Product Brochure

World's First Converged Crypto Platform for General Purpose and Payment Use Cases

Utimaco

u.trust Converged HSM CSAR

Creating Trust in the Digital Society

utimaco®

u.trust Converged HSM CSAR

Single platform for multiple use cases

The trend towards digital transformation is forcing cloud service providers and enterprises to enhance their products, services and operations to ensure the most robust security.

Today many business processes require hardware-based security as the foundation of confidentiality and integrity. Hardware Security Modules (HSMs), as the Root of Trust, are playing a key role in keeping the cloud service and enterprises services and systems secured.

Using traditional HSMs for cloud services requires several HSMs for individual use cases, resulting in complicated security architecture. In addition, operating HSMs comes with specific processes and policies based on the use cases and requires expert teams who can manage them.

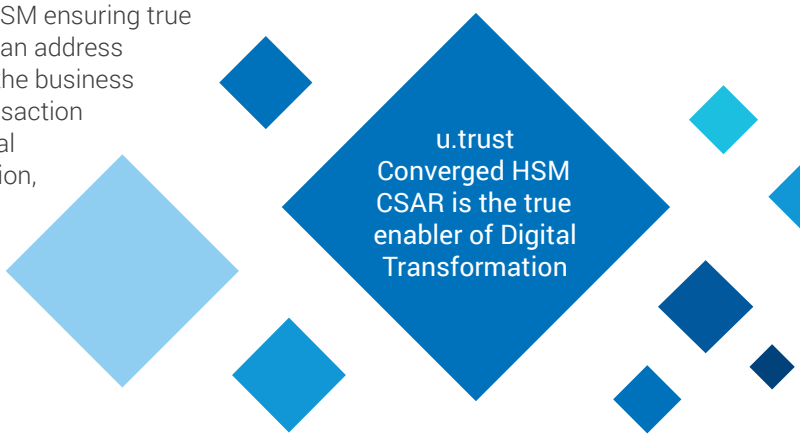
Enterprises are facing increasing challenges using HSMs within both private cloud and on-premises solutions. Having a fleet of HSMs across an enterprise can bring difficulties for centralized HSM management, often leading to HSMs not being used to their full potential. Cloud service providers and enterprises are demanding greater flexibility and scalability, simplicity of management and better value.

Utimaco is covering all of these market needs with its u.trust Converged HSM CSAR solution, bringing one single platform for HSMs covering a variety of use cases. This platform can combine certified payment, custom firmware, and general-purpose usages on the same platform providing a crucial building block for future-proofing services.

u.trust Converged HSM CSAR: Converged HSMaaS

u.trust Converged HSM CSAR is the world's first multi-tenant and converged cloud HSM platform for general purpose and payment use cases.

It addresses multiple use cases and compliance mandates, leveraging the same underlying crypto service platform; enabling cloud service providers to offer HSM as a Service or enterprises to use HSM as a Service for internal security requirements. u.trust Converged HSM CSAR can run multiple containerized HSMs (cHSMs) instances concurrently, each with their own firmware stack, while simultaneously keeping all stacks entirely separated from each other in their respective cHSM ensuring true segregation and multi-tenancy. These firmware stacks can address various use cases and compliance mandates based on the business requirements. For example, PCI-compliant payment transaction processing, FIPS and Common Criteria compliant general purpose use cases, blockchain applications, authentication, key agreement in mobile networks, post-quantum crypto, and more.

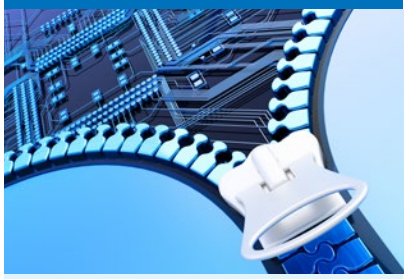


Highlights

Multi-tenancy

True Multi-tenancy with strong separation of tenants

Converged Platform



Convergence of general purpose and payment HSMs

HSM Utilization

Aggregation of HSM loads and **scaling on demand**

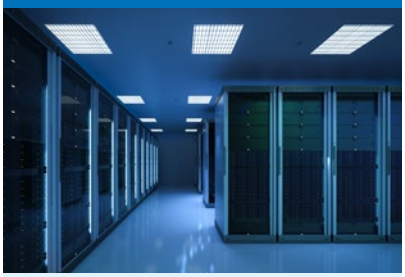
Compliance

Various compliance requirements on one platform

Cost

Reduce Total Cost Of Ownership

Location



Service Provider-ready

Use Cases

- Document Signing
- Key Injection
- Card Personalization
- Code Signing
- Key Management
- DKE
- PKI
- Payment Transaction Processing
- TLS

