

Product Brief

Luna Network HSM

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THALES
Building a future we can all trust

Secure your sensitive data and critical applications by storing, protecting and managing your cryptographic keys in Thales Luna Network Hardware Security Modules (HSMs) - high-assurance, tamper-resistant, network-attached appliances offering market-leading performance and crypto agility.

Contact us to learn how you can integrate Luna Network HSMs into a wide range of applications to accelerate cryptographic operations, secure the crypto key lifecycle, and provide a root of trust for your entire encryption infrastructure.

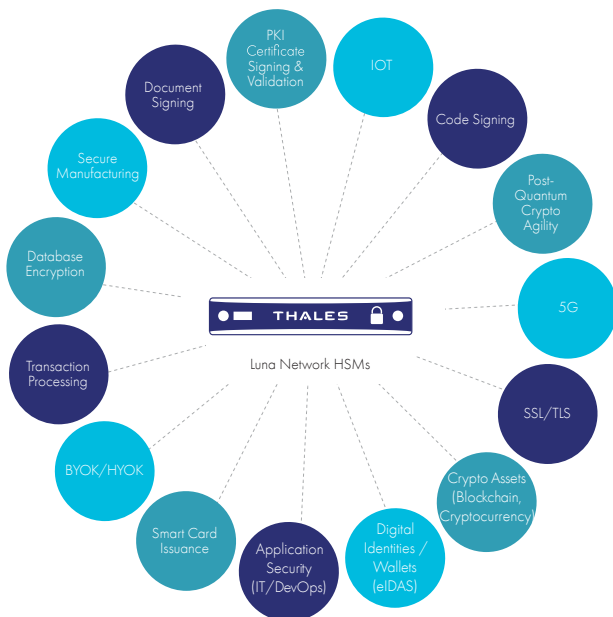
What you need to know:

Superior Performance:

- Meet your high throughput requirements with over 20,000 ECC and 10,000 RSA operations per second for high performance use cases
- Lower latency for improved efficiency

Highest Security & Compliance:

- Keys always remain in FIPS-validated, tamper-evident hardware
- Meet compliance needs for GDPR, eIDAS, HIPAA, PCI-DSS, and more



- De facto standard for the cloud
- Multiple roles for strong separation of duties
- Multi-person MofN with multi-factor authentication for increased security
- Secure audit logging
- High-assurance delivery with secure transport mode
- High quality keys through external Quantum RNG seeding

- Securely backup and duplicate keys in hardware with Luna Backup HSM or to the cloud with Data Protection on Demand for redundancy, reliability and disaster recovery

Reduce Costs & Save time:

- Remotely manage HSMs - no need to travel
- Reduced audit and compliance costs and burdens
- Automate enterprise systems to manage HSMs via REST API
- Efficiently administer resources by sharing HSMs amongst multiple applications or tenants
- Flexible partition policies to meet your key management and compliance needs
- Increased portability, greater efficiency and less overhead using Luna Client in a container
- Functionality Modules
 - Extend native HSM functionality
 - Develop and deploy custom code within the secure confines of the HSM

Technical specifications

Supported Operating Systems

- Windows, Linux, Solaris, AIX
- Virtual: VMware, Hyper-V, Xen, KVM

API Support

- PKCS#11, Java (JCA/JCE), Microsoft CAPI and CNG, OpenSSL
- REST API for administration

Cryptography

- Post-Quantum mechanisms within the Luna PQC Functionality Module
- Full Suite B support
- Asymmetric: RSA, DSA, Diffie-Hellman, Elliptic Curve Cryptography (ECDSA, ECDH, Ed25519, ECIES) with named, user-defined and Brainpool curves, KCDSA, and more
- Symmetric: AES, AES-GCM, Triple DES, DES, ARIA, SEED, RC2, RC4, RC5, CAST, and more
- Hash/Message Digest/HMAC: SHA-1, SHA-2, SHA-3, SM2, SM3, SM4 and more
- Key Derivation: SP800-108 Counter Mode
- Key Wrapping: SP800-38F
- Random Number Generation: designed to comply with AIS 20/31 to DRG.4 using HW based true noise source alongside NIST 800-90A compliant CTR-DRBG
- Digital Wallet Encryption: BIP32

- 5G Cryptographic Mechanisms for Subscriber Authentication: Milenage, Tuak, and COMP128

Security Certifications

- FIPS 140-2 Level 3 Validated – Password and Multi-Factor (PED)
- FIPS 140-3 (Validation in Progress) – Password and Multi-Factor (PED)
- Common Criteria EAL4+ (AVA_VAN.5 and ALC_FLR.2) Certified against the Protection Profile EN 419 221-5
- Qualified Signature or Seal Creation Device (QSCD) listing for eIDAS compliance
- Singapore NITES Common Criteria Scheme

Host Interface

- 2 options: 4 Gigabit ethernet ports with Port Bonding, or 2 x 10G fiber network connectivity and 2 x 1G with Port Bonding
- IPv4 and IPv6

Physical Characteristics

- Standard 1U 19in. rack mount appliance
- Dimensions: 19" x 21" x 1.725" (482.6mm x 533.4mm x 43.815mm)
- Weight: 28lb (12.7kg)
- Input Voltage: 100-240V, 50-60Hz

Available models

Choose from two series of Luna Network HSMs, each one with 3 different models to fit your requirements.

Luna A Series:

Password Authentication for easy management.

Standard Performance A700	Enterprise Performance A750	Maximum Performance A790
4 MB Memory Partitions: 5 Maximum Partitions: 5	32 MB Memory Partitions: 5 Maximum Partitions: 20	64 MB Memory Partitions: 10 Maximum Partitions: 100
Performance: RSA-2048: 1,000 tps ECC P256: 2,000 tps AES-GCM: 2,000 tps	Performance: RSA-2048: 5,000 tps ECC P256: 10,000 tps AES-GCM: 10,000 tps	Performance: RSA-2048: 10,000 tps ECC P256: 22,000 tps AES-GCM: 17,000 tps

Luna S Series:

Multi-factor (PED) Authentication for high assurance use cases.

Standard Performance S700	Enterprise Performance S750	Maximum Performance S790
Up to 4 MB Memory Partitions: 5 Maximum Partitions: 5	Up to 32 MB Memory Partitions: 5 Maximum Partitions: 20	Up to 64 MB Memory Partitions: 10 Maximum Partitions: 100
Performance: RSA-2048: 1,000 tps ECC P256: 2,000 tps AES-GCM: 2,000 tps	Performance: RSA-2048: 5,000 tps ECC P256: 10,000 tps AES-GCM: 10,000 tps	Performance: RSA-2048: 10,000 tps ECC P256: 22,000 tps AES-GCM: 17,000 tps

tps = transactions per second

- Power Consumption: 100W maximum, 84W typical
- Heat Dissipation: 376BTU/hr maximum, 287BTU/hr typical
- Temperature: operating 0°C – 35°C, storage -20°C – 60°C
- Relative Humidity: 5% to 95% (38°C) non-condensing

Safety & Environmental Compliance

- UL, CSA, CE
- FCC, CE, VCCI, C-TICK, KC Mark
- RoHS2, WEEE
- TAA
- India BIS [IS 13252 (Part 1)/IEC 60950-1]

Reliability

- Dual hot-swap power supplies
- Field-serviceable components
- Mean Time Between Failure (MTBF) 171,308 hrs

Management & Monitoring

- HA disaster recovery
- Backup and restore hardware to hardware on-premises or in the cloud
- SNMP, Syslog