Product Brochure

# CryptoServer Cloud – The HSM as a Service

**Utimaco**
CryptoServer Cloud

**Creating Trust** in
the **Digital Society**

utimaco®
40 YEARS

# CryptoServer Cloud

## Realize your multi-cloud strategy with the highest security

Nearly every company relies on cloud services to host their infrastructure, access platforms, store data, run big data analytics and so on — the use cases are endless. Nevertheless, cloud and security are still a contradiction for many people and hosting sensitive assets like cryptographic keys in the cloud seems risky.

**We show you how cloud and security can be combined:**



**Our CryptoServer Cloud** offers best of both worlds: **The flexibility of the cloud and the security of a General Purpose Hardware Security Module.** You get a tamper-protected, FIPS 140-2 Level 3 HSM which will be fully hosted by Utimaco but remains under your (remote) control.

# CryptoServer Cloud

## The root of trust for your cloud applications

### The Hardware Security Module as a Service

- Hosted in an ISO/IEC 27001, HIPAA, PCI, and GSMA SAS-SM compliant data center

- Extensive Remote Management

- FIPS 140-2 Level 3 Validation

- Supports common cryptographic APIs for easy integration with 3rd party applications

- Supports multi-cloud deployments

- Flexible migration possible, no lock-in to specific CSP key management or HSM solution

- Works with the major Cloud Service Providers (AWS, Azure, Google, Oracle, Alibaba, …)

### The Datacenter

- Hosted in an ISO/IEC 27001, HIPAA, and PCI compliant data center

- Provision of all hardware and software in the datacenter

- Maintenance of equipment in the datacenter and replacing units

- Setup and additional hardware included

- Secure server room with dedicated HSM per customer

- All relevant security and regulatory certifications

### Operational Services

- Support directly from the HSM vendor

- Monitoring of Utimaco system components

- Announcing maintenance windows

- Installation of firmware updates (CSLAN network appliance)

- Detection of and timely response to incidents involving Utimaco equipment

- Providing clear indication of the status and health of the customer's HSMs

- By default, all HSMs are connected with two cloud connections

# Utimaco
# CryptoServer Cloud

Realize your multi-cloud strategy without compromising on security: The Utimaco CryptoServer Cloud is the Hardware Security Module as a Service that integrates smoothly with your Cloud Service Providers. You receive the same security features as an on-premises HSM while not having to worry about operating and maintaining the infrastructure.

## More than an HSM

Sit back and let us do the work: With the CryptoServer Cloud you receive a worry-free service from Utimaco: We take care of the setup, hosting, and implementation in the datacenter of your HSM — while you maintain full (remote) control. This significantly reduces your Capex and takes all your worries about implementing a dedicated server room, creating a secure environment, or choosing a data center.

## Moving your HSM to the Cloud – Your Benefits

- **Multi-cloud ready:** Fits perfectly to your existing cloud applications but still offers migration possibilities

- **Significantly reduces your capex:** No purchase of hardware, no changes in your IT environment

- **High security:** Supports a wide variety of cryptographic algorithms, offers two-factor authentication, true random number generation, and further security features

- **Easy management:** No setup efforts needed, complete remote management

- **Flexible and scalable:** Quickly available and grows according to your needs

- **Maintain full control** over your cryptographic assets – no backdoors or shared HSMs

