



HOST SECURITY MODULE

- Supports ATM, EFTPOS, EMV (Europay, Mastercard and Visa), and Chip Card Applications
- Visa/MasterCard/American Express PIN and Card Verification Functions
- Europay Security Platform (ESP) functionality
- FIPS Validated
- DES, Triple DES Two and Three Key, RSA
- Supports ATM Remote Key Loading
- VISA CASH, CLIP and VCEPS
- Supports ANSI, ISO, and Australian Security Standards.

→ HOST SECURITY MODULE

The HSM is a tamper-resistant device that provides the cryptographic facilities necessary for securing transactions in financial networks.

The HSM is used to secure a multitude of financial applications around the world ranging from ATM and POS networks to interbank funds transfer and share dealing systems. It is available in standard and high speed variants with a wide range of connectivity options and protocols allowing connection to all types of host systems.

The Host Security Module is:

- Used for 70% of the world's card transactions
- Used by all major card associations
- Used for ATM, POS, Corporate banking, Card Issuing, Funds transfer and Stock/Share Trading
- Easily customised for user applications
- Available with support for a wide range of connectivity options and transaction protocols.
- Available in various speed variants to give required transaction throughput.
- Triple DES capable, using two and three keys, for all functions including the processing of PIN blocks.
- Integrated within all major financial industry solution providers applications.
- Certified to the most rigorous security standards.

Typical HSM Applications *ATM Interchange*

The HSM is designed for the ATM interchange environment and is in use in many of the world's major ATM interchange networks. The HSM can be customized to suit individual networks and, if needed, the particular requirements of each member of the network. The wide and growing variety of host interfaces in the HSM means that the needs of each member's system can be readily accommodated. In particular, the AMEX, VISA and MasterCard commands are an integral part of all standard firmware releases.

EFTPOS

The HSM supports a number of EFTPOS (Electronic Funds Transfer at Point of Sale) systems in use around the world. Many of the key management concepts required to secure EFTPOS, such as the Thales Transaction Key method, were pioneered by Thales and implemented in the HSM. The Derived Unique Key Per Transaction and Australian Transaction Key schemes are also available.

Card Production Facility

The HSM is suitable for use within the client card production area. It can provide a secure means of generating cryptographic card values such as VISA's CVV (Card Verification Value), MasterCard's CVC (Card Verification Code) and American Express CSC (Card Security Code) as well as securely generating PINs and PIN mailers.





Chip Card Support

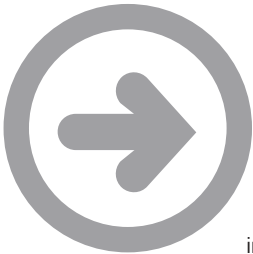
The HSM supports Credit/Debit and Electronic Purse chip card applications from Visa, MasterCard and Europay. The transaction processing functions are available as standard card issuing functions on request. For more information contact your local representative.

Electronic Purse

The HSM can support VISA Cash, CLIP, and VCEPS processing, enabling card holders to securely reload value to their cards from an ATM or card reload terminal.

Data Integrity

The integrity of information transmitted around and stored within systems is of paramount importance to its users. The integrity of information generated at remote terminals can be secured, using message authentication codes (MACs), by Thales PC Security Modules, WebSentry™ and Smart Card terminals for subsequent verification by an HSM. A number of applications such as Cash Management and Bond Reconciliation can be secured in this way.



HSM Features Various Speed Variants

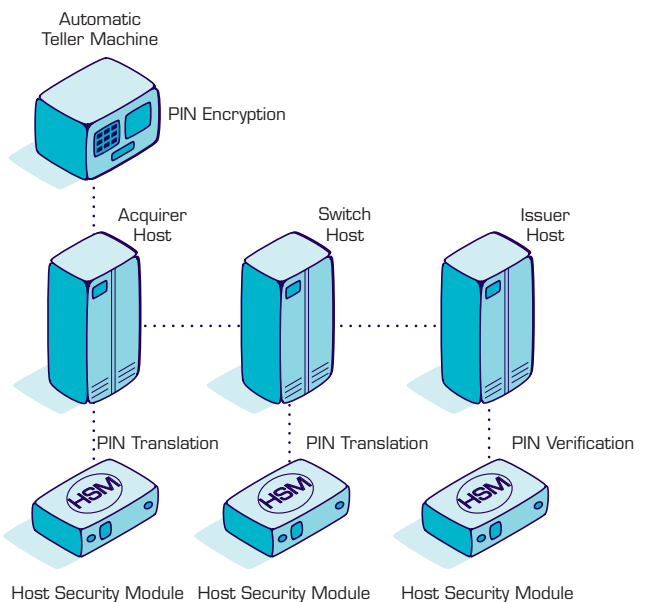
As the banking and financial industries continue to move toward PIN-based and Smart Card security systems, the demand for higher transaction speeds has never been greater.

In its high speed variant, the HSM provides industry leading performance (800 PIN Block translate functions per second), significantly reducing transaction processing time and lowering the cost per transaction.

Flexible Key Management System

In practice, the security offered by any application is only as good as the key management system designed for it. The HSM supports a variety of key management schemes, including Master/Session Key, Racal Transaction Key, Australian Transaction Key, DUKPT, and Public Key.

Typical ATM Interchange Application





Technical Specifications

Typical Performance (Triple DES PINBlock Translate)	HSM8-SM	220
	HSM8-EM	220
	HSM8-SH	800
	HSM8-EH	800

Cryptographic Support	<p>DES and Triple DES Algorithms – Provide PIN encryption and message authentication capabilities.</p> <p>RSA Algorithm – Provides high-level key management including remote key loading for ATMs, and supports the generation and validation of digital signatures. RSA key length is selectable from 320 to 2048 bits.</p> <p>Local Master Key Components – These are stored on Smart Cards (ISO 7816) for secure storage or distribution.</p>
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Communications Interfaces	HSM8-SM / HSM8-SH	TCP/IP and UDP, Ethernet 10/100Base-T; Async, RS232
	HSM8-EM / HSM8-EH	ESCON; TCP/IP and UDP, Ethernet 10/100Base-T; Async, RS232

Security Certification	<p>The HSM utilises the Safeguard Security Subsystem (SGSS) for all cryptographic and security processing this is validated to FIPS 140-1 level 4.</p> <p>The SGSS is under evaluation at FIPS 140-2 level 4 and the HSM overall at FIPS 140-2 level 3.</p>
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Power	Voltage	90-132 VAC and 175-264 VAC, auto-selected
	Frequency	47-63 Hz
	Fuse	1.6A delayed action

Environmental	Operating Temperature	10° to 40° C
	Humidity	10% to 90%, non-condensing

Physical Dimensions	Height	88 mm (2U)
	Width	480 mm (to fit 19" rack)
	Depth	400 mm
	Weight	12 kg

*Check on the NIST website for status of these validations.





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