



# CryptoBind<sup>®</sup>

## Data Security Server

Key Management Solution

# Data Security Server



Data Security Server provides built-in HSM with encryption and tokenization solutions. It enables organisations to neutralize the data breach impact for data at rest, in motion and in use by de-identifying sensitive information



Built-In HSM with encryption and tokenisation solutions

Data Security Server enable advanced format-preserving encryption, secure Stateless tokenization, and stateless key management to protect enterprise applications, data processing infrastructure, Data Encryption API etc.

Data Security Server provides built-in HSM with encryption and tokenization solutions. It enables organizations to neutralize the data breach impact for data at rest, in motion and in use by de-identifying sensitive information. Data Security Server solves the industry's biggest challenge by simplifying data protection across complex legacy and modern IT.



## Enhance your data your data security with CryptoBind® Data Security Server

### Model Information:

Model Number	Performance		Concurrent Key Usage	Key storage in Appliance	Key storage Upgradable in Appliance
	TPS RSA	Network Connectivity			
DSA10000	10000	1 G &/or 10 G Fiber	10,000 Keys	10,00,000 Keys	25,00,000 Keys
DSA5000	5000	1 G &/or 10 G Fiber	5,000 Keys	5,00,000 Keys	10,00,000 Keys
DSA2000	2000	1 G &/or 10 G Fiber	2,000 Keys	1,00,000 Keys	10,00,000 Keys
DSA1000	1000	1 G &/or 10 G Fiber	1,000 Keys	1,00,000 Keys	10,00,000 Keys
DSA500	500	1 G &/or 10 G Fiber	500 Keys	1,00,000 Keys	10,00,000 Keys

### Types of data to protect can include:

- ☑ Credit card and other payment card numbers
- ☑ Bank account numbers, Tax File Numbers
- ☑ Post codes and ZIP codes
- ☑ Currency amounts – salaries, bank account amounts, transaction amounts
- ☑ Phone numbers – mobiles and landlines
- ☑ Dates – birth dates, join dates

- ✔ Social security, national security and Medicare account numbers
- ✔ Names - surnames, first names, street names, suburbs
- ✔ Identification numbers - driver's license and passport numbers

## Supported Environment:

- ✔ Operating Systems: Windows, RHEL, CentOS, Ubuntu, Suse Linux, Linux, Unix, HP UX, IBM AIX
- ✔ The virtual appliance is available in VMware, HyperV, KVM and Azure compatible formats.
- ✔ Application Middleware Support : IIS, JBOSS, Oracle, IBM , Nginx , Apache, WSO2
- ✔ Hardware Acceleration: Intel AES-NI and IBM POWER8
- ✔ Database Support : MSSQL, MySQL, Oracle, DB2, MongoDB, Maria DB, PostgreSQL
- ✔ Container: Docker, Red Hat OpenShift

## Hardware Specifications:

### Physical specifications network appliance

- ✔ Height 3.5" (89 mm)
- ✔ Width 17.2" (437 mm)
- ✔ Depth 25.5" (647 mm)
- ✔ Gross Weight 52 lbs (23.59 kg)
- ✔ Packaging (W x H x L) 26.7" (678 mm) x 11.4" (290 mm) x 34.5" (876 mm)

### Power Supply

- ✔ 2 x 1U 400W/550W/740W 80+certified Hot Swappable
- ✔ Power Supply
- ✔ Power Efficiency : 94%
- ✔ Output and Input: 400W/550W/740W with Input 100 -240Vac
- ✔ AC Input Freq. : 50-60Hz
- ✔ Power Distributor: O/P: 12V/75A
  - ◇ +5V Max: 30A
  - ◇ +3.3V Max: 24A
  - ◇ -12V Max: 0.6A
- ✔ Mean Time Between Failure : 1,83,421 hours

### Operating Environment / Compliance

- ✔ 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

### Network Interface

- ✔ Dual network Interface of 1 G port &/or Dual network Interface of 10 G Optical Fiber port

### Compliance

- ✔ RoHS , UL , CE , BIS Compliant
- ✔ Complies with FCC standard for Electromagnetic compatibility (EMC)
- ✔ FIPS 140-2 level 3 Certified Cryptographic boundary - Applicable for physical appliance for Crypto operation and Key generation

