

Overview

Models

HP 10160 Network Security Processor	AJ560A
HP 10160v Network Security Processor	AJ561A
HP 8160 Network Security Processor	AJ556A
HP 8160v Network Security Processor	AJ557A
HP 9160 Network Security Processor	AJ558A
HP 9160v Network Security Processor	AJ559A

Key features

- Industry-leading physical and logical security
- Advanced Atalla Key Block for excellent Triple DES
- Dual power supply
- Easy firmware upgrades via the Atalla USB
- Outstanding flexibility and ease of use

Product overview

HP 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, the industry-standard advanced key management solution. The HP NSPs offer identical security functionality with unique processing capabilities.

Features and benefits

Performance

- **Benchmarked at up to 1060 Triple DES PIN:**
 - Tailored to entry-level, midlevel, 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

Manageability

- **Flexible:**
 - Broad application support (ATM/EFT/POS, stored value, loyalty cards, and corporate funds transfer) Public Key support for Remote Key Management
 - Customer-defined security policies enforced
- **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 FIPS 140-2 Level 3 Smart cards

Standards

- **Cryptographic support:**
 - Data Encryption Algorithm (DEA) standard (ANSI X3.92-1987, ISO 10126-2), DES, and two- and three-key Triple DES



Overview

DES Key Management using X9.24 Parts 1&2 PIN Management using ISO 9564 ISO 16609 Message Authentication
Support Random number generation using NIST SP 800-90 Random Number Generation

- Banking procedures for message encipherment, general principles (ISO 10126-2)

- **PIN verification methods:**

- IBM 3624
- VISA PIN Verification Value (PVV)
- NCR
- Diebold

Security

- **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



Technical Specifications

HP 10160 Network Security Processor (AJ560A)

Ports	2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 USB 2.0	
Physical characteristics	Dimensions	29.25(d) x 19.25(w) x 3.45(h) in. (74.3 x 48.9 x 8.76 cm) (2U height)
	Weight	35.8 lb. (16.24 kg)
	Full configuration weight	35.8 lb. (16.24 kg)
Mounting	standard HP 19" rack	
Environment	Operating temperature	50°F to 95°F (10°C to 35°C)
	Operating relative humidity	10% to 90% @ 35°F (1.7°C), noncondensing
	Nonoperating/Storage temperature	122°F to -4°F (50°C to -20°C)
	Nonoperating/Storage relative humidity	10% to 90% @ 35°F (1.7°C)
Electrical characteristics	Maximum heat dissipation	1773/120 BTU/hr (1715/240 kJ/hr)
	Voltage	120-240/200-240 VAC
	DC voltage	12
	Idle power	460 W
	Maximum power rating	460 W
	PoE power	460 W
	Frequency	50/60 Hz
	Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). Rated input voltage: 90 to 132 VAC/180 to 264 VAC; rated input current: 7.1 A at 120 VAC/3.5 A at 240 VAC; rated input frequency: 50 Hz to 60 Hz; rated input power: 852 W; BTUs per hour: 1773 at 120 VAC/1715 at 240 VAC; rated steady-state power: 460 W at 100 VAC/460 W at 200 VAC; maximum peak power: 460 W at 100 VAC/460 W at 200 VAC
Safety	CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; CAN/CSA-C22.2 No.60950-00/UL 60950 - Third Edition, Safety Information for Technology Equipment; CAN/CSA-C22.2 No. 60950-1-03; CAN/CSA-C22.2 No. 60950-1; FCC Part 15, Subpart B; GOST; EU RoHS Compliant; As/NZS 60950:2000, Australia; VCCI Class A; ROHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; AS/NZS-3548 Class A; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval; UL; AS/NZS 60950-1	
Emissions	VCCI (Japan); Korean EMI Class A; EMC Directive 2004/108/EC; CE; FCC (CFR 47, Part 15) Subpart B Class A	



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HP Network Security Processors

