SENETAS
trusted to secure critical information

"Senetas Encryption"

Senetas designs and manufactures a range of encryption devices that protect data in motion by providing inline encryption at speeds up to 10Gbps. While the units provide support for protocols such as ATM, SONET/SDH, Fibre Channel and binary links, Ethernet is the most commonly requested device.

All Senetas encryptors are managed by a common element manager called CypherManager (CM). CM is a Windows application that loads onto a PC and uses SNMPv3 to configure and manage the encryptor. The management session is secure and encrypted. Typically you would manage a unit via an RJ45 port on the front panel, or use out of band management to access the front panel management port of a remote unit. If desired you can connect CM to the front panel of a local unit, configure it as a gateway, and then use in-band management to manage remote encryptors.

CM is sold separately from the encryptors. A single licence supports up to 10 encryptors and additional licenses are available to extend this as required. Customers usually purchase 2 or more encryptors and the appropriate licenses.

CM can configure Simple Network Management protocol (SNMP) traps within encryptors so that they can report events, alarms, etc., to a network management system such as OpenView or Tivoli, and CM can itself monitor these traps. Encryptors maintain Audit logs (operator actions), Event logs (changes that occurred), and Alarm logs (error states). These logs can be viewed with CM and saved and exported as files for archive and/or review.

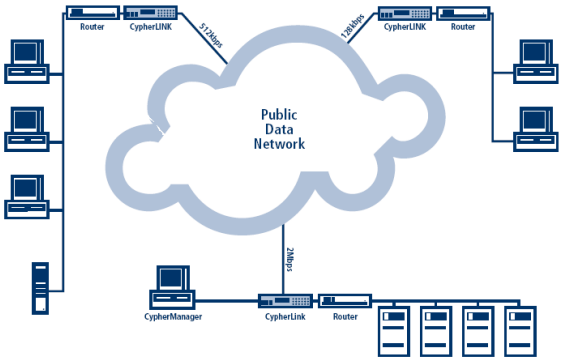
In addition to providing configuration and monitoring functionality, CM can be configured as the 'Certificate Authority' (CA) for the encryptors. Each encryptor must have a signed X.509 certificate so that units can establish trusted connections. Typically you would configure one copy of CM on a secure PC as your CA, and then use it to certify all of the encryptors in the network. (Encryptors are tamper resistant and any attempt to physically access the unit will destroy all certification and key material such that the unit reverts to its factory uncertified state)

Encryptors can also be managed via a front panel 'craft' interface. This is an RS232 port that provides a Command Line Interface that supports a range of commands that provide similar functionality to CM. This interface does not provide certification functionality.

In the case of Ethernet encryptors, units can be configured as point-to-point or in multipoint mode with up to 509 units. Encryption is based on the AES algorithm with 256 bit keys, and automatic key updates change the key every 1-60 minutes (user defined). The encryption mode is CFB or Counter mode for units running at up to 1 Gbps, or Counter mode for 10 Gbps.

Local and network interfaces are usually RJ45 or SFP's. (XFP's for 10 Gbps). We support single and multimode fibre. Units running at 100 Mbps to 10Gbps are 19" rack mounting units powered by 90-240, 50/60 Hz AC supplies. A 10Mbps Ethernet-only table top unit is available, and this is typically used for 'branch office' style applications.

Senetas encryptors have been accredited to the FIPS 140-2 and Common Criteria EAL4+ international security standards.



As depicted above, Senetas encryptors can be used to secure data that is being transferred over the public data network. Equally, encryptors can be used on private lines or dark fibre links, or in fact over practically any media. Futher detailed information is available in Senetas product brochures and documentation and in Senetas application notes and whitepapers.

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