



# SafeNet SONET Encryptor

## PRODUCT BRIEF

### Benefits

- 10 Gbps operation is ideal for high-performance, time-sensitive networks
- Full duplex wirespeed throughput
- Extremely low latency
- No additional network overhead
- First commercially available OC192 SONET encryptor
- Configurable as a path or line encryptor Employs federally endorsed, highly secure AES algorithm
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- Fully supports both SONET and SDH architectures
- Flexible XFP OC192 interface
- 10km, 40km, and 80km options
- Highly reliable redundant DC power supplies
- Management through the SafeEnterprise Security Management Center using SNMPv3
- Designed to international security standards
- Common Criteria EAL4
- FIPS 140-2 Level 3

The SafeNet SONET Encryptor is a high-performance, dedicated security solution designed to protect 10 Gbps and below SONET/SDH networks. It integrates easily and transparently into SONET/SDH networks and performs at wire-speed throughput, encrypting user data with the AES-256 algorithm. Its extremely low latency makes it ideal for even the most demanding real-time, latency-sensitive network applications. The SafeNet SONET Encryptor includes a FIPS validated 140-2 cryptographic module.

The SafeNet SONET Encryptor is a high performance, purpose-built integrated security solution designed to secure 10 Gbps SONET/SDH networks. It has been designed to integrate easily and transparently into the SONET/SDH network architecture. Wirespeed throughput and extremely low latency make it ideal for high-speed data and time-sensitive

video and voice applications.

Users value a single solution that provides scalable performance and seamless end-to-end integration to deliver improved network operations and performance without compromising security. The SafeNet SONET Encryptor is the solution. It employs the highly secure, federally endorsed AES algorithm, with the flexibility to be integrated into any OC192/STM64 (10 Gbps) SONET network.

The SONET Encryptor can be centrally managed across multiple remote stations using SafeNet's SafeEnterprise Security Management Center (SMC), which uses SNMPv3, the first secure version of SNMP. SMC management is available via a 10/100 Ethernet port or on the SONET network.

Both path and line SONET encryption are supported at rates up to 10 Gbps and at distances up to 80 kilometers. The encryptor supports OC192 line and STS-192c paths, with independent keys used in each direction. In addition, section, line, and path overhead bytes can be selectively encrypted, zeroised, regenerated, or bypassed.

Status operation of the appliance is visibly apparent through LEDs and a two-line, 20-character LCD display. LEDs indicate the status of the local interface, the network interface, power, temperature, battery status, system operation, secure status, and interface transmission and reception.

The SONET Encryptor offers superior, industry-standard physical security. It offers tamper-proof storage of encryption keys and user passwords, and has tamperevident, extruded/sheet metal construction. It has RJ-45 10/100 Ethernet and RS-232 serial management ports, and duplex LC fiber-optic network connectors.

## Technical Specifications

### Cryptography

- AES algorithm – 256-bit key
- Counter mode
- Automatic crypto resynchronization
- in less than 10ms

### Key Management

- ATM Forum Security Specification v1.1 Key Exchange
- RSA public key
- Master/session keys
- Automatic session key update

### Circuits

- Supports path and line encryption
- Each encrypted circuit uses an independent encryption key pair
- Section, line, and path overhead bytes can be selectively encrypted, zeroised, regenerated, or passed through unchanged
- APS (K1, K2) compatible

### Performance

- Constant non-cumulative delay of less than 10µs
- Full-duplex operation at OC192 line speeds

### Audit

- Event log
- Alarms
- Interface status
- Audit log
- Date and time of secure connection
- Configuration changes

### Network Interfaces

- OC192/STM 64
- Single-mode fiber – 10km (1310nm)
- Single-mode fiber – 40km (1550nm)
- Single-mode fiber – 80km (1550nm)\*
- Duplex LC connectors
- 3R interfaces (re-amplify, re-shape, re-time)

### Accreditations

- Common Criteria EAL4
- FIPS 140-2 Level 3

### Environmental

- 5° to 40° C operating temperature
- -10° to 60° C non-operating temperature
- 0 to 80% RH @ 40° C operating humidity
- 95% RH @ 40° C non-operating humidity

### Electrical

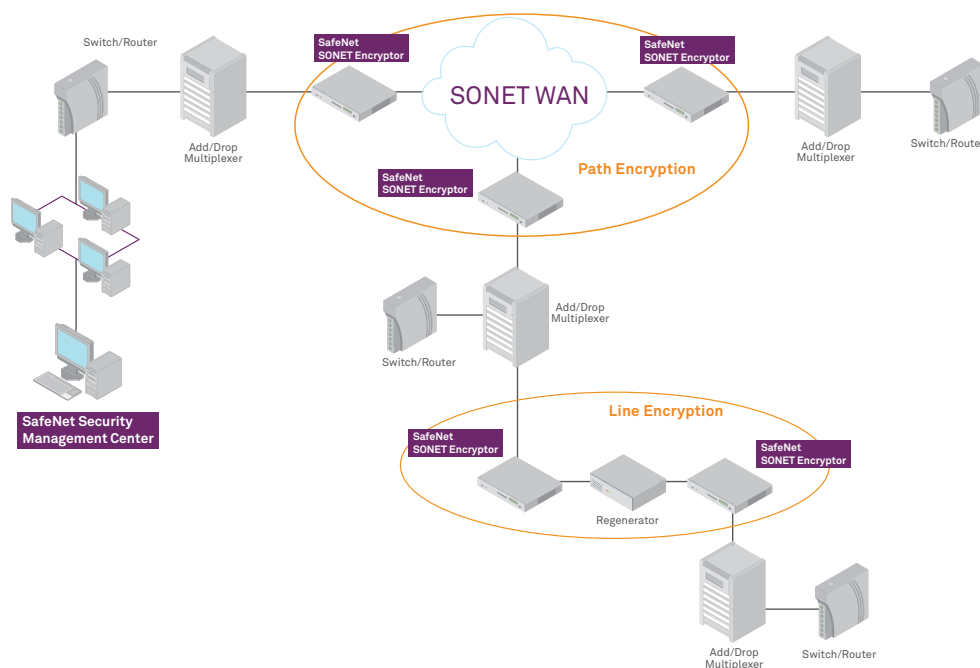
- -48VDC
- 40W maximum

### Mechanical

- Height – 5.1 inches, 130mm (3RU)
- Width – 17 inches, 432 mm (19" rack mountable)
- Depth – 14 inches, 356mm (includes handles)
- Weight – 21 lbs., 9.5kg

The SafeNet SONET Encryptor comes in a compact three Rack Unit (3RU) high chassis (130mm) with redundant -48VDC power supplies. Coupled with the flexibility provided by pluggable XFP (10 Gbps small form factor pluggable) transceivers (10km, 40km, and 80km), the SONET Encryptor integrates seamlessly into all customer networks. In addition, the SafeNet SONET Encryptor meets all regulatory standards, including FCC Part 15 Class A, UL, TUV, and CE.

SafeNet offers distinct levels of support tailored to meet our customers' individual requirements. The SONET Encryptor has a one-year (12 month) standard warranty with three levels of extended support. Maintenance contracts are also available. Support is available online through our customer support Web site, Express Service Center, and Customer Connection Center.



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