KG-340

Type 1 SONET Encryptor

PRODUCT BRIEF

Key Features

- Supports encryption up to Top Secret Sensitive Compartmented Information (TS/SCI)
- Simple, secure management using front panel, RS-232 serial port
- Supports concatenated SONET/ SDH streams: STS-3c, STS-6c, STS-9c, STS-12c, STS-24c, STS-48c, STS-192c
- Firmware upgrade via USB port and field-upgradeable SONET line interface cards
- Supports up to 192 individual STS1 channels

Key Specifications

Physical

- 2U high, 19" wide, 23" deep rack-mountable

Power

- Dual -48V DC power inputs
- 150 Watts Max - Fully Populated
- 40 Watts - Base Unit Only
- Max Current Draw 3A @ -48VDC

Key Management

- Automatic session key update

Performance

- Full duplex at wire speed

Audit

- Event Log/Security Log/ Interface status

Environmental

- Operating Temp.: 0 to 40° C
- 0 to 85% RH
- non-condensing

Government-Strength Encryption at OC-192 Speeds

The SafeNet Type 1 SONET Encryptor (KG-340) is a high-performance solution for SONET/SDH network security applications demanding speeds up to 10 Gbps.

The KG-340 integrates transparently and easily into new and existing SONET/SDH network architectures with line-rate throughput, extremely low latency, and no overhead. As a key part of the Cryptographic Modernization Initiative, the encryptor is ideal for high-speed data, as well as time-sensitive voice and video applications traversing the Global Information Grid.

Up to 384 independent security associations and key pairs can be configured to support encryption at STS-1 level granularity or any GR-253 concatenated grouping the user desires. Path-level SONET/SDH encryption is supported at various rates and at distances up to 80 kilometers over a duplex fiber-optic network connection. Administrators can selectively encrypt, zeroize, regenerate, or bypass section, line, and path overhead bytes when configuring these connections.

A single comprehensive solution, the KG-340 delivers scalable performance and seamless end-to-end integration, optimizing security without compromising operations or performance. It combines highly secure, NSA-approved algorithms with the flexibility to integrate into SONET/SDH-based networks at virtually any rate.

The encryptor's integrated keypad and RS-232 serial interface provide local management access. Operational status is displayed through front panel LEDs and on a two-line, 20-character LCD. The status of the local and network interfaces, power, temperature, battery, system operation, security, and interface transmission and reception are displayed via LEDs.

Encryption

- Path level encryption
- Security associations capable for each STS-1 (up to 192) or STM-1(up to 64) bidirectional time slot for SONET/SDH
- Supports MEDLEY encryption for network traffic
- Security policy database defines:
  - allowable time slots
  - line, section, and path overhead bytes processing
  - autodiscovery of timeslots
- Auto crypto resynch

NSA-CERTIFIED

Front Panel
- Interactive keypad (CLI command subset) & LCD (2 lines by 20 characters) for simple configuration
- RS-232 CLI for full local encryptor management
- USB port supporting firmware upgrade
- LEDs for Zeroized, Power, Standby, Alarm, Battery, Temperature

Crypto Ignition Key
- Serial Crypto Ignition Key interface
- Supports DataKey's KSD 4000 device

Key Fill
- MIL-CON MC283 six-pin audio connector
- RS-232 fill interface

User Accounts (Two Types)
- Crypto officer account
- Users with assigned privilege levels

Log Capabilities
- Enabled via console
- Logging to internal flash capability
- 3 Log Types: Audit, Security, and Event
- For each SA establishment: Universal ID, Time: Peer KMID, Expiration Date

Diagnostics
- Information during session establishment and release events
- Auto power-on self test & logging capability
- Available from console; subset from front panel

Conformance
- Telcordia GR-1377 (jitter tolerance)
- Telcordia GR-253

Network Interfaces

- Full duplex support available in OC-192(c), OC-48(c) versions, as well as a user-selectable OC-3/12(c) version
- Available with built-in 1 + 1 redundant port versions for integrated line protection (OC-48(c) and OC-3/12(c) versions)
- Available in short, intermediate, and long range optics
- OC-48 and OC-3/12 supports user replaceable Small Form Factor Pluggable (SFP) optical transceiver modules
- Support for 1310 and 1550nm frequencies
- Duplex LC connections

Security Certifications

- NSA Type 1
- NACSIM 5100A

Key Management

- Enhanced FIREFLY (EFF); negotiations configurable in-band using F2, Z3, Z4, and Z5 POH bytes
- Supports up to 384 SAs (max. 192 bidirectional associations)
- Supports 2 vector sets per SPD
- Supports HAIPE™ 3.0 requirements for key update/change (soft and hard timers) of vector sets

Statistics

- Number of processed SPEs per path
- Bypass, zeroize, and crypto SPEs
- Management Interface Packets
- Alarm indication (LOS, LOF, AIS [path line], REI [path line])
- Current and previous 15-minute and 24-hour counters for near and far end (CV-S, ES-S, SES-S, CV-L, ES-L, SES-L, UAS-L, FC-L, CV-P)
- Current counts for 15-minute and 24-hour intervals resettable to zero during an interval

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