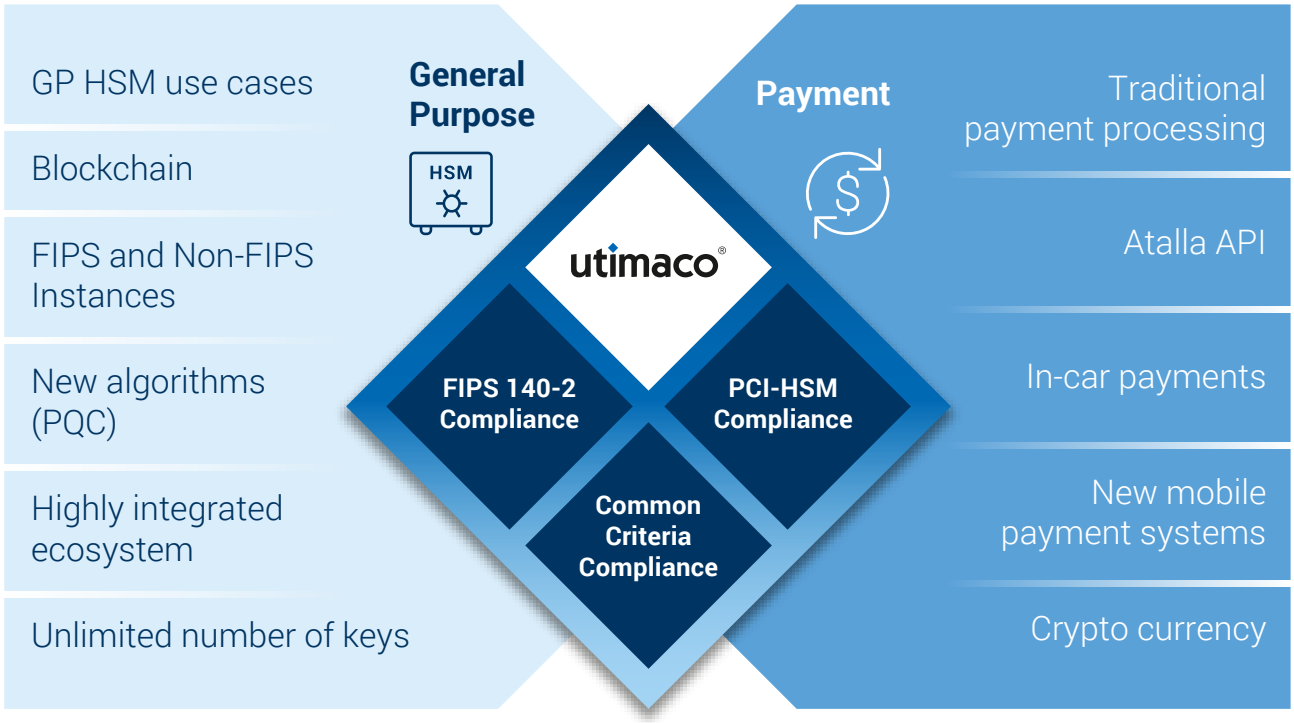
Industries

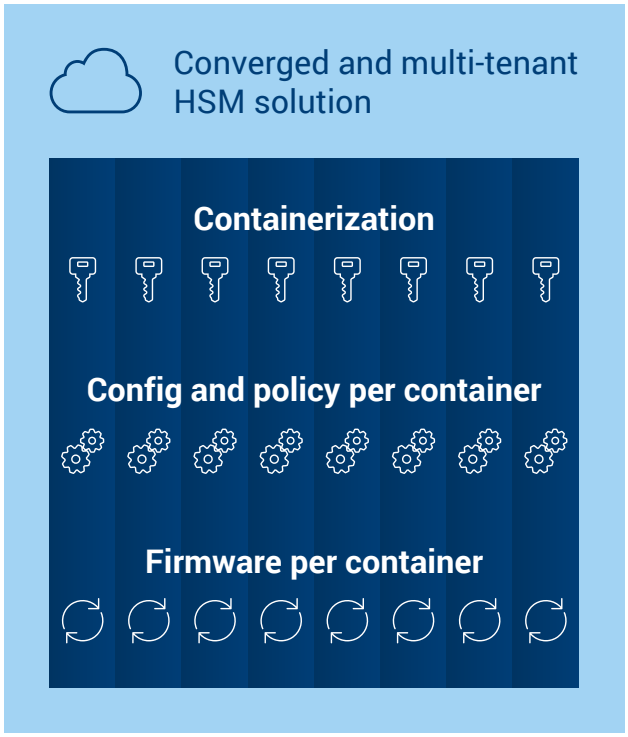
- Cloud Service Providers
- Manufacturing and IoT
- Banking and Financial Services
- Government and Public Sector
- Retail Industry
- Telecommunication
- Many more

u.trust Converged HSM CSAR Solution

Convergence and Multi-tenancy for general purpose and payment use cases

u.trust Converged HSM CSAR is the first converged and multi-tenant platform that enables service providers and enterprises to offer HSM as a Service (HSMaaS) for general purpose and payment use cases such as PKI, Code Signing and Payment Transaction Processing.





Key features

True multi-tenancy

Multi-tenancy with up to 31, 16 or 8 truly independent and fully isolated containerized HSM instances with quality of service. Each instance is opaque, i.e., access to the administrative and cryptographic functionality is limited to the respective user only and ensures the required level of confidentiality for their sensitive data and keys.