Technical Specifications

Services Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 10160v Network Security Processor (AJ561A)

Ports	2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 USB 2.0	
Physical characteristics	Dimensions	29.25(d) x 19.25(w) x 3.45(h) in. (74.3 x 48.9 x 8.76 cm) (2U height)
	Weight	35.8 lb. (16.24 kg)
	Full configuration weight	35.8 lb. (16.24 kg)
Mounting	standard HP 19" rack	
Environment	Operating temperature	50°F to 95°F (10°C to 35°C)
	Operating relative humidity	10% to 90% @ 35°F (1.7°C), noncondensing
	Nonoperating/Storage temperature	122°F to -4°F (50°C to -20°C)
	Nonoperating/Storage relative humidity	10% to 90% @ 35°F (1.7°C)
Electrical characteristics	Maximum heat dissipation	1773/120 BTU/hr (1715/240 kJ/hr)
	Voltage	120-240/200-240 VAC
	DC voltage	12
	Idle power	460 W
	Maximum power rating	460 W
	PoE power	460 W
	Frequency	50/60 Hz
	Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). Rated input voltage: 90 to 132 VAC/180 to 264 VAC; rated input current: 7.1 A at 120 VAC/3.5 A at 240 VAC; rated input frequency: 50 Hz to 60 Hz; rated input power: 852 W; BTUs per hour: 1773 at 120 VAC/1715 at 240 VAC; rated steady-state power: 460 W at 100 VAC/460 W at 200 VAC; maximum peak power: 460 W at 100 VAC/460 W at 200 VAC



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Safety	CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; CAN/CSA-C22.2 No.60950-00/UL 60950 - Third Edition, Safety Information for Technology Equipment; CAN/CSA-C22.2 No. 60950-1-03; CAN/CSA-C22.2 No. 60950-1; FCC Part 15, Subpart B; GOST; EU RoHS Compliant; As/NZS 60950:2000, Australia; VCCI Class A; ROHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; AS/NZS-3548 Class A; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval; UL; AS/NZS 60950-1
Emissions	VCCI (Japan); Korean EMI Class A; EMC Directive 2004/108/EC; CE; FCC (CFR 47, Part 15) Subpart B Class A
Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 8160 Network Security Processor (AJ556A)

Ports	2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 USB 2.0	
Physical characteristics	Dimensions	29.25(d) x 19.25(w) x 3.45(h) in. (74.3 x 48.9 x 8.76 cm) (2U height)
	Weight	35.8 lb. (16.24 kg)
	Full configuration weight	35.8 lb. (16.24 kg)
Mounting	standard HP 19" rack	
Environment	Operating temperature	50°F to 95°F (10°C to 35°C)
	Operating relative humidity	10% to 90% @ 35°F (1.7°C), noncondensing
	Nonoperating/Storage temperature	122°F to -4°F (50°C to -20°C)
	Nonoperating/Storage relative humidity	10% to 90% @ 35°F (1.7°C)
Electrical characteristics	Maximum heat dissipation	1773/120 BTU/hr (1715/240 kJ/hr)
	Voltage	120-240/200-240 VAC
	DC voltage	12
	Idle power	460 W
	Maximum power rating	460 W
	PoE power	460 W
	Frequency	50/60 Hz
	Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS). Rated input voltage: 90 to 132 VAC/180 to 264 VAC; rated input current: 7.1 A at 120 VAC/3.5 A at 240 VAC; rated input frequency: 50 Hz to 60



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Hz; rated input power: 852 W; BTUs per hour 1773 at 120 VAC/1715 at 240 VAC; rated steady-state power: 460 W at 100 VAC/460 W at 200 VAC; maximum peak power: 460 W at 100 VAC/460 W at 200 VAC

