



CM180D™

The new standard for powerful, cost-effective enterprise storage security on disk

KEY BENEFITS

Protects disk-based stored information from unauthorized viewing with 256-bit AES encryption

16-port connectivity in a compact, 1U chassis minimizes space and power requirements

Single pane of glass management simplifies configuration and administration for all systems across the enterprise

Flexible network design options allows transparent connectivity to existing SAN fabrics or deployment as a standalone FC switch

KeyCruiser™ key lifecycle management system ensures data recoverability with easy, centralized administration

As storage networks evolve into multi-tiered, distributed environments with copies of sensitive data stored in multiple locations, organizations look to strong data encryption to provide a last layer of defense. Until recently, available solutions have not been useful for enterprise-class environments due to the severe performance penalty imposed by software or the high cost of scaling two-port encryption appliances. Now CipherMax provides a scalable, manageable, and transparent solution to secure data across distributed enterprise environments.

The CipherMax CM180D integrates powerful high-speed encryption processing and high port count, any-to-any connectivity, enabling the CM180D to deliver an enormous amount of functionality with far less consumption of space, power and cooling than first-generation inline encryption appliances. Users can configure up to 16 FC connections to suit their network requirements with load-balanced, port-level bandwidth allocation of encryption processing. This dynamic distribution of encrypted data throughput across multiple ports provides the most efficient use of processing power and highest levels of performance, manageability and scalability available. The CM180D delivers a complete solution for all primary and secondary disk-based storage applications.

Scaling Storage Security Across the Enterprise

The CM180D architecture was specifically designed to provide high performance, flexibility of deployment and ease of management, thus avoiding problems commonly encountered with currently available encryption appliances in enterprise environments. CM180D capabilities include:

High port count: The CM180D supports up to 16 ports in a single chassis, or 32 ports in a clustered configuration. By clustering a CM180D with a modular CM250 or CM500 system, the CM180D can scale from 16 up to 272 FC ports to accommodate future growth requirements.

High performance processing: High-speed, load-balanced processing provides enough encrypted data throughput to support multiple 2Gb Fibre Channel connections at full line speed with complete network design flexibility.

Centralized management: Global administration allows the management of all CipherMax functions for any number of CM systems through a single, secure user interface. An innovative “single pane of glass” management model enables seamless, scalable management and operational support across the entire SAN.

Intelligent configuration: Automatic zoning detection and optional support for LUN masking and re-mapping significantly reduce setup time and mitigate the possibility of configuration errors.

Integrated SAN fabric: The CM180D can be installed in controller mode for transparent installation and operation, in discovery mode by trunking onto an existing switch, or full FC switching mode for maximum value. The CM180D supports fully load-balanced traffic with any-to-any connectivity across multiple trunked links, providing enhanced performance and resiliency against disruptions.

Energy and space efficiency: The CM180D’s 1U chassis design and ultra low power consumption relative to data throughput provide the industry’s lowest operational cost.

KeyCruiser Key Lifecycle Management

CipherMax's key lifecycle management system provides users with secure, manageable and flexible administration of their data encryption keys. The combination of the CM180D with the KeyCruiser key management system enables the implementation of automated key control processes designed to mitigate the possibility of lost or exposed keys. Clustered KeyCruiser systems support redundant archiving of encryption keys and system configurations with geographic separation, ensuring the ability to recover data and security configurations when needed, including the ability to replicate a complete CM180D system following a catastrophic event.

Complete Storage Security Solutions

The CM180D can be implemented as a standalone device for disk encryption services with optional support for Fibre Channel switching, or in combination with other CipherMax CM systems to provide complete storage security solutions across distributed storage networks. These solutions, such as SecureDR™, and SecureRemote™, enable the complete protection and management of sensitive data while "at rest," or "in flight" to a remote backup location.

CipherMax CM180D Specifications

Components and Options

Base system chassis includes two power modules, three independent, hot-swappable fan modules, an integrated switch fabric and system control functions. Systems can be clustered for high availability and scalability.

I/O Connectivity

- 16 auto-sensing 1-2 Gbps FC ports
- Small Form Factor Pluggable (SFP) transceivers
- Auto-sensing of E_Port/F_Port type; configurable as N_Port device

Protocols

SCSI FCP; SSL; SSH; Secure FTP; RADIUS

Security

- Hardware-based cryptographic acceleration for 256-bit AES data encryption
- FIPS 140-2 tested at Level 2 (validation pending NIST approval)

Software

- CipherMax data encryption administration
- FSPF trunking software across any number of ports with dynamic load balancing
- SAN access control with optional LUN masking and re-mapping functions
- Data recovery utility for Linux-based PC

System Monitoring

Temperature, fan, and power supply status monitored by system firmware with SNMP trap and alert notification to SANcruiser network management system.

Management

SANcruiser web-based management with discrete storage and security administration roles (Linux/Windows)

Key Management

KeyCruiser key lifecycle management system provides automated backup of encryption keys and security configurations with up to 16-way clustering. (Linux/Windows)

Fault Management

Fault detection, notification and automatic recovery

Form Factor

1U rack mount enclosure, installable into standard 19-inch racks

Environmental

Operating temperature: 0°C to 40°C

Storage temperature: -25°C to 70°C

Relative humidity: 5% to 95% non-condensing

Weight and Dimensions

Weight: 32 lbs (14.5 kg)

Dimensions: 1.75 in H 17.25 in W x 28 in L

Power Supplies

100-240 VAC, 47 to 63 Hz

Max input current: 4A @ 100VAC

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