Brochure

THALES

CYBERSECURITY

Thales Hardware Security Modules

The Foundation of Digital Trust

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Building a future we can all trust

CYBERSECURITY

What is an HSM?

A hardware security module (HSM) is a dedicated device that is specifically designed for the protection of the cryptographic keys. HSMs act as trust anchors that protect the cryptographic infrastructure of some of the most security-conscious organizations in the world by securely managing, processing, and storing those keys inside a hardened, tamper-resistant device.

The need for a strong crypto foundation

A root of trust is the foundation of a cryptographic system. Digital security is dependent on cryptographic keys that encrypt and decrypt data and perform functions such as signing and verifying signatures, and ensuring the integrity of those keys and the cryptographic functions within a secure environment such as an HSM is paramount.

Luna HSM-the foundation of digital trust

Protect your organization's devices, identities and transactions, and build trust in the overall ecosystem with Thales Luna HSMs - the foundation of digital trust for over 30 years. Don't compromise on agility, usability or scalability with Luna HSMs, purposefully designed to provide a balance of security and high performance for both traditional and emerging technologies. Additional benefits include:

- **Reduce risk.** Protect your critical digital infrastructures with a strong security architecture that is purpose built, certified, and crypto-agile. As an IT security professional, secure your data and identities with strong authentication and role separation, and a keys-in-hardware approach.

- **Ensure flexibility and visibility.** Strategic data and identity protection ensures flexibility and visibility by securing encryption keys, critical data and digital identities wherever they may be.
- **Easily install, provision and manage Luna HSMs.** Meet SLAs and reduce downtime with streamlined operations. Designed for today's lights out data centers, Luna HSMs are operationally graceful, reliable and centrally managed.
- **Simplify integration and development.** With a wide variety of APIs, flexible deployment options and superior performance, you can quickly secure hundreds of applications with our out-of-the-box technology partner hybrid integrations.

What makes Luna HSMs unique?

Always know the whereabouts of your keys

Securely isolate your cryptographic keys inside the tamper-resistant hardware of the Luna HSM with our unique keys-in-hardware approach. Knowing cryptography is only as strong as the security afforded to your cryptographic keys, Luna HSMs are designed with the highest key security in mind. Applications communicate with the keys stored in the Luna HSM via a client – but keys never leave the HSM.

Meet your compliance needs

Whatever your compliance needs may be, from GDPR and eIDAS to PCI-DSS, Luna HSMs are part of the solution. Luna HSMs offer the most certifications in the industry including Common Criteria, FIPS 140-3, ITI and more. Have complete trust in your infrastructure, backed by a certified HSM cryptographic foundation that is internationally recognized.

Key protection wherever your applications/workloads run

Don't be tied to one specific location or cloud service provider. Thales Luna HSMs offer flexible deployment options, including on-premises, cloud-based, and dedicated HSMs available through select cloud service providers, helping organizations maintain key ownership and control while choosing the model that best fits security, compliance, and operational needs.

Scale to meet high performance use cases

Meet high throughput requirements to satisfy your most demanding applications and meet service level agreements.

Easily manage and monitor HSM resources

Manage your cryptographic resources with Thales Crypto Command Center, a centralized platform that provides on-demand monitoring, reporting, provisioning and alerting in minutes.

Extend your return on investment

Integrate with hundreds of the most commonly used enterprise applications - the largest ecosystem of partners in the market. Additionally, we offer broad API support including PKCS #11, Java, Open SSL, Microsoft, Ruby, Python and Go.

Secure emerging technologies
Guard against evolving threats and create a secure foundation of digital trust for PKI, IoT, AI, digital assets, code signing, cloud, PQC, 5G and more, with Thales' unparalleled combination of products and features.

Enable low-touch, lights-out operations
Easily deploy and manage HSMs across modern data centers.

Choose the HSM to meet your needs
Benefit from a common architecture across all Luna HSMs. Perform the same crypto, leverage the same integrations, APIs, mechanisms and authentication methods, eliminate the need to design applications around a specific HSM; and have the flexibility to move keys from form-factor to form-factor, wherever you may need them.

