



## ATM Key Injection

HSM-backed control for ATM key loading

### Secure ATM Trust Establishment

ATM key injection is the controlled loading of cryptographic keys into an ATM's Encrypting PIN Pad to support PIN encryption, transaction processing, remote management, and device authentication. Futurex brings this process into CryptoHub, a unified HSM-backed platform that centralizes A-Key establishment, standards-based key transport, governed loading workflows, and audit traceability across distributed ATM operations.



### Controlled ATM Key Loading, Built for Banks

- **Centralized A-Key Establishment**

CryptoHub centralizes A-Key generation, transport, injection, and validation in an HSM-backed control model.

- **Standards-Based Key Transport**

Support TR-34 remote key loading and ANSI X9.143 key block workflows for controlled ATM key transport.

- **Traceable Operator Workflows**

Apply dual control, role-based approvals, and audit logging across bank, processor, and authorized service organization operations.

## ATM Key Injection Capabilities

### HSM-Backed Key Generation:

Generate and protect ATM keys inside hardware security modules with controlled access to sensitive cryptographic material.

### Remote and Onsite Loading:

Support remote loading through TR-34 certificate-based workflows and onsite injection procedures using ANSI X9.143.

### Certificate-Based Trust:

Validate device identity through PKI-backed workflows that support secure remote ATM loading.

### Dual Control Enforcement:

Enforce split knowledge and dual control so no single operator can control or reconstruct sensitive key material.

### Audit Documentation:

Document generation, transport, injection, validation, activation, and reload activity for compliance review and operational accountability.



## Governed ATM Key Loading, Ready for Scale

Manual ATM key ceremonies create coordination overhead across banks, processors, and service teams. CryptoHub centralizes A-Key establishment, controlled transport, terminal loading, and audit traceability in a unified platform.

## What Does Futurex ATM Key Injection Do for You?

Futurex ATM Key Injection gives operations teams tighter control over trust establishment and clearer audit evidence across distributed ATM estates.

### • Reduce Manual Ceremonies:

Replace coordinated A-Key loading steps with centralized workflows that reduce handoffs and on-site coordination.

### • Improve Audit Traceability:

Track generation, transport, injection, activation, reload activity, operators, and approval paths in one record set.

### • Centralize Trust Establishment:

Use CryptoHub as the control layer for A-Key generation, transport, injection, and validation across bank- and processor-controlled environments.

### • Support Distributed ATM Estates:

Apply the same governed loading model across branches, processors, service organizations, and mixed ATM hardware estates.

### Operating Modes

- Remote Key Loading
- On-Site Key Loading
- Staged Device Activation
- Bank-Controlled ATM Fleets
- Processor and ESO Operations

### Specifications / Compliance

- TR-34 remote key loading with certificate-based trust establishment
- ANSI X9.143 for secure key transport and storage
- PCI PIN governance for PIN-related key handling and operational controls
- ISO 9564 support for PIN block and PIN encryption handling
- Dual control, separation of duties, and traceability across ATM key operations

### Built for Controlled ATM Loading

- Centralized control for ATM key generation, transport, injection, and validation
- HSM-backed A-Key establishment for downstream ATM cryptographic operations
- Certificate-based remote loading and governed onsite workflows
- Audit records tied to devices, operators, approvals, and key events

## About Us

For over 40 years, Futurex has been an award-winning leader and innovator in the encryption market, delivering uncompromising enterprise-grade data security solutions. Over 15,000 organizations worldwide trust Futurex to provide groundbreaking hardware security modules, key management servers, and cloud HSM solutions.

Futurex is headquartered outside of San Antonio, Texas, with regional offices worldwide and over a dozen data centers across five continents, Futurex delivers unmatched support for its clients' mission-critical data encryption and key management requirements.



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