*\*under approval*

## DSS server configuration

- ✔ Core: 16 cores
- ✔ RAM: 32 GB
- ✔ Internal storage: 1 TB

## Technical Specification:

- ✔ Two Factor Authentication
- ✔ API Support PKCS #11, MSCAPI, MSCNG, SOAP, REST, KMIP, .NET
- ✔ Supports Users and groups from LDAP, local systems, Hadoop and container environments
- ✔ Network Management SNMP(v1, v2 & v3), NTP, Syslog-TCP
- ✔ SIEM integration for log analysis and monitoring
- ✔ Multi-tenancy support
- ✔ Supports Clustering & High availability using Agents, also supports HA with external hardware or software Load Balancer
- ✔ Management portal for Complete life cycle management of Cryptographic keys including Creation, Deletion , Archival, Usage and Permissions of Cryptographic keys
- ✔ Separation of duties and policies
- ✔ Administrative Interfaces Secure Web, SOAP, CLI, REST
- ✔ Security Authentication Username/ Password, RSA multi-factor authentication (optional)
- ✔ Backup Manual and scheduled secure backups. M of N key restoration.
- ✔ Compatible with local user LDAPS, Active Directory etc.
- ✔ Syslog Formats CEF, LEEF, RFC 5424
- ✔ vSphere cloud platform support
- ✔ Device can be configured in High Availability with Active - Active cluster

# Key Management Solution (KMS)



JISA's KMS is a centralized key management system that delivers automated key updates and distribution to a broad range of applications.

As your company grows, so does your data. Key Management System increase life cycle efficiency, and help your IT departments develop proper key management policies that scale with your organization.

Strong data encryption requires encryption key management. Being able to own and manage your encryption keys is crucial to meet compliance standards.

## Benefits of JISA's KMS:

- ✔ Streamlines key management processes
- ✔ Cost effective solutions with simple backup and recovery
- ✔ System-wide key control manages any key type and format
- ✔ Automatic key updates and distribution
- ✔ Scalable solution
- ✔ Provides tamper evident records for compliance
- ✔ System-wide key control manages any key type and format

## Features of JISA's KMS:

- ✔ Encryption Key and certificate life cycle
- ✔ Access control for keys and certificate
- ✔ Key Manager support for direct application integration
- ✔ Flexible integration with HSM
- ✔ KMIP agent OS Support : Windows, Linux, HP UX, AIX
- ✔ Policy based key and certificate generation
- ✔ Able to function as a certificate authority
- ✔ Database for storage of keys and key metadata
- ✔ KMIP compliant (Version 1.0, 1.1, 1.2, 1.3, 1.4, 2.0)

# Encryption Use-Cases



Encryption is the process of converting information or data into a code, especially to prevent unauthorized access. JISA KMS can be used in many encryption use-cases like TDE, Column Level Encryption etc.

The purpose of data encryption is to protect digital data confidentiality. While data encryption may seem like a daunting, complicated process, JISA's software handles it reliably every day.

JISA KMS can be used in many encryption use-cases like TDE, Column Level Encryption etc. In most of the scenarios, JISA KMS manages keys leveraging the native encryption offered by different Databases and Applications.

## Transparent Data Encryption (TDE)

- ✔ Encrypt database files.
- ✔ File level encryption.
- ✔ Addresses compliance issues such as PCI DSS which require the protection of data at rest.
- ✔ Encrypting databases on the hard drive and on backup media.

## Column level Encryption

- ✔ Flexibility in encryption of data
- ✔ TDE is possible with this
- ✔ Encryption is possible not just "at rest" but also "in motion" and when data is in process
- ✔ Retrieval speed is relatively high

## Application Level Encryption

- ✔ Potential to simplify the encryption process
- ✔ Enables to achieve PCI DSS standards
- ✔ Security at application level to ensure more protection
- ✔ Data is encrypted before it is written to the database

# Storage & Tape Drive Encryption

- ✔ Flexible Key management (KMIP compliant)
- ✔ Provides good security and high functionality
- ✔ Access control can be enforced





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