Data sheet

# HP Enterprise Secure Key Manager 4.0

## Manage business-critical encryption keys for OASIS KMIP clients

**Interoperable**

- Supports OASIS KMIP, NIST, and existing HP standards
- Supports a growing range of HP tape, disk, network, cloud, and partner data protection products and solutions
- Upgradeable to new software releases
- HP ArcSight FlexConnector for ESKM is available

**Secure**

- Hardened server appliance designed as a FIPS 140–2 Level 2 cryptographic module
- All software is included, preinstalled, digitally signed, and verified at startup
- Keys are always encrypted at rest and in motion; SSL/TLS encrypted communications
- Strong mutual certificate authentication available for access to keys
- Local Certificate Authority is included

**Scalable**

- Clusters span and serve multiple data centers, locations, and regions
- Supports tens of thousands of key-using clients and millions of keys

**Reliable**

- High-availability clustering, 2–8 nodes
- Performs automatic key replication, client load-balancing, and failover
- Fault-tolerant hardware with mirrored internal disks, dual power supplies, dual network ports, and redundant cooling

**Manageable**

- Secure remote administrator access, easy to designate roles and privileges
- Scheduled backups and log rotations
- SNMP alerts and SIEM log monitoring

## Enterprise data protection

**Protecting sensitive information with data encryption**
Organizations across all industry and public sectors are increasingly challenged to protect their sensitive information (cardholder data, patient records, personal identifying information, and intellectual property) from threats like unauthorized insider access, accidental disclosure, and theft by a range of hostile outsiders.

Auditors, regulators, and industry compliance mandates often require encryption of sensitive data-at-rest as a minimum standard of care and security best practice. When sensitive data at rest is encrypted, the risks of audit failures, financial losses, and damage to an organization's reputation are significantly reduced.

**Key management is essential**
When encryption is used to protect data at rest, strong key management practices with policy enforcement are needed to manage, protect, serve, and preserve underlying encryption keys over the life of the data. If keys are compromised, data is compromised. If keys are lost, data is lost and business continuity is impacted. Finally, if an organization cannot prove that data and keys were managed and protected under stated policies, it may fail compliance audits.

## Product overview

HP Enterprise Secure Key Manager (ESKM) provides a complete solution for unifying and automating an organization's encryption controls by securely creating, protecting, serving, controlling, and auditing access to encryption keys.

ESKM now supports the OASIS Key Management Interoperability Protocol (KMIP) version 1.0, 1.1, and 1.2 clients, enabling the broadest range of data protection products, partners, and solutions. A client-side Software Developer Kit (SDK) is also available to HP Partners and customers to enable native ESKM client integrations.

ESKM is designed as a fully integrated solution: an independent lab-validated secure server appliance. Standard capabilities include high availability clustering and failover, secure key database, key generation and retrieval services, identity and access management for administrators and encryption devices, secure backup and recovery, a local Certificate Authority, and strong audit logging for compliance validation.

