



HP Atalla Ax160 Network Security Processors

Data sheet

HP Atalla Ax160 series network security processors (NSPs) provide unrivaled protection for Triple Data Encryption Standard (TDES) and other cryptographic keys when safeguarding value-based transactions. They are designed as the hardware complement to the Atalla Key Block, the industry-standard advanced key management solution.

The Atalla Ax160 series NSPs consist of three models. Each model offers identical security functionality, with different processing capabilities:

- **Atalla A10160 NSP:** At 1060 PIN translates per second when used with the Atalla Key Block, the A10160 NSP efficiently handles high-volume environments and delivers the fastest and most secure Triple DES performance on the market.
- **Atalla A9160 NSP:** At 280 PIN translates per second, the A9160 NSP is a cost-effective solution for mid-level transaction environments, providing exceptional security and functionality.
- **Atalla A8160 NSP:** At 80 PIN translates per second, the A8160 NSP works well in low-volume transaction environments and has all the security and functionality of larger NSP models. It is the first entry-level device to provide both an auto-sensing Ethernet interface for fast host connectivity and an asynchronous interface for compatibility with legacy systems.

Features at a glance

- Industry-leading physical and logical security
- Advanced Atalla Key Block for optimal Triple DES key management
- Plug-and-play fast host connectivity
- Dual power supplies
- Superior flexibility and ease of use
- Space-saving, state-of-the-art, rack-mountable platform
- Command-set compatibility with all previous Atalla network security processors
- Easy firmware upgrades

Institutions can match their security processors to their particular throughput demands, while gaining the ability to scale gracefully when necessary without changing their applications.

From a hardened, rack-mountable, 2U perimeter to a state-of-the-art tamper-resistant architecture to secure remote key loading, the Atalla Ax160 NSPs raise the bar for physical and logical security, flexibility, and ease of use. They also interoperate transparently with non-Atalla hardware security modules. As a more efficient platform for the industry-standard Atalla Key Block, the Atalla Ax160 NSPs enable you to derive the full security value of single-length DES, two- and three-key Triple DES, and public key encryption—alone or in a mixed encryption environment—while providing a cost-effective migration path to even stronger future algorithms.



The high-performance Atalla Ax160 Network Security Processors, an evolution of the industry-leading Atalla Ax1x0 NSP family, provides a fast and secure hardware-base cryptographic processing solution for ATM/EFT/POS networks.

The new-generation Atalla Ax160 NSPs incorporate more than three decades of standards-based cryptographic expertise coupled with the latest open systems technologies from HP—making the Atalla Ax160 NSPs the fastest, safest security processor solution for your ATM/EFT/POS networks.

Advanced key management solution using the Atalla Key Block key management with the Atalla Key Block

The Atalla Key Block is the advanced key management complement to the Atalla Ax160 NSPs and other Atalla NSP models. The Atalla Key Block has been embraced by leading financial industry ISVs and 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 X9.24 Part 2-2006 Retail Financial Services Symmetric Key Management Part 2: Using Asymmetric Techniques for Distribution of Symmetric Keys. Together, the Atalla Key Block and Atalla Ax160 NSPs offer these benefits:

- A single solution with simultaneous support for single-length DES and two- and three-key Triple DES keys, public keys, and others
- 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.
- Full hardware and software investment protection far into the future

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 protection (protective grid)
- Out-of-range temperature and voltage detection

- Low battery voltage protection
- PIN security and key management implemented within a secure hardware perimeter for protection against manipulation

Logical security

- FIPS 140-2 Level 3 certification for key management
- 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 the Atalla Secure Configuration Assistant (no cleartext passing of keys or key components)
- Remote ATM key initialization and re-keying via the optional Atalla Remote Key feature

Performance

- Benchmarked at up to 1060 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 units

