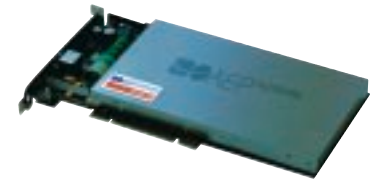


About AEP Systems

AEP Systems, the high-speed security company, delivers hardware security and acceleration solutions that are fast and cost-effective to deploy. Customers include financial institutions, government bodies, healthcare organizations, and OEMs. Founded in 1998, AEP Systems is privately held and based in Dublin, Ireland with offices in the UK, USA and Asia-Pacific.



AEP SureWare Keyper PCI

In any sensitive environment, security is the cornerstone on which the trust and integrity of data is built.

Trust and integrity is derived from the security of the underlying signing and encryption keys, therefore the protection of this material is critical to the overall trust and integrity of a system. Key material can be stored and protected in many ways on a variety of mediums such as in software on a hard drive, protected on a smart card or USB token, or for ultimate protection, on a hardware security module (HSM) designed to protect key material independently of the cryptographic system.

Ultimate Protection of Key Material

AEP Systems has built a comprehensive hardware security module product range, AEP SureWare Keyper, that is capable of protecting the most sensitive data or system and that caters for the PKI, VPN and Web markets. At the heart of AEP SureWare is AEP's revolutionary ACCE technology, a next-generation flexible crypto platform that is accredited to the highest level of assurance – FIPS 140-1, Level 4 and ITSEC E3.

AEP SureWare Keyper PCI is a host security module offering a cost effective high level of security and performance in environments that require cryptographic services and where the management and storage of cryptographic keys is essential. AEP SureWare Keyper PCI is a FIPS 140 - 1, Level 3 certified module providing protected key storage, signature and key generation in hardware.

AEP SureWare Keyper PCI is a PCI card that can be shared between multiple processes within a host concurrently. It employs tamper detection in excess of FIPS 140-1, Level 3; the standard level of assurance for leading hardware modules worldwide. Each module is capable of storing up to 1000 keys internally and can be securely upgraded in the field.

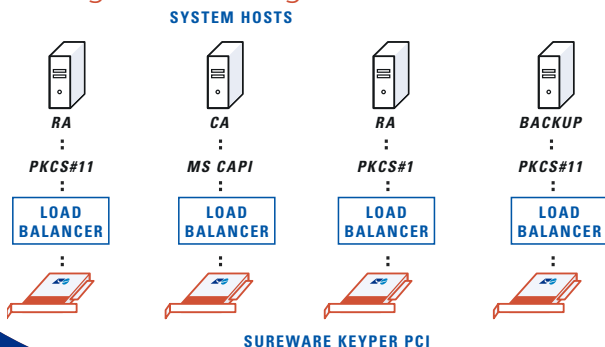
AEP SureWare Keyper PCI has an accompanying but detachable Omniport device containing an integrated keypad, LCD display and smart card reader enabling operators to back up key material from the card, reconfigure the security settings and enable/disable the cryptographic services.

AEP SureWare Keyper PCI is ideally suited to businesses deploying a cryptographic system where the protection of cryptographic keys is a priority, for example, certificate signing, code or document signing, bulk generation or ciphering of keys or data.

Features and Benefits

- Connectivity – PCI card connectivity, ideal for use in a workstation or server on a corporate LAN
- Manageability – Small footprint allows desktop use or rack mounting
- Design – Fully integrated module with smart card reader, PIN entry and cryptographic processing within a single device
- Performance – Increases the number of crypto operations achievable
- Fault Tolerance – Extended reliability through automated switch over to live card
- Load Sharing – Software available to load balance multiple cards within a host
- Architecture – Built on ACCE giving tamper protection in excess of FIPS 140-1, Level 3
- Scalability – Multiple cards can be fitted into a single host providing an improvement in performance
- Choice of Interfaces – On host PKCS#11 and Microsoft CSP interfaces
- Field Upgradeable – Possibility of upgrading firmware and algorithms in the field

Configuration Diagram



Technical Specifications

Cryptographic Functions and Services

RSA:	512 to 2048 bit key length
DSA:	512 to 1024 bit key modulus
Des/3DES:	56, 112, 168 bit key lengths
Diffie Hellman:	up to 2,048 bit key length
Hash:	SHA-1, MD5

Operator Interface

Key entry from the smart card is possible under dual control (four eye principle) using the key switch and access control via smart card.

Random Number Generation

Hardware random number generator with full entropy
FIPS 186-1 compliant.

Key Management

Storage Master Key (SMK) import/export via smart cards in M of N components.

Application Key import/export via smart cards protected with SMK.

Key Storage

Red Key Store: Keys temporarily in clear text, actively erased when a tamper is detected.

Black Key Store: Keyper personality keys and application keys encrypted under a key from the Secure Key Store.

Connectivity

TCP/IP over Ethernet at 10/100 Mbps full/half duplex with auto-negotiation.

Up to 4 concurrent TCP/IP connections.

Standards Certification

FIPS 140-1, Level 3 Certified

FCC part 15 Class B

BSEN60950 Safety

BSEN61000 Susceptibility, Performance B

BSEN55022 Level B Emissions

100-240 VAC, 47-63Hz

Operating Environment

+5°C to 40°C

Operating Humidity Range

25% to 90%, non-condensing

Power Requirements

100-240 VAC, 47-63Hz

Product Dimensions

223 x 45 x 244 mm

Battery Lifetime

10 years

ACCE (Advanced Configurable Crypto Environment)

- All AEP SureWare products incorporate ACCE technology – the most advanced crypto hardware environment available.
- AEP Systems' leading hardware and crypto engineers have over 100 years of combined experience to bring new levels of security, speed and manageability to a range of hardware security devices.
- ACCE supports a range of Key Management options with protected internal key store for over 1000 keys, backed by secure key export and transport options.
- All AEP SureWare modules can be upgraded with new software and algorithms, and configured remotely. Standard algorithms include RSA, DSA, 3 DES, Diffie-Hellman, MD-5 and SHA-1.
- ACCE's low power, highly integrated design leads to increased reliability and savings in overall lifecycle costs.

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