# HP Enterprise Secure Key Manager version 4.0


**ESKM high-availability cluster with enrolled client systems**

| | |
|---|---|
| **Software** | **Unified, secure, scalable encryption key management services**<br>• Automate and enforce organizational data protection and compliance policies<br>• Secure key generation, retrieval, access, and auditing for enrolled clients<br>• Supports multiple key types, use cases, key-using client devices and applications<br>• Capacity for >2 million keys, >25,000 clients, and eight HP ESKM nodes per distributed cluster<br>**Strong auditable security**<br>• Security hardened Linux-based server appliance; all software is included and digitally signed<br>• All keys and backups are encrypted both at rest and in motion<br>• Granular control of key access to key owners and across administrator defined key-sharing groups<br>• Certificate-based mutual client-server authentication, secure administration, and audit logging<br>• ESKM 4.0 is designed to FIPS 140-2 Level 2 requirements, validation pending<br>• Locking front bezel, dual pick-resistant locks for security officer dual control<br>**Reliable continuous access to business-critical encryption keys**<br>• Supports mirrored storage internal, dual networks, dual power, and redundant cooling<br>• Native multisite high-availability clustering, keys replicated securely and transparently to all nodes<br>• Comprehensive monitoring, recovery, scheduled backup, and restore functionality<br>**Management**<br>• Web browser GUI and Command Line Interface supported<br>• SSL/TLS and SSH for secure administrator remote access<br>• Terminal interface (serial RS-232C) for initial installation setup |
| **Cryptography and security** | Supports (in FIPS mode) AES (128, 192, 256), 3-key Triple DES, HMAC, and RSA (2048/3072/4096) key types<br>Designed for NIST SP 800-131A and FIPS 140-2 Level 2 requirements |
| **Physical characteristics and ports** | Full configuration weight 36.4 lb (16.5 kg)<br>Overall dimensions 31.3 (d) x 19.0 (w) x 1.7 (h) in. (79.5 x 48.3 x 4.32 cm)<br>1U rack mount; dual locking front bezel, FIPS Level 2 physical security, and rack mount rail kit included<br>2 autosensing 10/100/1000BASE-T (Ethernet) RJ-45 ports<br>1 RS-232C serial console port, 1 video port |
| **Processor, memory, and disk** | Processor: 6-core Intel® Xeon® Processor E5-2640 @2.5 GHz<br>Memory: 16 GB DDR3 DIMM; 15 MB L3 Cache<br>Disk controller: HP Smart Array, 1 GB flash-backed write cache<br>Disk: Dual RAID-1 (mirror) SFF 300 Gb 15k rpm SAS disk drives<br>Cooling: 6-fan variable-speed redundant cooling |
| **Environment** | Operating temperature 50°F to 95°F (10°C to 35°C) at sea level<br>Altitude up to 10,000 ft. (3050 m) with a derating of maximum operating temperature of 1.0°C per 305 m (1.8°F per every 1000 ft.) above sea level; no direct sustained sunlight<br>Operating relative humidity 10% to 90%, 82.4°F (28°C) maximum wet bulb temperature, noncondensing<br>Non-operating/Storage temperature -22°F to 140°F (-30°C to 60°C); maximum change 20°C/hr (36°F/hr)<br>Non-operating/Storage relative humidity 5% to 95%, 101.7°F (38.7°C) maximum wet bulb, noncondensing |
| **Electrical and thermal characteristics** | Maximum heat dissipation 290 BTU/hr (305.95 kJ/hr);<br>Voltage 100–240 VAC auto-ranging, Frequency 50/60 Hz; Idle power 85 W, Maximum power 135 W<br>**Note:** Idle power is the actual power consumption of the device with no ports connected or active.<br>Each HP ESKM node ships with dual redundant power supplies and two (2) IEC C13 to C14 power cords intended for rack mounting with dual PDUs and UPS for highest availability. HP ESKM nodes may also be powered using two (2) optional regional power cords connecting to receptacles on separate branch circuits for highest availability. |

# Ordering options for ESKM 4.0 software and servers

**ESKM 3.x to 4.0 Upgrade Kit and single node server LTU**
**C8Z65AA**

Software upgrade kit and LTU for one ESKM server. Installs version 4.0 software on existing ESKM 3.0 or 3.1 hardware.

**ESKM 4.0 single node server**
**C8Z61AA**

One ESKM 4.0 server node. Includes all hardware, accessories, preinstalled software, and documentation. Single nodes are suitable for ESKM test and development environments, and for expansion of production clusters.

**ESKM 4.0 Two node cluster server**
**C8Z62AA**

Two ESKM 4.0 server nodes. Includes two sets of hardware, accessories, software, and documentation. Two node clusters are recommended for all ESKM production environments and expansion of existing clusters.