Safety	CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; CAN/CSA-C22.2 No.60950-00/UL 60950 - Third Edition, Safety Information for Technology Equipment; CAN/CSA-C22.2 No. 60950-1-03; CAN/CSA-C22.2 No. 60950-1; FCC Part 15, Subpart B; GOST; EU RoHS Compliant; As/NZS 60950:2000, Australia; VCCI Class A; ROHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; AS/NZS-3548 Class A; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval; UL; AS/NZS 60950-1
Emissions	VCCI (Japan); Korean EMI Class A; EMC Directive 2004/108/EC; CE; FCC (CFR 47, Part 15) Subpart B Class A
Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 8160v Network Security Processor (AJ557A)

Ports	2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 USB 2.0	
Physical characteristics	Dimensions	29.25(d) x 19.25(w) x 3.45(h) in. (74.3 x 48.9 x 8.76 cm) (2U height)
	Weight	35.8 lb. (16.24 kg)
	Full configuration weight	35.8 lb. (16.24 kg)
Mounting	standard HP 19" rack	
Environment	Operating temperature	50°F to 95°F (10°C to 35°C)
	Operating relative humidity	10% to 90% @ 35°F (1.7°C), noncondensing
	Nonoperating/Storage temperature	122°F to -4°F (50°C to -20°C)
	Nonoperating/Storage relative humidity	10% to 90% @ 35°F (1.7°C)
Electrical characteristics	Maximum heat dissipation	1773/120 BTU/hr (1715/240 kJ/hr)
	Voltage	120-240/200-240 VAC
	DC voltage	12
	Idle power	460 W
	Maximum power rating	460 W
	PoE power	460 W
	Frequency	50/60 Hz
Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply	



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(EPS).

Rated input voltage: 90 to 132 VAC/180 to 264 VAC; rated input current: 7.1 A at 120 VAC/3.5 A at 240 VAC; rated input frequency: 50 Hz to 60 Hz; rated input power: 852 W; BTUs per hour 1773 at 120 VAC/1715 at 240 VAC; rated steady-state power: 460 W at 100 VAC/460 W at 200 VAC; maximum peak power: 460 W at 100 VAC/460 W at 200 VAC

Safety	CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; CAN/CSA-C22.2 No.60950-00/UL 60950 - Third Edition, Safety Information for Technology Equipment; CAN/CSA-C22.2 No. 60950-1-03; CAN/CSA-C22.2 No. 60950-1; FCC Part 15, Subpart B; GOST; EU RoHS Compliant; As/NZS 60950:2000, Australia; VCCI Class A; ROHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; AS/NZS-3548 Class A; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval; UL; AS/NZS 60950-1
Emissions	VCCI (Japan); Korean EMI Class A; EMC Directive 2004/108/EC; CE; FCC (CFR 47, Part 15) Subpart B Class A
Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 9160 Network Security Processor (AJ558A)

Ports	2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 USB 2.0	
Physical characteristics	Dimensions	29.25(d) x 19.25(w) x 3.45(h) in. (74.3 x 48.9 x 8.76 cm) (2U height)
	Weight	35.8 lb. (16.24 kg)
	Full configuration weight	35.8 lb. (16.24 kg)
Mounting	standard HP 19" rack	
Environment	Operating temperature	50°F to 95°F (10°C to 35°C)
	Operating relative humidity	10% to 90% @ 35°F (1.7°C), noncondensing
	Nonoperating/Storage temperature	122°F to -4°F (50°C to -20°C)
	Nonoperating/Storage relative humidity	10% to 90% @ 35°F (1.7°C)
Electrical characteristics	Maximum heat dissipation	1773/120 BTU/hr (1715/240 kJ/hr)
	Voltage	120-240/200-240 VAC
	DC voltage	12
	Idle power	460 W
	Maximum power rating	460 W
	PoE power	460 W
	Frequency	50/60 Hz
	Notes	Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the



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infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).

