

HP Atalla Ax100 network security processors

Data sheet



The high-performance Atalla Ax100 network security processors provide the most secure hardware-based cryptographic processing for ATM/EFT/POS networks.



HP Atalla Ax100 series network security processors (NSPs) provide unrivaled protection for Triple DES and other cryptographic keys when safeguarding value-based transactions. They are designed as the hardware complement to the Atalla Key Block, an industry-standard advanced key management solution.

The Atalla Ax100 series NSPs consist of three models, each with identical security functionality, but with different processing capabilities:

- **Atalla A10100 NSP.** At 540 PIN translates per second when used with the Atalla Key Block, the A10100 NSP is designed for high-volume environments and delivers the fastest and most secure Triple DES performance on the market.
- **Atalla A9100 NSP.** At 220 PIN translates per second, the A9100 NSP is a solution for mid-level transaction environments that is cost-effective without sacrificing any security or functionality.
- **Atalla A8100 NSP.** At 60 PIN translates per second, the A8100 NSP is designed for low-volume environments and has all the security and function of larger NSP models. It is the first entry-level device to provide both an autosensing Ethernet interface for fast host connectivity and an asynchronous interface.

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
- 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 via the Atalla Ax100 CD-ROM



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

From their hardened, rack-mountable, 1U perimeter to their state-of-the-art tamper-resistant architecture to their secure remote key loading, the Atalla Ax100 NSPs reset the bar for physical and logical security, flexibility, and ease of use. They also interoperate transparently with non Atalla hardware security modules. As an optimal platform for the industry-standard Atalla Key Block, the Atalla Ax100 NSPs enable customers 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 new-generation Atalla Ax100 NSPs incorporate more than three decades of standards-based cryptographic expertise coupled with the latest open systems technologies from HP—making the Atalla Ax100 NSPs the fastest, safest security processor solution for your ATM/EFT/POS networks.

Optimal key management with the Atalla Key Block

The Atalla Key Block is the advanced key management complement to the Atalla Ax100 NSPs and other Atalla NSP models. The Atalla Key Block has been embraced by leading financial industry ISVs and has been adopted as part of the industry standard ANSI X9.24 Part 1-2004, Retail Financial Services Symmetric Key Management Part 1: Using Symmetric Techniques. Together, the Atalla Key Block and Atalla Ax100 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
- Fully secure mixed encryption environments (with masking of weaker keys)
- Full hardware and software investment protection far into the future

Physical security

- FIPS 140-2 Level 3 certification for physical security plus active zeroization
- Rack-mountable (1U), 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 PIN, 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 540 Triple DES PIN translates per second using the Atalla Key Block
- Tailored to entry-level, mid-level, or high-volume environments to meet any processing performance needs and demanding security requirements
- Linear performance scaling with additional units

Fast host connectivity

- Autosensing 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 A8100 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)
 - Unique key per transaction (ANSI X9.24-1990)
 - EMV-based smart card support
- PIN verification methods
 - Atalla Identikay
 - IBM 3624
 - Visa PVV (PIN Verification Value)
 - Atalla Bi-Level DES
 - Diebold
 - NCR
- PIN block formats
 - ANSI X9.8-1982
 - PIN Pad
 - IBM 324 ATM PIN format
 - Unisys (Burroughs)
 - Diebold
 - Docutel/Olivetti
 - Visa Derived Unique Key Per Transaction
- Key management standards
 - ANSI X9.17-1985
 - ANSI X9.24-2004
 - ANSI X9.52

Global support

HP provides worldwide support and services to ensure a secure business environment.

HP Atalla Ax100 network security processors

Ordering information

Product ID	Description
T16/A10100	Atalla A10100 network security processor with Atalla Key Block
T16/A10100V	Atalla A10100 network security processor with variant key management
T16/A9100	Atalla A9100 network security processor with Atalla Key Block
T16/A9100V	Atalla A9100 network security processor with variant key management
T16/A8100	Atalla A8100 network security processor with Atalla Key Block
T16/A8100V	Atalla A8100 network security processor with variant key management
T16/ARKEY	Atalla Remote Key feature

Specifications

Physical dimensions

Height	4.34 cm (1.71 in)
Width	48.64 cm (19.15 in)
Depth	68.45 cm (26.95 in)
Weight	12.3 kg (27 lb)

Controls

Power on/off switch

Electrical

Dual input voltage, autosensing	100–120 V AC at 3 A, 50–60 Hz; 200–240 V AC at 1.5 A, 50–60 Hz
Power consumption	120 V AC at 1.8 A, average; 3.25 A maximum at power on

Operating environment

Temperature	10°–35° C
Relative humidity	10%–85% at 35° C noncondensing

Certification/compliance

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

Connectivity

Communications	Ethernet running TCP/IP
Connection	10/100/1000Base-T (RJ45) autosensing Additional asynchronous connection for the Atalla A8100 NSP

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For more information, go to www.hp.com/go/atalla.

5982-5806EN, 06/2004