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| **Prerequisites and limitations** | Requires verification of prior ESKM 3.0 or 3.1 server purchase and a current ESKM support agreement. | None. Single nodes are recommended only for ESKM test and development environments, and for expansion of production clusters. | None. Two node clusters are recommended for all ESKM production environments and expansion of existing clusters. |
| **Hardware** | Includes a mirror pair of disk drives pre-imaged with ESKM 4.0 software | Single node ESKM server. Include two power supplies and IEC-IEC power cords, null modem serial cable, 1U rack mounting hardware kit, and two sets of keys to the locking bezel. | Two single node ESKM servers. Each includes two power supplies and IEC-IEC power cords, null modem serial cable, 1U rack mounting hardware kit, two sets of keys to the bezels. |
| **Documentation** | Includes “Read Me First” card and document CD with user guide, installation guide, and release notes. | Includes “Read Me First” card and document CD with user guide, installation guide, and release notes. | Includes “Read Me First” cards and two document CDs with user guide, installation guide, and release notes. |
| **Software** | ESKM 4.0 software is included and pre-installed on disks | ESKM 4.0 software is included and pre-installed on server node. | ESKM 4.0 software is included and pre-installed on server node. |
| **Server LTU** | Includes ESKM 4.0 software LTU for one existing single server node | Includes ESKM 4.0 software LTU for a single server node. | Includes ESKM 4.0 software LTUs for each of two server nodes. |
| **Client LTU** | Existing ESKM client licenses are preserved. Additional clients require additional client licenses, which may be purchased in any desired quantity (see table below). | Each ESKM 4.0 single node server includes one preinstalled ESKM client license. Additional clients require additional client licenses, which may be purchased in any desired quantity (see table below). | Each ESKM 4.0 two node server cluster includes two preinstalled ESKM client licenses. Additional clients require additional client licenses, which may be purchased in any desired quantity (see table below). |
| **Support services** | ESKM server node to be upgraded must be covered under an existing support agreement. | Support services must be ordered at the same time as a single node ESKM server order. | Support services must be ordered at the same time as an ESKM two node cluster server order. |
| **Installation services** | ESKM installation or startup, upgrade, migration, and training services are available. Please contact your HP sales representative or reseller. | ESKM installation/startup, upgrade, migration, and training services are available. Please contact your HP sales representative or reseller. | ESKM installation or startup, upgrade, migration, and training services are available. Please contact your HP sales representative or reseller. |

| Order item# | Client license item description |
|---|---|
| C8Z40AA | 1/Client LTU (Min Qty 1) |
| C8Z41AA | 1/Client LTU (Min Qty 10) |
| C8Z42AA | 1/Client LTU (Min Qty 25) |
| C8Z43AA | 1/Client LTU (Min Qty 50) |
| C8Z46AA | 1/Client LTU (Min Qty 500) |
| C8Z47AA | 1/Client LTU (Min Qty 1000) |
| C8Z48AA | 1/Client LTU (Min Qty 3000) |
| C8Z49AA | 1/Client LTU (Min Qty 10000) |

ESKM versions 3.0 and 3.1 are FIPS 140-2 Level 2 validated, FIPS certificate #1922, and ESKM 4.0 validation is pending


**Resources**

**Learn more about HP Enterprise Security Products, Services, and Solutions**
**hpenterprisesecurity.com**

**Find ESKM product details and related products at**
**hp.com/go/eskm**

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# Unify data security and key management controls for all your sensitive data

ESKM helps protect sensitive information including payments cardholder data, customer and employee records, electronic health records, intellectual property, hosted cloud data, and national security and defense information.

ESKM helps organizations meet compliance and audit mandates including Payment Card Industry Data Security Standard (PCI-DSS), Health Insurance Portability and Accountability Act (HIPAA) or Health Information Technology for Economic and Clinical Health (HITECH), Graham Leach Bliley, Sarbanes-Oxley, state and international privacy laws, national security regulations, and internal policies, controls, and audits.

ESKM now supports the OASIS Key Management Interoperability Protocol (KMIP) standard and a growing range of HP and partner encryption solutions for protecting sensitive data at rest wherever it resides from disk and tape media, to cloud.

ESKM scales easily to support large enterprises across multiple geographically distributed data centers, tens of thousands of encryption clients, and millions of keys.

ESKM supports applicable NIST and PCI standards and recommendations for cryptography, security, key management, and audit.

# HP Enterprise Security and Services

**HP Enterprise Security**
HP is a leading provider of security and compliance solutions for the modern enterprise to mitigate risk in their hybrid environment and defend against advanced threats. Based on market-leading solutions from HP ArcSight, HP Fortify, HP Atalla, and HP TippingPoint, the HP Security Intelligence Platform uniquely delivers the advanced correlation, application protection, and network defenses to protect today's hybrid IT infrastructure from sophisticated cyber threats.

**HP Security Services**
HP ESP Global Services take a holistic approach to building and operating cyber security and response solutions and capabilities that support the cyber threat management and regulatory compliance needs of the world's largest enterprises. We use a combination of operational expertise—yours and ours—and proven methodologies to deliver fast, effective results, and demonstrate ROI. Our proven, use case-driven solutions combine market-leading technology together with sustainable business and technical process executed by trained and organized people.

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