Fast host connectivity

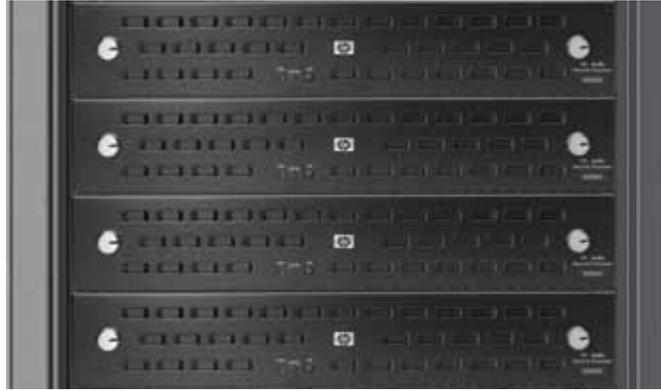
- Auto-sensing 10/100/1000Base-T Ethernet interface for point-to-point TCP/IP
- Integrated high-performance TCP/IP stack and communications processor
- Asynchronous connection for legacy applications also supported by the Atalla A8160 NSP

Flexibility and extensibility

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

Easy to use and manage

- Encrypted, convenient key loading via the Atalla Secure Configuration Assistant



- Simple-to-use GUI for Atalla Key Block key loading
- Fast, convenient release upgrades via CD-ROM
- No need to replace firmware components (for example, EPROM) when upgrading

Support for most standards

- Cryptographic support
 - 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 (ANSI X9.9-1987, ISO 9807)
 - MasterCard CVC (Card Validation Code), Visa CVV (Card Verification Value), and American Express CSC (Card Security Code)
 - MasterCard CVC3 (dynamic card verify code), Visa dCVV (dynamic card check value) and Discover DCVV (dynamic card verification value)
 - Unique key per transaction (ANSI X9.24-2004)
 - EMV-based smart card support
- PIN verification methods
 - Atalla Identikey
 - IBM 3624
 - Visa PVV (PIN Verification Value)
 - Atalla Bi-Level DES
 - Diebold
 - NCR
- PIN block formats
 - ISO 9564
 - PIN Pad
 - IBM 3624 ATM PIN format
- Unisys (Burroughs)
- Diebold
- Docutel/Olivetti
- Triple DES Derived Unique Key Per Transaction

- Key management standards

- ANSI X9.24 Parts 1 & 2
- ANSI X9.52

Global support

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Specifications

Physical dimensions

Height	8.76 cm (3.44 in)
Width	44.80 cm (17.64 in)
Depth	75.57 cm (29.75 in)
Weight	15.87 kg (35.0 lbs)

Controls

Power on/off switch

Electrical

Dual input voltage, auto-sensing	90 -132 V AC180 -260 VAC
Rated input current	7.1 A at 120 VAC; 3.5 A at 240 VAC
Rated input frequency	50Hz to 60Hz
Power consumption	460 W at 100 VAC; 460 W at 200 VAC

Operating environment

Temperature	10°-35° C (50° to 95° F)
Relative humidity	10% to 90% noncondensing 28° C

Certification/compliance

Safety	ULC, CE, TUV approved
Emissions	FCC, C-Tick, Gost
Environmental	RoHS

Connectivity

Communications	Ethernet running TCP/IP
Connection	10/100/1000Base-T (RJ45) auto-sensing Additional asynchronous connection for the Atalla A8160 NSP

Ordering information

Product ID	Description
AJ560A	Atalla A10160 network security processor with Atalla Key Block
AJ561A	Atalla A10160 network security processor with variant key management
AJ558A	Atalla A9160 network security processor with Atalla Key Block
AJ559A	Atalla A9160 network security processor with variant key management
AJ556A	Atalla A8160 network security processor with Atalla Key Block
AJ557A	Atalla A8160 network security processor with variant key management
T16/ARKEY	Atalla Remote Key feature

To learn more about how HP Atalla Security Products and Services can provide better value, productivity, performance and total cost of ownership for your organization, visit: www.hp.com/go/atalla

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