



CM250™ Midrange Enterprise Storage Security System

The new standard for scalable, enterprise-class storage security

KEY BENEFITS

Modular, line card-based platform for flexible deployment of SAN-aware storage security services

Fully integrated, line-speed AES-256 encryption scales easily across enterprise-class storage environments

Simplified, single pane of glass management of all security policies and encryption keys

Director-class Fibre Channel switching functionality scales from 16 up to 64 ports

Fully redundant, highly reliable design supports automatic fault detection and recovery for non-stop computing

Overview

As enterprises find themselves compelled to address the growing risk of security breaches affecting personal data, intellectual property, entrusted partner data and other confidential information, their task is becoming increasingly complex. Sustained 50% growth rates for data volumes and the adoption of distributed storage topologies, multi-tiered architectures and third-party storage services, highlights the limitations of software- or appliance-based solutions for managing a problem that extends throughout a widespread IT environment. The demand for a unified security solution that can be transparently applied throughout the entire storage environment operation has never been greater.

Modular, SAN-based Storage Security

CipherMax's CM250 Storage Security System provides the industry's first solution for delivering storage security services across an enterprise environment. The mid-sized CM combines modular, encryption processor-equipped line cards with carrier-class, 16-to-64-port FC switching to provide an intelligent platform for medium to large-sized storage environments. This approach offers enormous benefits to enterprises including easy scalability, centralized management, line-speed performance, deployment flexibility, improved reliability and the lowest available total cost of ownership.

Line-Speed, Scalable Connectivity

The CM's Intelligent Line Cards (ILCs) are equipped with high-speed hardware encryption engines that provide line-speed processing of industry standard AES-256 data encryption for multiple 2Gb FC connections. In contrast to first generation, two-port data encryption appliances, the CM250 can scale

to support up to 64 ports of connectivity, or 128 ports in a clustered configuration. With its central management interface for system administration and key management, CipherMax delivers the only practical, manageable and affordable solutions for securing sensitive data throughout heterogeneous, distributed storage environments.

Flexible Deployment Options

Like all CipherMax systems, the CM250's multi-mode configuration options provide flexible deployment options to suit the requirements of individual locations. Configuration options include: Switching Mode that supports deployment as a full-featured core switching fabric; Discovery Mode that uses FSPF trunking to connect to the edge of an existing SAN fabric while automatically detecting all devices, LUNs and zones within the SAN for easy configuration; and Controller Mode, which allows transparent connectivity and operation for easy installation and the highest level of interoperability.

High Availability and Performance

The CM250 is equipped with fully redundant, hot-swappable elements to ensure uninterrupted operation in the event of a failure. Its system software supports non-disruptive software and hardware upgrades, and high-availability clustering. Built to Telco standards, the CM250 supports redundant System Control Cards (SCCs), Switch Fabric Cards (SFCs), power supplies, and fans.

Simplifying Management

The CM250's GUI-based SAN*Cruiser* management software has a powerful, feature-rich set of tools. The ability to easily manage all CM installations from a single pane of glass interface enables convenient deployment

into remote locations without incurring any additional management resource overhead. SAN*Cruiser* secure network management software allows the entire SAN, including third-party interconnect devices, to be centrally viewed and managed. The intuitive

and comprehensive UI allows the upgrades of operating system, firmware, and BIOS of remote systems to be performed from a single location. SNMP-based communication and industry-standard MIBs communicate with existing enterprise management software.

CM250 Midrange Enterprise Secure Security System Specifications

Components and Options

The CM250 base system includes: passive backplane, two power modules, one dual fan assembly, one System Control Card (SCC), one Switch Fabric Card (SFC) and one Intelligent Line Card (ILC1612) with optional redundant SCCs and SFCs. All cards and modules are front-loading and hot-swappable. CM250s accepts up to four ILCs and systems can be clustered for scalability and high availability.

I/O Connectivity

- **Intelligent Line Card ILC1612:** Sixteen 1-2 Gbps Fibre Channel ports, up to 64 per chassis
- Self configuring ports (F_Port, E_Port, N_Port modes supported)
- **Media type:** Small Form Factor Pluggable (SFP) LC transceivers
- **Cabling:** Short wave (SW) and long wave (LW) SFP transceivers with multi-mode (50um and 62.5um) and single mode (9um) optical cabling respectively

System Control Connectivity

- 10/100BaseTX Ethernet port on front panel for system configuration
- One RS-232 serial port accessible on front panel

Security

- 256-bit AES encryption for disk security supports up to four 2Gb FC connections at full line-speed
- Software data recovery utility
- Simple and secure key management operations, including random key generation, secure key storage with integrity check and secure key backup and system recovery operations

Software

- Local console port with CLI for SAN and security administration
- Fibre Channel standard compliant services: Distributed name server, fabric services and FSPF protocol, hard and soft zoning, management server, distributed lock manager, zone server, fully distributed trunking
- Any number of ports can be grouped into interswitch link trunks
- FSPF trunking software ensures proper frame ordering with dynamic load balancing
- SAN access control with optional LUN masking and re-mapping functions
- SNMP agent and subagents including standard MIBs

- Remote console and CLI via SSH over 10/100BaseT management port
- Secure audit logging of configuration changes and policy violations with export via SFTP or syslog
- Audit log integrity check
- System and security events alerts via SMTP
- Non-disruptive software upgrades

System Monitoring

- Five temperature sensors on ILC and three on SCC and SFC cards
- Fan and power module status detection circuitry
- Card ejector and SFP transceiver status monitoring

Management

SAN*Cruiser* SAN management software with discrete interfaces for storage and security administration

Key Management

Key*Cruiser* key lifecycle management system for secure, automated backup and storage of encryption keys and security configurations

Fault Management

Fault detection, notification and automatic recovery

Form Factor

5U enclosure, installable into standard 19" racks

Environmental

Operating temperature: -5°C to 40°C

Storage temperature: -25°C to 70°C

Relative humidity: 5% to 95% non-condensing

Weight and Dimensions

Base System Weight: 84 lbs (38.2 kg)

Line Card Weight: 4.4 lbs (2 kg)

Base System Dimensions: 8.7 in H 17.5 in W x 27 in L

Line Card Dimensions: 17 in W x 20 in L

Power

- Operating voltage: 100 to 120 volts AC; Current: 14.9 amps max; Power: 1700 watts max
- Requires two dedicated 110V, 20A circuits (NEMA 5-20R) for full redundancy
- System includes two NEMA connectors with mating cables

Regulatory

UL; FCC Part 15 Subpart B Section 15.109 Class A; CE (EN55024, 1998); EN61000-3-2 (2001); EN61000-3-3 (1995 W/A1:98); EN55022 (1998) Class A; AS/NZS3548 (1995 w/A1 & A2:97) Class A; CISPR 22 (1997 Class A); BSMI (Taiwan); CB (IECEE)

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