Thales general purpose HSM portfolio

Meet the Next-Generation Luna 8
The Foundation of Digital Trust for the Post-Quantum Era

Secure your sensitive data, identities, transactions and critical applications with Luna Network Hardware Security Modules (HSMs). Designed to securely store, protect, and manage cryptographic keys, these high-assurance, quantum-safe, tamper-resistant appliances deliver scalable, multi-tenant security and market-leading PQC performance.

These network-attached HSMs integrate easily into a wide range of applications, supporting existing and emerging cryptographic use cases, compliance needs, and seamless deployment and act as a quantum-safe root of trust for the entire crypto infrastructure.

Luna 8 is the first next-generation HSM delivered on the all-new Thales HSM platform, powered by the Thales custom designed crypto processor, and is available now in a network form factor. Built to address the most demanding security requirements, with FIPS 140-3 Level 3 and EU Common Criteria certifications underway.

Luna 8 Key Advantages:

- Quantum readiness: It enables a seamless transition to post-quantum cryptography while protecting existing investments.
- Performance: With orders of magnitude faster cryptographic operations, Luna 8 delivers the performance needed for the most demanding applications.
- Scalability: It scales effortlessly from enterprise deployments to hyperscale environments, supporting rapidly growing cryptographic workloads without compromise.
- Future proof: Its upgradeable architecture makes it easy to introduce new algorithms, standards, and capabilities, ensuring it remains secure, adaptable, and future-ready for years to come.
- Seamless migration Transition from Luna 7 to Luna 8 is frictionless and secure for existing customers as it uses the same ancillaries and interfaces without requiring changes to current applications.

Our Fastest HSM Ever | Quantum-safe & Crypto Agile | Multi-tenant & Scalable Architecture
Powered by the Thales custom designed crypto processor

Luna 7: Choose the deployment model that fits your environment

Multiple form factors. A single foundation of digital trust.

Luna Network HSMs
Secure sensitive data and critical applications by storing, protecting and managing cryptographic keys in Luna Network HSMs - Thales' premium family of high-assurance, tamper-resistant, network attached appliances offering market-leading PQC performance. Meet compliance and audit needs for FIPS 140-3 Level 3, HIPAA, PCI-DSS, eIDAS, GDPR, BSI, NATO and others, in highly-regulated industries including financial, healthcare and

Luna PCIe HSMs
Store, protect and manage cryptographic keys for sensitive data and critical applications in Luna PCIe HSMs – high-assurance, tamper-resistant, low-profile PCIe cards. Provide applications with dedicated access to a purpose-built, high-performance cryptographic processor. Quickly embed this cost-efficient solution directly into servers and security appliances for FIPS 140-3 Level 3-validated key security.

Luna USB HSMs
Maintain all key materials exclusively within the confines of Luna USB HSMs, delivering industry-leading key management in a portable appliance. The small form-factor and on-board key storage sets the product apart, making it especially attractive to customers who need offline key storage.

Luna Cloud HSM
Luna Cloud HSM, available on Thales Data Protection on Demand online marketplace, is a cloud-based HSM service that provides dedicated cryptographic key protection without the need to deploy or manage physical HSM infrastructure. A common architecture across all Luna HSMs — whether they are deployed in the cloud, on-premises, or a combination of both — ensures your critical infrastructures are protected with a strong foundation of digital trust that's certified and crypto agile.

Management Accessory

Crypto Command Center

Centralize your crypto management Luna Network HSM resources and reduce IT security infrastructure costs with Crypto Command Center - a complete monitoring, reporting and management tool for on-premises, hybrid and cloud environments.

Additional HSM Option

ProtectServer HSMs

Available in network attached and PCIe form factors, ProtectServer HSMs are designed to protect cryptographic keys against compromise while providing encryption, signing and authentication services. ProtectServer HSMs offer a unique level of flexibility for application developers to create their own firmware and execute it within the secure confines of the HSM.

Contact Thales

Contact us to learn more about Luna General Purpose HSMs and how they can help you protect applications using modern technologies, ensure your users, devices and infrastructure is secure, and how you can protect your data and digital identities regardless of the environment be it on-premises, in the cloud, or hybrid and multi-cloud.

About Thales

Thales is a global leader in cybersecurity, helping the most trusted organizations protect critical applications, data, identities, and software anywhere, at scale. Through Thales' integrated platforms, customers achieve better visibility of risks, defend against cyber threats, close compliance gaps, and deliver trusted digital experiences for billions of consumers every day.

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Contact us

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