



#### Features at a glance

- Industry-leading physical and logical security
- Atalla Key Block for advanced Triple DES key management
- Plug-and-play fast host connectivity
- Dual power supplies
- Dual NIC (optional)
- PIN and component printing option (optional)
- Cryptographically protected remote key loading
- Space-saving, state-of-the-art, rack-mountable platform
- Command-set compatibility with all Atalla network security processors
- Enhanced security and user-friendly firmware upgrades

**A fast and secure hardware-based cryptographic processing solution for ATM/EFT/POS networks.**

# HPE Atalla Hardware Security Module (HSM) Ax160 Models

## Protect your organization and customers from financial fraud

Protect your business and its financial data with the HPE Atalla HSM (Network Security Processor). This secure, tamper-resistant hardware security module (HSM) for cryptographic processing solutions on automatic teller machine (ATM), electronic funds transfer (EFT), and point of sale (POS) networks delivers high-performing cryptography and key management capabilities for card payment authorization and real-time fraud prevention. And it meets critical financial services industry, PCI-DSS, and NIST standards for security and compliance.

HPE Atalla HSM (NSP) provides unrivaled protection for Triple Data Encryption Standard (3DES) and other cryptographic keys when safeguarding value-based transactions. They are designed as the hardware security module complement to the Atalla Key Block, an industry-leading advanced key management solution.

The Ax160-3 HSM family consist of three models. Each model offers identical PCI security functionality, with different performance levels:

#### • HPE Atalla HSM A10160

At 1060 PIN translates per second, when used with the Atalla Key Block, the A10160 HSM efficiently handles high-volume environments.

#### • HPE Atalla HSM A9160

At 280 PIN translates per second, the A9160 HSM is a cost-effective solution for mid-level transaction environments.

#### • HPE Atalla HSM A8160

At 80 PIN translates per second, the A8160 HSM works well in low-volume transaction environments while still encompassing the same security and functionality of high-performing HSM models.

Institutions like yours can match HSMs to current throughput demands and expand capacity as needed.

From a hardened, rack-mountable, 2U perimeter to a state-of-the-art tamper-resistant architecture, the HPE Atalla HSM Ax160-3 raises the bar for physical and logical security, flexibility, and ease of use. Atalla HSMs also interoperate transparently with non-Atalla hardware security modules. Atalla recommends customers to use Atalla Key Block that provides extra security when using two and three key length with Triple DES and can be utilized for other encryption methods.

The new-generation Atalla HSM Ax160-3's is fully backward compatible with its previous generation models, incorporating more than three decades of expertise and the latest technologies from Hewlett Packard Enterprise—making it a safer and high performance solution.

**The Atalla Key Block and Atalla HSM Ax160-3 offer benefits, such as:**

- A single HSM solution with simultaneous support of single-length DES, two and three key Triple DES, and RSA public or private keys
- Support for future algorithms, key types, and key lengths
- Full support for mixed encryption environments with masking of vulnerable keys and strong control over the usage of shorter cryptographic keys

**Advanced key management solution using Atalla Key Block**

Atalla Key Block is the advanced key management complement to the Atalla Ax160 HSMs and other Atalla HSM models. Leading financial industry independent software vendors (ISVs) have embraced Atalla Key Block. It has also been adopted as part of the industry-standard ANSI X9.24 Part 1-2009 Retail Financial Services Symmetric Key Management Part 1: Using Symmetric Techniques and ANSI X9.24 Part 2-2006 Retail Financial Services Symmetric Key Management Part 2: Using Asymmetric Techniques for Distribution of Symmetric Keys.

**Physical security**

- FIPS 140-2 Level 3 certification for physical security
- Rack-mountable (2U), physically fortified form factor
- Double-locking bezel with Medeco locks
- Penetration detection (protective grid)
- Out-of-range temperature and voltage detection
- Low-battery voltage detection
- PIN security and key management implemented within a tamper-resistant, tamper-responsive hardware security module perimeter for protection against manipulation

**Logical security**

- Industry-standard Atalla Key Block key management technology
- Advanced security architecture that prevents retrieval of PINs, keys, and other sensitive data in cleartext form
- Automated and manual key management options
- Encrypted, convenient configuration, management, and key loading via HPE Atalla Secure Configuration Assistant (no cleartext passing of keys or key components)
- Remote ATM key initialization and rekeying via the optional Atalla Remote Key feature
- Payment Card Industry (PCI) Security Standards Council PIN Transaction Security (PTS) approved device

**Performance**

- Rated at 1060, 280, and 80 Triple DES PIN translates per second using the Atalla Key Block
- Tailored to entry-level, mid-level, or high-volume environments to meet processing performance needs and demanding security requirements
- Linear performance scaling with additional hardware security module units

**Fast host connectivity**

- Auto-sensing 10/100/1000BASE-T Ethernet interface for point-to-point TCP/IP
- Integrated high-performance TCP/IP stack and communications processor
- Asynchronous connection for legacy applications

**Flexibility and extensibility**

- Broad application support (ATM/EFT/POS, stored value, loyalty cards, and corporate funds transfer)
- Customer-defined security policies enforced
- Easy command set customization
- Seamless interoperability with non-Atalla environments
- Remote rekey support for NCR, Diebold, and other ATM vendor devices
- Command set compatibility with earlier models of Atalla HSMs

**Easy to use and manage**

- Encrypted, convenient key loading via the Atalla Secure Configuration Assistant
- Simple-to-use GUI for key loading and configuration
- Fast, convenient software upgrades
- No need to replace components (for example, EPROM) when upgrading

**Global support**

Hewlett Packard Enterprise provides worldwide support and services to help you maintain the security and availability of your business environment.