Rated input voltage: 90 to 132 VAC/180 to 264 VAC; rated input current: 7.1 A at 120 VAC/3.5 A at 240 VAC; rated input frequency: 50 Hz to 60 Hz; rated input power: 852 W; BTUs per hour: 1773 at 120 VAC/1715 at 240 VAC; rated steady-state power: 460 W at 100 VAC/460 W at 200 VAC; maximum peak power: 460 W at 100 VAC/460 W at 200 VAC

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Emissions	VCCI (Japan); Korean EMI Class A; EMC Directive 2004/108/EC; CE; FCC (CFR 47, Part 15) Subpart B Class A
Services	Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.

HP 9160v Network Security Processor (AJ559A)

Ports	2 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 1 RJ-45 autosensing 10/100/1000 port (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T); Duplex: 10BASE-T/100BASE-TX: half or full; 1000BASE-T: full only 2 USB 2.0	
Physical characteristics	Dimensions	29.25(d) x 19.25(w) x 3.45(h) in. (74.3 x 48.9 x 8.76 cm) (2U height)
	Weight	35.8 lb. (16.24 kg)
	Full configuration weight	35.8 lb. (16.24 kg)
Mounting	standard HP 19" rack	
Environment	Operating temperature	50°F to 95°F (10°C to 35°C)
	Operating relative humidity	10% to 90% @ 35°F (1.7°C), noncondensing
	Nonoperating/Storage temperature	122°F to -4°F (50°C to -20°C)
	Nonoperating/Storage relative humidity	10% to 90% @ 35°F (1.7°C)
Electrical characteristics	Maximum heat dissipation	1773/120 BTU/hr (1715/240 kJ/hr)
	Voltage	120-240/200-240 VAC
	DC voltage	12
	Idle power	460 W
	Maximum power rating	460 W
	PoE power	460 W
	Frequency	50/60 Hz



Technical Specifications

Notes	<p>Idle power is the actual power consumption of the device with no ports connected. Maximum power rating and maximum heat dissipation are the worst-case theoretical maximum numbers provided for planning the infrastructure with fully loaded PoE (if equipped), 100% traffic, all ports plugged in, and all modules populated. PoE power is the power supplied by the internal power supply. It is dependent on the type and quantity of power supplies and may be supplemented with the use of an external power supply (EPS).</p> <p>Rated input voltage: 90 to 132 VAC/180 to 264 VAC; rated input current: 7.1 A at 120 VAC/3.5 A at 240 VAC; rated input frequency: 50 Hz to 60 Hz; rated input power: 852 W; BTUs per hour: 1773 at 120 VAC/1715 at 240 VAC; rated steady-state power: 460 W at 100 VAC/460 W at 200 VAC; maximum peak power: 460 W at 100 VAC/460 W at 200 VAC</p>
Safety	<p>CAN/CSA 22.2 No. 60950-1; AS/NZS 60950; CAN/CSA-C22.2 No.60950-00/UL 60950 - Third Edition, Safety Information for Technology Equipment; CAN/CSA-C22.2 No. 60950-1-03; CAN/CSA-C22.2 No. 60950-1; FCC Part 15, Subpart B; GOST; EU RoHS Compliant; As/NZS 60950:2000, Australia; VCCI Class A; ROHS Compliance; FCC Class A: Regulations for Radio Frequency Devices for Electromagnetic Compliance; AS/NZS-3548 Class A; AS/NZS 60950: 2000 Australia, Russian GOST Safety Approval; UL; AS/NZS 60950-1</p>
Emissions	<p>VCCI (Japan); Korean EMI Class A; EMC Directive 2004/108/EC; CE; FCC (CFR 47, Part 15) Subpart B Class A</p>
Services	<p>Refer to the HP website at: www.hp.com/networking/services for details on the service-level descriptions and product numbers. For details about services and response times in your area, please contact your local HP sales office.</p>



Accessories

Mounting Kit AMEDKEY (AMEDKEY)

To learn more, visit: www.hp.com/networking

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