

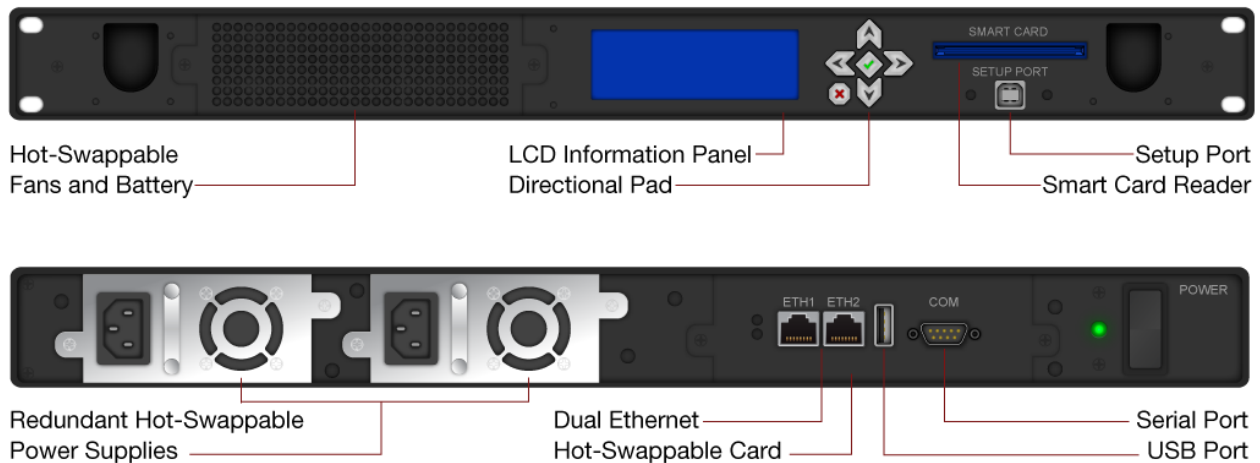
Vectera Plus – Product Overview



The Vectera Plus is a compliant, network-attached hardware security module (HSM) designed for high security data encryption. Incorporating the world's most advanced encryption algorithms within an industry-leading secure cryptographic device, the Vectera Series is designed for unlimited application across a wide range of industries.

Additionally, the extensibility and versatility of the Vectera Plus is unparalleled. The many features available through the Vectera Plus ensure that your organization does not have to sacrifice quality and usability when looking for a cost-effective solution. The result is an efficient, Best-in-Class solution for an enterprise's encryption needs.

Vectera Plus – Features and Benefits



Secure, Convenient, and Easy to Use

Futurex HSMs are configured with ease-of-use in mind. Our HSMs are designed to improve security and reduce risk, while making management as convenient as possible. Centralized monitoring of multiple geographically dispersed Vectera Series units is easily accomplished through the HSM's automated, network-based log output.

High Performance

The Vectera Plus builds upon Futurex's legacy of proven technology with features designed to exceed expectation and deliver upon expectations of high performance cryptographic solutions. With scalability features to increase processing throughput rates without removing units from production, the Vectera Series ensures organizations don't have to worry about downtime or loss of functionality.

Industry Regulation-Compliant

Adhering to industry standards, the Vectera Plus is compliant with all audit requirements to support both current and emerging security standards. The system is designed to comply with FIPS 140-2 Level 3 requirements, giving you the robust protection you need to secure your growing network.

Robust Security

The Vectera Plus HSM includes the following physical and logical security features:

- 1U tamper-resistant hardened steel interlocking rack-mounted case
- Two unique faceplate bezel locks to protect the configuration port
- Software enforcement of dual control and split knowledge principles
- Secure Cryptographic Device (SCD) with epoxy barrier and sensor wires to protect processor and system memory
- User-serviceable battery backup for keys in SCD memory

Advanced Reporting and Audit Logging Abilities

- Automatically transmit data logs to a remote syslog server for internal and external audits
- Digitally sign log files, ensuring that data integrity is maintained and logs cannot be altered
- Remotely access internal logs via the web-based management interface

Universal Compatibility

- Able to work with custom code through the Secure Code Environment
- Compatible with major host application software products sold around the world
- Intuitive GUI reduces training and administrative costs

Easy-to-Use GUI

- Simple point and click application allows for easy configuration
- Ability to perform a number of key management functions, including key loading and generation

Optional Features

Through the use of the Guardian9000, multiple Vectera Plus HSMs can be managed from a secure, centralized location, enabling additional features such as:

- Customized, real-time monitoring and alerting based on user-defined thresholds
- Notification functionality available via SMS, SMTP, and SNMP
- Cloud-based scalability, enabling resource modification depending on current needs
- Centralized, remotely accessible storage of log files

Through the use of the Securus, organizations can remotely load keys and configure the Vectera Series from virtually anywhere in the world.