**STANDARD SUPPORT**

<b>Cryptographic support</b>	Data encryption algorithm (DEA) standard (ANSI X3.92-1987, ISO 10126-2), DES, and two- and three-key Triple DES; Banking procedures for message encipherment, general principles (ISO 10126-2); PIN management and security, part 1 and 2 (ANSI X9.8, ISO 9564-1 and 2); Message authentication (ISO 9797-1, ANSI X9.9-1987, ISO 9807); MasterCard CVC, Visa CVV, and American Express CSC; MasterCard CVC3, Visa dCVV, and Discover dCVV; Unique key per transaction (ANSI X9.24-2004); EMV-based smart card support
<b>PIN block formats</b>	ISO 9564; PIN pad; IBM 3624 ATM PIN format; IBM 4731 PIN block; IBM Encrypting PIN pad; Unisys (Burroughs); Diebold; Docutel/Olivetti
<b>PIN verification methods</b>	IBM 3624; Visa PVV; Atalla Bi-Level DES; Diebold; NCR
<b>Key management standards</b>	ANSI X9.24 Parts 1 & 2; ANSI X9.52; Triple DES derived unique key per transaction

**Note:** Card validation code (CVC), card verification value (CVV), card security code (CSC), card validation code 3 (CVC3), dynamic card verification value (dCVV), and PIN verification value (PVV)

**HPE Atalla Ax160-3 HSMs****TECHNICAL SPECIFICATIONS**

<b>Physical dimensions</b>	
	<b>Ax160-3</b>
Height	3.45 inches (8.76 cm)
Width	19.00 inches (48.26 cm)
Depth	27 inches (68.58 cm)
Weight	33.7 pounds (15.3 kg)
<b>Controls</b>	Power on/off switch, unit ID switch
<b>Electrical</b>	
	<b>Ax160-3</b>
Rated input voltage	100 to 120 VAC, 200 to 240 VAC
Rated input current	6.2 A at 100 VAC 3.7 A at 240 VAC
Rated input frequency	50 Hz to 60 Hz
Rated input power	616 W at 100 VAC 873 W at 240 VAC
BTUs per hour	2099 at 100 VAC 2975 at 240 VAC
Rated steady-state power	550 W at 100 VAC 800 W at 240 VAC
Maximum peak power	550 W at 100 VAC 800 W at 240 VAC
<b>Operating environment</b>	
	<b>Ax160-3</b>
Temperature	5° to 59° C (41°F to 122° F)
Relative humidity	5% to 59% Non-condensing
<b>Certification/compliance</b>	
Safety	ULC, CE, TUV approved
Emissions	FCC, C-Tick, GOST
Environmental	RoHS
<b>Connectivity</b>	
Communications	Ethernet running TCP/IP
Connection	10/100/1000BASE-T (RJ45) auto-sensing

## HPE Atalla Ax160 Network Security Processors (continued)

### ORDERING INFORMATION

Product ID	Description
AJ560D	HPE Atalla HSM A10160 with Atalla Key Block
AJ561D	Atalla HSM A10160 with variant key management
AJ558D	Atalla HSM A9160 with Atalla Key Block
AJ559D	Atalla HSM A9160 with variant key management
AJ556D	Atalla HSM A8160 with Atalla Key Block
AJ557D	Atalla HSM A8160 with variant key management
C9B77AAE	Atalla Remote Key feature (optional)
C9B78AAE	Premium Value Commands (optional)
AJ592A	Chain of Trust—notification for tracking of serial number of HSMs attached to order for on-site delivery authentication (Optional)
C8Z36AAE	HPE Atalla HSM Ax160 Enhanced AKB SW 1 per Appl. LTU
C8Z37AAE	HPE Atalla HSM Ax160 Enhanced VAR SW 1 per Appl. LTU

### Resources

**Worldwide sales assistance:**  
[datasecurity.globalsales@hpe.com](mailto:datasecurity.globalsales@hpe.com)

**Atalla sales orders**  
[datasecurity.atalla.orders@hpe.com](mailto:datasecurity.atalla.orders@hpe.com)

**Worldwide technical support**  
**Atalla support**  
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 Outside US: +1-916-414-0216

### About Atalla Key Block

Atalla Key Block is the advanced key management complement to the Atalla HSM Ax160's and other Atalla HSM models. Leading financial industry independent software vendors (ISVs) have embraced Atalla Key Block. It has also been adopted as part of the industry-standard ANSI X9.24 Part 1-2009 Retail Financial Services Symmetric Key Management Part 1: Using Symmetric Techniques and ANSI X9.24 Part 2-2006 Retail Financial Services Symmetric Key Management Part 2: Using Asymmetric Techniques for Distribution of Symmetric Keys.

### About HPE Security—Data Security

HPE Security—Data Security drives leadership in data-centric security and encryption solutions. With over 80 patents and 51 years of expertise we protect the world's largest brands and neutralize breach impact by securing sensitive data at rest, in use and in motion. Our solutions provide advanced encryption, tokenization, and key management that protect sensitive data across enterprise applications, data processing IT, cloud, payments ecosystems, mission critical transactions, storage, and big data platforms. HPE Security—Data Security solves one of the industry's biggest challenges: simplifying the protection of sensitive data in even the most complex use cases. [hpe.com/software/DataSecurity](https://hpe.com/software/DataSecurity)

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