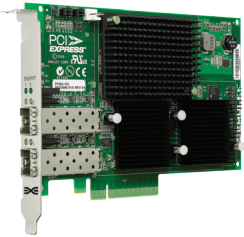




Emulex OneSecure™ Adapter

Host-based storage security for data-at-rest on disk and in-flight on the storage network



The EMC-branded Emulex OneSecure™ Adapter is an 8Gb/s Fibre Channel encryption Host Bus Adapter (HBA) that provides high-performance, affordable, hardware-based encryption. OneSecure adapters protect data on the wire and at-rest, encrypting data throughout the data lifecycle without impacting application performance. OneSecure is integrated into EMC® PowerPath® Encryption with RSA® as well as in its new EMC® VNX™, EMC CLARiiON® network storage and EMC Celerra® unified storage systems as part of a complete security solution for Fibre Channel-connected hosts that encrypts data without sacrificing server performance, system uptime or stability for high workload data center environments.



OneSecure™

Hardware-based security solution delivers maximum SAN protection for low cost, with minimal impact to application or database performance

Protects more data, provides a best practices security solution: OneSecure protects data where it is created—in the server, and in hardware—and protects it no matter where the data goes outside the server, improving the data center security stance against data theft and loss. Because encryption is done as close to the data source as possible, it meets the Storage Networking Industry Association (SNIA) best practices standard, and supports the National Institute of Standards and Technology (NIST) requirements for hardware protection of keys.

Provides a more affordable solution, non-disruptive to existing infrastructures: There is no need to rip and replace current storage systems, or purchase expensive encryption appliances that do not scale and add unwanted complexity to the storage environment. OneSecure encrypts data on any storage array, which protects disks in the event of unauthorized access or disk removal. This also means expensive disk shredding is no longer necessary, because the data on disk is unreadable and encryption keys are securely stored on the key manager.

OneSecure is:

- 30% less expensive than disk shredding
- 50% less expensive than encryption arrays
- 70% less expensive than encryption switches

Delivers high-performance encryption: By offloading encryption processes to the Host Bus Adapter (HBA), OneSecure delivers a high-performance solution without the high CPU overhead experienced with software encryption.

Easy to use, no more point products: OneSecure is installed and configured just like any Emulex LightPulse Fibre Channel HBA. OneSecure starts encrypting data when advanced software such as EMC PowerPath Encryption with RSA configures the OneSecure HBA. This solution encryption enables the entire network with one product, providing one simple security solution that is easy to install and manage. OneSecure scales easily by adding additional OneSecure adapters to servers as business needs grow.

Key Benefits

- Protects data in-flight across the network and at-rest on disk
- Costs substantially less than alternative encryption solutions
- Drop-in solution enables compliance with internal, private and government standards (PCI-DSS, HIPAA, and more)
- Eliminates CPU bottlenecks by offloading encryption to the adapter
- Best practices solution encrypts as close to the data source as possible for maximum data security
- Optimized for virtualized environments—enterprise-wide key management enables virtual machine (VM) migration with encrypted storage ready for use
- Scales easily across the enterprise just by adding additional OneSecure adapters
- Non-disruptive to the existing storage infrastructure and applications and works with most FC storage arrays from various vendors
- Enterprise-class key management applications

Key Features

- Efficient centralized administration of all Emulex OneSecure and LightPulse adapters via Emulex OneCommand Manager
- FIPS 140-2*
- AES 256-bit encryption
- Support for Message Signaled Interrupts eXtended (MSI-X), improves host utilization and enhances application performance
- Support for 8Gb/s and 4Gb/s Fibre Channel devices
- Comprehensive virtualization capabilities with support for N_Port ID Virtualization (NPIV) and Virtual Fabric
- Host-to-fabric FC-SP authentication
- Easy to install, deploy new firmware with minimal server reboots
- PCIe 2.0 bus compliant, with PCIe 1.0-backward compatibility supported

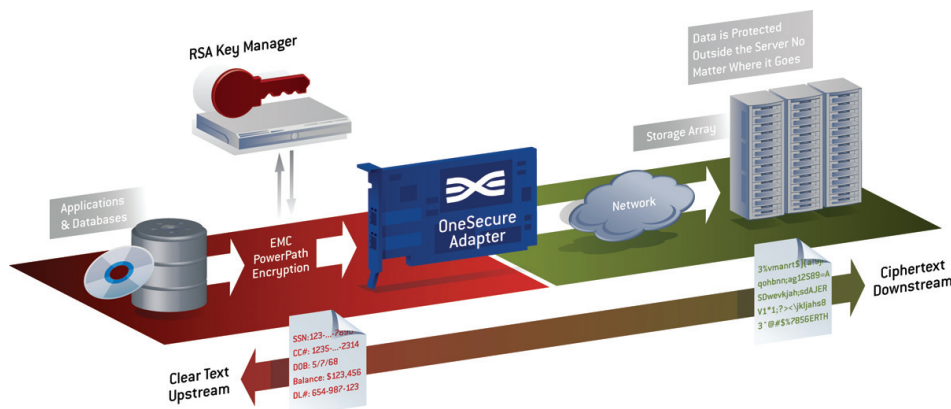
* Please see www.emulex.com/fips for FIPS certification status.