- Establish a Public Key Infrastructure (PKI) to securely and remotely load Master Keys
- Replicate device configuration details across multiple units, reducing initial setup time

Cryptographic Algorithms Supported

The Vectera Series is capable of supporting numerous cryptographic algorithms for general purpose data encryption. These algorithms include:

- 3DES
- AES
- RSA
- ECC
- HMAC
- SHA-2

Functional Interfaces Supported

The following represents some of the many APIs and interfaces supported by the Vectera Series:

- Excrypt API
- PKCS #11
- Java

Graphical User Interface

An intuitive native GUI application is included by default with the Vectera Series. Through this GUI-based application, virtually all settings may be configured.

Secure Code Environment

The Vectera Series provides a protected environment for organizations through its Secure Code Environment. This environment is isolated to allow organizations to internally load and execute their own

custom code and applications. Companies can load their own software directly into the Vectera Series, promoting ease of use and flexibility while maintaining highest security.

PKI-Based Remote Key Loading for Operation in a Remote Datacenter

Using the Futurex Securus, a portable, touch screen-based configuration and key management tool, users may securely and remotely load keys into the Vectera Series HSM. This feature is ideal for organizations that have remote datacenters that make physical access to the HSM difficult, time-consuming, or expensive.

Dual, Hot-Swappable Power Supplies

The Vectera Series contains dual, redundant, hot-swappable power supplies, allowing both for redundancy in physical hardware and redundancy in power source, if an organization wishes to use two separate circuits.

Dual Ethernet Ports

The Vectera Series contains dual Ethernet ports, adding another layer of hardware redundancy.

Integrated Smart Card Reader

Key components are required to be stored securely. Organizations have typically used pen and paper methods to record key components, but our innovative support of smart card-based key loading removes that cumbersome requirement. When storing key components on smart cards, each smart card is itself certified as a FIPS 140-2 Level 3 Secure Cryptographic Device, adding an additional layer of security.

Syslog Support

Maintaining accurate and complete logs is a critical element of a robust payment processing environment. The Vectera Series is designed to output log files directly to an external syslog server, which simplifies troubleshooting, development, and auditing.

M-of-N Key Fragmentation

Typically, if an organization has five key officers, all five of them must take time from their schedule and often travel long distances to attend a key loading ceremony. With the M-of-N key fragmentation support available on the Vectera Series, organizations can define a number of required key officers for a key ceremony that is less than the total number of key officers. So instead of requiring all five key officers to attend a key ceremony, an organization can require that at least three of them be present at a key loading ceremony. This allows organizations to maintain security while dramatically reducing the inconvenience of coordinating busy schedules around key ceremonies.

Remote Management Capabilities

The process of configuring and maintaining off-site data centers is typically very difficult. In order to alleviate that, a Public Key Infrastructure (PKI) has been incorporated into the Vectera Series in order to allow it to communicate with the Securus, Futurex's portable, touchscreen-based remote management and configuration device.

Using the remote management functionality within the Vectera Series eliminates the need for organizations to spend time and money traveling to perform routine maintenance, key loading operations, and firmware updates. All activities normally performed at the HSM directly can now be performed securely from anywhere in the world.

Vectera Plus – Specifications

- Weight: 36 lbs (16.33 kg)
- Width: 19 inches (48.26 cm)
- Height: 1U – 1.72 inches (4.37 cm)
- Depth: 19.44 inches (49.38 cm)
- Power requirements: 100 - 240 VAC 50/60 Hz. 120 Watts
- Operating temperature: 50° to 95°F (10° to 35°C)
- Storage temperature: -4° to 149°F (-20° to 65°C)
- Operating relative humidity: 20% to 80% non-condensing
- Storage relative humidity: 5% to 95% non-condensing