- **Service and Support directly from the HSM vendor:** 24/7 support included

- **Fully auditable:** You and your auditors can visit the HSM on-site

- **High availability:** 99% guaranteed availability with one HSM at a single site, optionally up to 99,9% availability with redundant datacenters and two HSMs per site
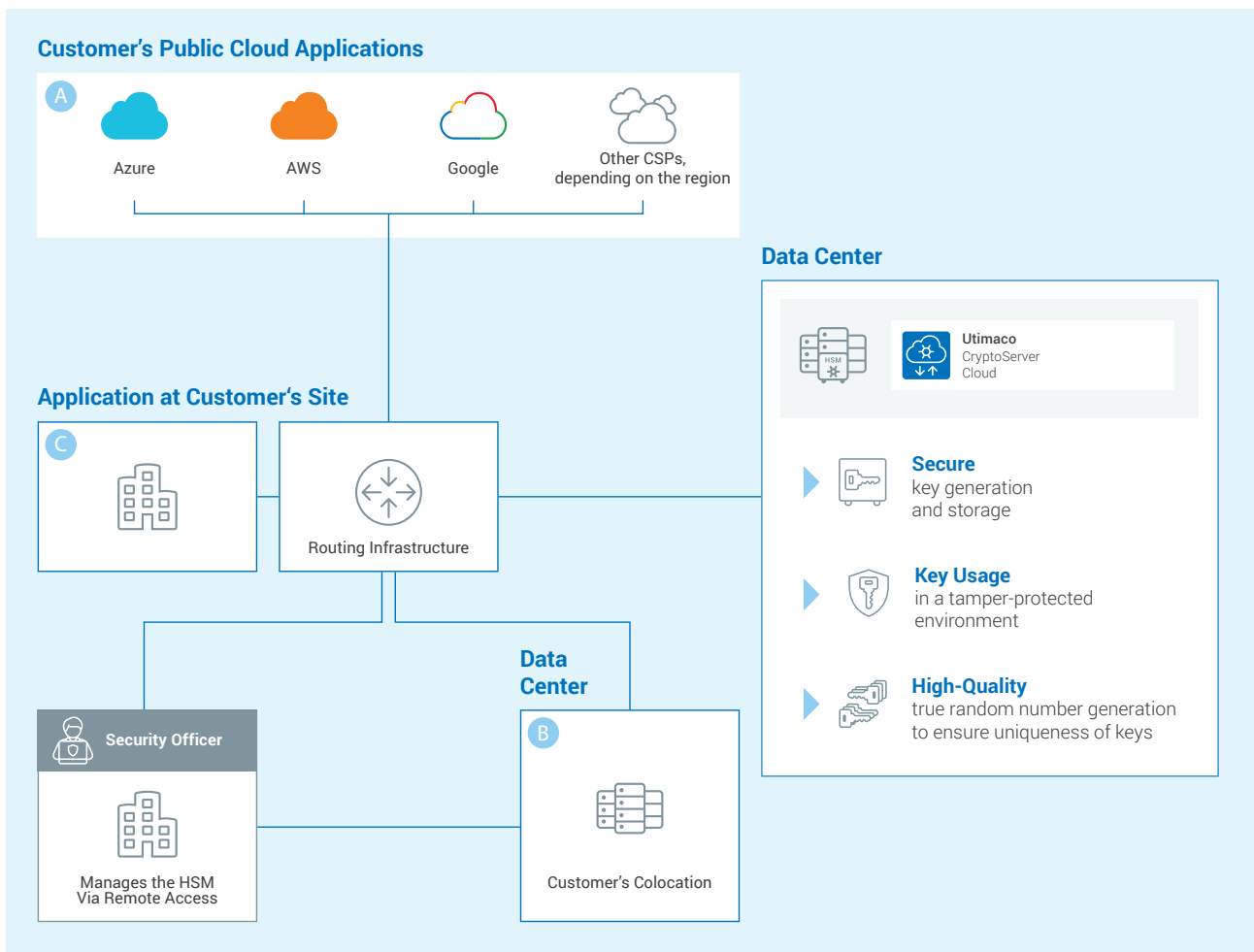
**No set-up and hardware efforts**

