DATA SHEETS

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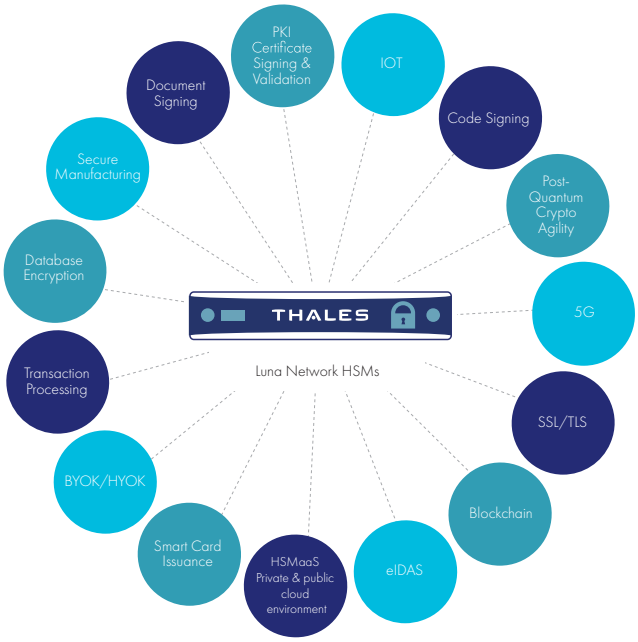
Thales Luna Network HSM

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.

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 SafeNet 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

- 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 – Password and Multi-Factor (PED)
- Common Criteria EAL4+ (AVA_VAN.5 and ALC_FLR.2) 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
- Power Consumption: 110W 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

* under evaluation

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**
2 MB Memory	16 MB Memory	32 MB Memory
Partitions: 5	Partitions: 5	Partitions: 10
Maximum Partitions: 5	Maximum Partitions: 20	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**
2 MB Memory	16 MB Memory	32 MB Memory
Partitions: 5	Partitions: 5	Partitions: 10
Maximum Partitions: 5	Maximum Partitions: 20	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

About Thales

The people you rely on to protect your privacy rely on Thales to protect their data. When it comes to data security, organizations are faced with an increasing number of decisive moments. Whether the moment is building an encryption strategy, moving to the cloud, or meeting compliance mandates, you can rely on Thales to secure your digital transformation.

Decisive technology for decisive moments.

Contact us – For all office locations and contact information, please visit cpl.thalesgroup.com/contact-us

CKM_RSA_PKCS

Summary

FIPS approved?	Yes
Supported functions	Sign | Verify | Encrypt | Decrypt | Wrap | Unwrap
Functions restricted from FIPS use	Cannot wrap
Minimum key length (bits)	256
Minimum key length for FIPS use (bits)	2048
Minimum legacy key length for FIPS use (bits)	1024
Maximum key length (bits)	8192
Block size	0
Digest size	0
Key types	RSA
Algorithms	None
Modes	None
Flags	None

> **NOTE** The flag MPE_NO_WRAP is assigned to several mechanisms, including this one. When the HSM policy “Allow NonFIPS Algorithms” is disabled, mechanisms with the MPE_NO_WRAP flag *are not* allowed to wrap objects. When the policy is enabled, these mechanisms *are* allowed to wrap objects.

CKM_RSA_PKCS_KEY_PAIR_GEN

Summary

FIPS approved?	No
Supported functions	Generate Key Pair
Functions restricted from FIPS use	N/A
Minimum key length (bits)	256
Minimum key length for FIPS use (bits)	N/A
Minimum legacy key length for FIPS use (bits)	N/A
Maximum key length (bits)	8192
Block size	0
Digest size	0
Key types	RSA
Algorithms	None
Modes	None
Flags	None