OneSecure LPSe12002-ML1-E

Management Features

Integrated into EMC PowerPath Encryption with RSA Key Manager:

- OneSecure is the foundation of this hardware-enabled encryption solution. OneSecure is installed into the servers, and operates just like a standard Emulex Fibre Channel adapter.
- PowerPath Encryption recognizes the OneSecure adapter, then PowerPath configures the policies on the adapter to start encrypting data.
- RSA Key Manager interfaces with PowerPath Encryption to provide the keys. PowerPath Encryption configures OneSecure to encrypt specific logical unit numbers (LUNs).
- OneSecure supports up to 100,000 unique encryption policies to support large-enterprise, virtualized, high-availability environments.
- The Emulex AutoPilot Installer automates the installation process and significantly reduces time to deployment and administrative costs.
- The Emulex OneCommand™ Manager application enables centralized discovery, monitoring, reporting and administration of Emulex adapters on local and remote hosts. Powerful automation capabilities facilitate remote driver parameter, firmware and boot code upgrades. Advanced diagnostic features such as adapter port beaconing and adapter statistics help to optimize management and network performance while the environmental monitoring feature helps to maintain optimum host-to-fabric connections.
- Emulex's management instrumentation complies to Open Management Standards, such as SMI-S and common HBA API support.



Architecture

- Dual-channel
- 8Gb/s or 4Gb/s Fibre Channel link speeds automatically detected
- Integrated data buffer and code space memory

OS Support

- Windows

Hypervisors

- Windows Hyper-V

Hardware Environments

- Intel x86, x64

Compatibility

- 100% compatible with PowerPath Encryption algorithms by RSA
- Compatible with RSA Key Manager

Optical

- Data rates: 2.125, 4.25 and 8.5Gb/s (auto-detected)
- Optics: Short wave lasers with LC-type connector
- Cable: Operating at 8.5 Gb/s
 - 50/125µm (500MHz*km BW)-up to 50m
 - 50/125µm (2000MHz*km BW)-up to 150m

Physical Dimensions

- Full height, half length form factor
- 6.600" x 4.376"
- Standard bracket

Power & Environmental Requirements

- Volts: +3.3, +12
- Operating temperature: 0° to 55°C (32° to 131°F), 150 lfm
- Storage temperature: -40° to 70°C (-40° to 158°F)
- Relative humidity: 5% to 95% non-condensing
- 23°C wet bulb
- Watts: 22W

What's in the Box

- 1x OneSecure adapter
- 1x standard bracket
- Downloadable drivers for OneSecure and OneCommand Manager application

To Get the Complete Solution

- EMC PowerPath Encryption with RSA and Emulex OneSecure are available from EMC and EMC-authorized resellers

Agency Approvals

- Class 1 Laser Product per DHHS 21CFR (J) and EN60825-1
- UL recognized to UL 60950-1
- CUR recognized to CSA22.2, No. 60950-1-07
- Baurt-certified to EN60950-1
- FCC Rules, Part 15, Class A
- ICES-003, Class A
- EMC Directive 2004/108/EEC (CE Mark)
 - EN55022, Class A
 - EN55024
- Australian EMC Framework (C-Tick Mark)
 - AS/NZ CISPR22, Class A
- VCCI (Japan), Class A
- KCC (Korea), Class A
- BSMI (Taiwan), Class A
- EU RoHS Compliant (Directive 2002/95/EC)
- China RoHS Compliant

Ordering Information

- LPSe12002-ML1-E**
 - Dual-channel, multi-mode optic interface

SPECIFICATIONS

Standards

- FIPS 140-2*
- ANSI Fibre Channel: FC-PI-4, FC-FS-2, FC-FS-2/AM1, FC-LS, FC-AL-2, FC-GS-6, FC-FLA, FC-PLDA, FC-TAPE, FC-DA, FCP through FCP-4, SBC-3, FC-SP Authentication, FC-HBA and SMI-S v1.1
- PCI Express Base Spec 2.0
- PCI Express Card Electromechanical Spec 2.0
- Fibre Channel class 2 and 3

* Please see www.emulex.com/fips for FIPS certification status.



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