**Test before any commitments: Software Simulator available**

**As secure as an on-premise HSM**

# The Basic Architecture

## Suitable to your deployment (Option A, B, or C)

**Customer's Public Cloud Applications**

A

Azure

AWS

Google

Other CSPs, depending on the region

**Data Center**

Utimaco CryptoServer Cloud

HSM

▶ **Secure**
key generation and storage

▶ **Key Usage**
in a tamper-protected environment

▶ **High-Quality**
true random number generation to ensure uniqueness of keys

**Application at Customer's Site**

C

Routing Infrastructure

**Data Center**

B

Customer's Colocation

**Security Officer**

Manages the HSM Via Remote Access

# Licensing Model – Your HSM, Your Choice

## Flexibly choose what you need for your cyber security infrastructure:

### Choose your appliance and the licensing model

| Article Number | Description | Signature creation performance in single signing mode |
|---|---|---|
| **Monthly rental** | | |
| **CSCS-SE500-M** | **CryptoServer Cloud Se500**<br>**24/7 support included for each rental, monthly rental** | Up to 800 keys per second (2048-bit RSA keys) |
| **CSCS-SE1500-M** | **CryptoServer Cloud Se1500**<br>**24/7 support included for each rental, monthly rental** | Up to 1,100 keys per second (2048-bit RSA keys) |
| **Yearly rental** | **12 for 10:** Choose yearly rental and get 2 months for free compared to monthly rental for a year | |
| **CSCS-SE500-Y** | **CryptoServer Cloud Se500**<br>**24/7 support included for each rental, yearly rental** | Up to 800 keys per second (2048-bit RSA keys) |
| **CSCS-SE1500-Y** | **CryptoServer Cloud Se1500**<br>**24/7 support included for each rental, yearly rental** | Up to 1,100 keys per second (2048-bit RSA keys) |

### Choose additional

| Article Number | Description |
|---|---|
| **Accessories** | Get additional accessories for your CryptoServer Cloud |
| **ACC-PIP-ONE** | **cyberJack One USB PIN Pad** |
| **ACC-SC** | **Smartcard for CryptoServer Administration** |

# HSM Functionalities

## Features

- Extensive key management

- **Secure key storage inside HSM,** as encrypted key blobs in file system or in enterprise-grade database

- **2-factor authentication** with smartcards

- **"m out of n" authentication** (e. g. 3 out of 5)

- Configurable **role-based access control** and separation of functions

- **Multi-tenancy** support

- Supported **operating systems: Windows** and **Linux**

- Multiple integrations with PKI applications, database encryption, etc.

- **Up to 1,500 RSA ECDSA operations** in single signing mode (CryptoServer Cloud Se1500)

- **All features included** in product price

## Cryptographic Algorithms

- **RSA, DSA, ECDSA** with NIST, Brainpool and FRP256v1 curves, EdDSA

- **DH, ECDH** with NIST, Brainpool, FRP256v1 and Montgomery curves

- **AES, Triple-DES, DES**

- **MAC, CMAC, HMAC**

- **SHA-1, SHA2-Family, SHA3, RIPEMD**

- **Chinese SM2, SM3 and SM4**

- **5G, Block-chain** and **PQC ready**

- **Hash-based deterministic random number generator** (DRG.4 acc. AIS 31/ NIST SP800-90B)

- **True random number generator** (PTG.2 acc. AIS 31)

- **All algorithms included** in product price

- **Can be upgraded** with blockchain-specific algorithms such as BIP32/44 and SLIP-010 on request

## Application Programming Interfaces (APIs)

- PKCS #11

- **Java Cryptography Extension** (JCE)

- **Microsoft Crypto API** (CSP) and **Cryptography Next Generation** (CNG)

- **Microsoft SQL Extensible Key Management** (SQLEKM)

- **OpenSSL**

- **Cryptographic eXtended services Interface** (CXI) – Utimaco's high performance interface ensures easy integration of cryptographic functionality into client applications

# 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.

Find out more on **utimaco.com**



Headquarters Aachen, Germany



Headquarters Campbell, USA

**...people, devices and digital identities**
against natural disasters, terrorism and cybercrime.

**...financial transactions, data at rest and in motion**
against theft and sabotage.

## We protect ...

**...data and ideas**
Digital economy and digital transformation processes against theft, abuse and manipulation.

**...investments**
with proven, future-proof technology, products and solutions that meet regulation and compliance standards.

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