PaymentServer CSe

utimaco®

Meet your strict compliance requirements with the PCI HSM and FIPS 140-2 accredited Utimaco PaymentServer

All payment systems are unique, and the market is constantly evolving. Technologies like blockchain are on the rise. To keep up with market developments, the industry needs of tomorrow require implementing modifications today already, all while keeping regulations and compliance in mind.

In the face of industry changes, many vendors find themselves stuck with inflexible technology and limited customization options, including legacy systems with outdated API functions.

Utimaco PaymentServer is a Payment Card Industry (PCI) PIN Transaction Security (PTS) HSM for the card schemes programs like Visa, MasterCard, Amex, UnionPay, including card personalization. The Utimaco Software Development Kit (SDK) allows for self-customization of the PaymentServer by your team to handle proprietary and secret algorithms.

Certified customized functionality

- Our powerful SDK for your own developments involving sensitive code, IP or algorithms or
- Professional Services for integrating additional functions and modifications
- Certification Services to get the required certification / compliance for additional functions

Key Features

- Use Payment APIs and General Purpose APIs like PKCS#11 on the same HSM
- Support both secure key storage inside HSM and external encrypted key storage
- 2FA and "M of N" strong authentication with smartcards
- Configurable role-based access control and separation of duties
- Remote management
- Software simulator for development, evaluation and integration testing
- All features included in product price (transparent pricing)

Security, safety, environmental compliance

- PCI PTS HSM V2
- FIPS 140-2 Level 3, Physical Security Level 4
- DK (German Banking Industry Committee)
- CE, FCC Class B
- UL, IEC/EN 60950-1
- CB certificate
- RoHS II, WEEE

Application Programming Interfaces (APIs)

- Payment Specific API:
  ByteBuffer Interface allows Operating System independent build for the communication library and scripting C-API libraries for Windows and Linux, C-API as source code available for rapid integration on other OS
- General Purpose API (add-on license):
  PKCS#11, JCE, CSP, CNG, SQLEKM and Cryptographic eXtended services Interface (CXI)

PCIe card physical specifications

- Half-length, full-height single lane PCI Express card
- Supports PCIe 1.1, PCIe 2.0 and PCIe 3.0 slots
- Operating voltage: 3.3 V
- 3 V lithium battery, Ø 12 mm, length 600 mm, FDK CR 12600 SE or VARTA CR2NP
- 2 USB interfaces
- Operating temperature: +10°C to +35°C (+50°F to +95°F)
- Storage temperature: -10°C to +55°C (+14°F to +131°F)
- Relative humidity: 10% to 95%, non-condensing
- MTBF 360,000 hours at 25°C / 77°F
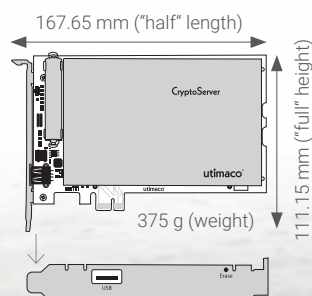
Cryptographic Algorithms

- Triple-DES, DES, AES
- RSA
- MAC, CMAC, HMAC
- SHA-1, SHA2-Family, SHA3, RIPEMD
- Hash-based deterministic random number generator (DRG.4 acc. AIS 31)
- True random number generator (PTG.2 acc. AIS 31)
- DSA, ECDSA with NIST and Brainpool curves
- DH, ECDH with NIST and Brainpool curves
- Up to 3,100 PIN translations per second

Functionalities

- DUKPT
- EMV, Visa, MasterCard
- Transaction processing
- PIN Translation
- Full TR-31 support
- ISO Pin Block Formats 1, 2, 3, 4 (AES PIN Block)
- Card personalization and issuance
- Support for ARPC, ARQC and ARC
- On behalf key management
- 25 key derivations supported
- Customizable architecture to easily add new key derivation methods

Network appliance physical specifications

- 19" 1U form factor
- Redundant field-replaceable power supply:
  2 x 100 ~ 240 V AC, 50 ~ 60 Hertz, 300 W
- Power consumption: typically 45 W / 66 VA, max. 50 W / 70 VA
- Heat dissipation: max. 171 BTU/h
- 2 RJ45 1 Gb/s network interfaces
- Operating temperature: +10°C to +40°C (+50°F to +104°F)
- Storage temperature: -10°C to +55°C (+14°F to +131°F)
- Relative humidity: 10% to 95%, non-condensing
- MTBF 100,000 hours at 25°C / 77°F, environment GB, GC – Ground Benign, Controlled

446 mm excluding brackets (width)

44 mm (height)

533.4 mm excluding handles (depth)   10 kg (weight)

167.65 mm ("half" length)

111.15 mm ("full" height)

375 g (weight)