC-8555 10G

Powerful fibre-optic cables nowadays offer speeds of up to 10 Gbps. Such vast bandwidths allow using one fibre for a whole set of applications simultaneously. For you as the user, this results in a wide mix of individual applications and services in LAN/MAN/WAN and SAN networks. Ethernet is the key technology for this purpose – be it for linking different locations in cities (MAN – Metropolitan Area Network) or countries (WAN – Wide Area Network) and for backup and disaster recovery infrastructures (SAN – Storage Area Network). With Ethernet Encryption HC-8555 10G your valuable information is secured against any attacks by outsiders!

The encryption unit enables you to use the full available transmission bandwidth of 10 Gbps for point-to-point connections – while providing the highest degree of security for all your information, irrespective of applications or services. Crypto AG offers you a completely transparent high-performance system with the product Ethernet Encryption HC-8555 10G. It provides unlimited encryption without loss of performance, in full-duplex operation. It delivers the reliable security platform for all applications using Ethernet LAN/MAN/WAN backbones.

Thanks to interchangeable optical transceivers, you can configure it for all standard wavelengths, distances and fibre types. Installation is plug-and-play style by looping the units into the data cable. Hot pluggable, redundant power supply units ensure the availability of the encryption unit at all times.

Encryption takes place in a separate tamper-proof security module with symmetric, customer-specific algorithms profiled by your Security Manager. This prevents

attacks, both by cryptographic and mechanical means. The periodic change of the communication keys takes place automatically without interrupting operations. Centralised offline and online security management offers easy setup and update of cryptographic parameters.

Key features

- Powerful 10 Gbps Ethernet Encryption
- Transparent for all applications and services
- 100 % performance and security for fibre connections
- Plug-and-play start-up
- Interchangeable optical transceivers
- Highly secure, hardware-based encryption with secret, customer-specific algorithm
- Scheduled key change without interrupting operations
- Comfortable computer-based central Security Management Centre

General data

Housing

- 19" rack mounting – 2 units high

User interfaces

- Keypad with 16 buttons
- 2 lines x 16 characters LCD with backlight
- Status LEDs at front side
- Browser-based user interface
- Built-in smart card reader for reading/writing key and setup data
- Diagnostic user interface

Local/link interfaces

LC connector:

- Optical transceivers XFP according to MSA (Multi Source Agreement)
- Available for different distances up to 80 km and different wavelengths

10 Gigabit Ethernet

- IEEE 802.3ae 10GBASE-LR/LW, 10GBASE-SR/SW and 10GBASE-ER/EW

Management interfaces

- Local management (browser-based access) Ethernet 10BASE-T/100BASE-TX RJ-45
- Remote management (SMC-1100, NMC, RAD-1100, Time Server) Ethernet 10BASE-T/100BASE-TX RJ-45
- Alarm relay RJ-45 (active or non-active alarm indication)
- Control interface (diagnostics) Serial RS-232 RJ-45

Management

- Security Management Centre (SMC-1100) with in band and out-of-band online management
- Local management via keypad and display
- Local management via browser-based user interface
- Remote access via ciphered browser connection (RAD-1100)
- Remote SW update
- SNMPv1
- Standard MIB II

Test facilities

- Built-in test equipment (BITE)
- Cipher loop test
- Transparent mode
- Diagnostics

Compliance

- ITU-T

EMC

- EN 55022 class B/EN 55024

Safety

- EN 60950-1/EN 60825-1

Power supply

- Redundant hot pluggable PSUs (AC/AC) at front side
- AC input 230 VAC nominal (100...240 VAC/50...60 Hz)
- Maximum power consumption < 100 W

Cooling

- Redundant hot pluggable cooling with 6 fans

Dimensions

- 444 x 350 x 88 mm W/D/H

Weight

- 8.6 kg

Reliability

- MTBF: 50,000 hrs

Quality system

- ISO 9001:2000

Conformity

- CE (European conformity)

Cryptographic data

Algorithm

- Customer-specific cipher algorithm HCA-820
- Customer managed profiling of algorithm with variety > 10⁵⁰⁶
- Mutual key agreement scheme for generation of short-term communication keys
- Built-in high quality true random generator

Keys

- Customer-defined master communication keys stored in tamper-proof security module
- Master communication keys and communication keys with variety > 10³⁸

Key management

- Manual key input via user interface
- Copy/backup of key and installation data with Security Data Carriers
- Offline with SMC-1100 and Security Data Carriers
- Online with SMC-1100
- Online inter-unit management

Access protection

- Tamper-proof design
- Password protection with user names
- Block/unblock function
- Emergency clear

Environmental data

- Operating temperature: 0 °C...+50 °C
- Storage temperature: -25 °C...+70 °C
- Humidity: 5 %...95 %, non-condensing

Accessories/options

- Security Management Centre SMC-1100 Broadband
- Remote Access Device RAD-1100
- Security Data Carriers

Ethernet Systems