Convergence of general purpose and payment HSMs

The general purpose and payment use cases have varied requirements for firmware stacks to operate. The ability to combine certified payment, custom firmware, and general purpose usage on the same platform is a crucial building block for future-proof attractive service offerings. u.trust Converged HSM CSAR offer organizations a singular platform for a wide variety of use cases that is flexible, scalable, and simple.

Scaling on demand

Based on the business requirements, your organization might need to increase or decrease the number of HSMs. u.trust Converged HSM CSAR enables the organization or cloud service providers to aggregate multiple HSM instances on their HSMs and shift instances based on the necessity of the business.

Various compliance requirements on one platform

u.trust Converged HSM CSAR adheres to stringent certification and validation requirements enforced by various industries for general purpose and payment use cases to ensure that the security requirements are fulfilled. Some examples are FIPS 140-2, Common Criteria (CC EAL4+), and PCI HSM.

Reduces total cost of ownership

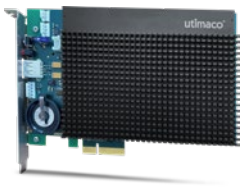
Converging various use cases and dedicated interfaces into one service running on the same hardware and administered with the same operator interface reduces the total cost of ownership.

Service Provider-ready

u.trust Converged HSM CSAR has been designed with the needs of Service Providers in mind. In addition to its container architecture, it features redundant system components and supports various network interfaces including modern fiber channel technology.

Technical Specifications

Utimaco
u.trust Converged HSM
CSAR



Network Appliance

Physical Dimensions

- **Form factor:** 19" 1U
- **Weight**: 22.05 lb (10 kg)
- **Width:** 17.56 in (446 mm) excluding brackets
- **Depth:** 21.79 in (533.4 mm) excluding handles
- **Height:** 1.73 in (44 mm)

Connectivity

- **Interfaces:** 2 RJ45, 1 Gb/s
- 2 SFP+ 10Gb/s or 2 RJ45 1Gb/s network interfaces as optional extension

Electrical Characteristics

- **Power Supply:** Redundant field-replaceable, 2 x 100 ~ 240 V AC, 50 ~ 60 Hertz, 300 W
- **Power Consumption:** typically 55 W / 78 VA, max. 65 W / 90 VA
- **Heat dissipation:** max. 222 BTU/h

Operating Environment

- **Operating temperature:** +50°F to +122°F (+10°C to +50°C)
- **Operating relative humidity:** 10% to 95%, non-considering
- **Storage temperature:** +14°F to +131°F (-10°C to +55°C)
- **MTBF:** 134,250 hours, in acc. With Telcordia Issue 3, temperature 30°C, environment Ground Benign

Certification / Compliancee

- **Safety and Electromagnetic Compliance:** IEC/EN 60950-1, IEC/EN 62368-1, UL, CB Certificate, CE, FCC Class B
- **Environmental:** RoHS II, REACH
- **Security:** FIPS 140-2 Level 3

Time Source

- DCF-77 or GPS receiver as optional extension

PCIe Card

Physical Dimensions

- **Form factor:** Half – length, full-height 4 lane, PCI Express Card
- **Compatibility:** PCIe 1.1, PCIe 2.0 and PCIe 3.0 slots
- **Height:** 0.74 in (18.6 mm)
- **Width:** 4.38 in (111.15 mm)
- **Depth:** 6.60 in (167.65 mm) excluding brackets
- **Weight:** 0.88 lb (0.4 kg)

Connectivity

- **Interface:** PCIe x4

Electrical Characteristics

- **Power Supply:** 3.3 V supplied by PCIe connector
- **Power consumption:** max. 25 W
- **Backup battery:** 3 V lithium battery, type CR2447

Operating Environment

- **Operating temperature:** +50°F to +113°F (+10°C to +50°C)
- **Operating relative humidity:** 10% to 95%, non-considering
- **Storage temperature:** +14°F to +131°F (-10°C to +55°C)
- **MTBF:** 389,797 hours, in acc. with Telcordia Issue 3, temperature 30°C, environment Ground Fixed, temperature 50°C for parts in potting material

Certification / Compliancee

- **Safety and Electromagnetic Compliance:** IEC/EN 60950-1, IEC/EN 62368-1, UL, CB Certificate, CE, FCC Class B
- **Environmental:** RoHS II, REACH
- **Security:** FIPS 140-2 Level 3

About Utimaco

Utimaco is a global platform provider of trusted Cybersecurity and Compliance solutions and services with headquarters in Aachen (Germany) and Campbell, CA (USA).

Utimaco develops on-premises and cloud-based hardware security modules, solutions for key management, data protection, and identity management as well as data intelligence solutions for regulated critical infrastructures and Public Warning Systems. Utimaco is one of the world's leading manufacturers in its key market segments.

550+ employees around the globe create innovative solutions and services to protect data, identities and communication networks with responsibility for global customers and citizens. Customers and partners in many different industries value the reliability and long-term investment security of Utimaco's high-security products and solutions.

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