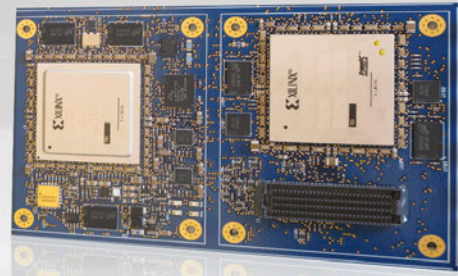


- » NSA Type 1-Certified for TS/SCI & Below
- » High-Speed Voice and Data Encryption
- » COTS-Based Programmable Security System
- » MILS-Certified Standalone Cryptosystem
- » Supports MLS applications



The Viasat Embeddable Security System 1800 (ES-1800) is a complete, programmable cryptographic module leveraging COTS-based technologies and optimized for embedment in applications that require high-speed voice and data encryption. Based on Viasat's field-proven PSIAM cryptosystem architecture and certified by NSA as the PSIAM-II Cryptographic Module (P2CM) Standalone, this module delivers high-assurance communications security for a wide range of TS/SCI military and government communications.

Delivering more than just a crypto engine, the Viasat ES-1800 module is an entire cryptographic system that includes key management, memory, power conditioning, IP optimization, zeroization, trusted bypass and control.

Utilizing Field Programmable Gate Array (FPGA) technology, this module is truly programmable and complies with the NSA Crypto Modernization Initiative (CMI), ensuring your embedded information assurance evolves over time without costly hardware changes.

This module is certified for Multiple Independent Levels of Security (MILS) and certified to support Multiple Levels of Security (MLS) information processing when using a trusted labeling mechanism. This standalone module can reduce the size, cost, and power of your application by processing data at multiple classification levels.

Using all COTS parts, this module has an inherently flexible design resulting in a longer lifecycle than proprietary ASIC crypto chips, saving you development time and money.

## VIASAT ES-1800 AT-A-GLANCE

### A Total Cryptosystem

- » All the functions you need for a cryptosystem contained in one module
- » High-performance security
- » MILS certified and certified for MLS when using an approved trusted labeling mechanism
- » NSA Type 1-certified for TS/SCI and Below communications

### FPGA-Based Technology

- » Flexible design supports changes and feature enhancements
- » Leverages COTS technologies
- » Longer product lifecycle compared to ASIC chips

### Quick and Seamless Integration

- » Turnkey customization
- » Common packet-based control interface/API
- » Evaluation Kit available for early integration and testing

### Fully Reprogrammable

- » Encryption/decryption
- » Key management
- » Keystream generation
- » Trusted control/status/header bypass

## SPECIFICATIONS

### CRYPTOGRAPHIC FEATURES

- » NSA-certified for TS/SCI and below communications
- » Complete cryptographic system module
- » Fully programmable
- » Multiple Independent Levels of Security (MILS)
- » Multiple Levels of Security (MLS) when using an approved trusted labeling mechanism
- » Supports up to 64 K circuits/channels simultaneously
- » Multiple simultaneous algorithms/equipment modes
- » **Message types** data, voice, and video
- » **Throughput** 200 Mbps
- » **Trusted (Guarded) Bypass** In-band header, control/status
- » Token-based authentication
- » DS-101 Key load
- » **Key storage** 10,000 keys
- » Hardware randomizer
- » Anti-Tamper

### INTERFACES

<b>RGMII</b>	Plaintext, Ciphertext
<b>DS-101</b>	RS-485
<b>Token</b>	I <sup>2</sup> C
<b>Misc IO</b>	2.5 V LVCMOS
<b>Power Input</b>	3.3 V

### PHYSICAL

<b>Size (W x H)</b>	6 x 3.5 in.
<b>Weight</b>	60 g
<b>Power</b>	7 W typical

### ENVIRONMENTAL SPECIFICATIONS

<b>Temperature</b>	
» <b>Operational</b>	-40° to 85° C
» <b>Storage</b>	-55° to 125° C
<b>Altitude</b>	
» <b>Operational</b>	50,000 ft
» <b>Storage</b>	70,000 ft
<b>Shock/Vibration</b>	MIL-STD-810G

### SOFTWARE UPGRADEABLE FEATURES

- » Dynamically loadable guard policies
- » Over-the-air rekey
- » Plaintext override
- » Interface to multiple key fill device types
- » Programmable external interfaces and IO
- » Algorithm agile in support of COMSEC, Key Management, and Authentication
- » KMI compatibility
- » Remote zeroization
- » Support for higher data rates

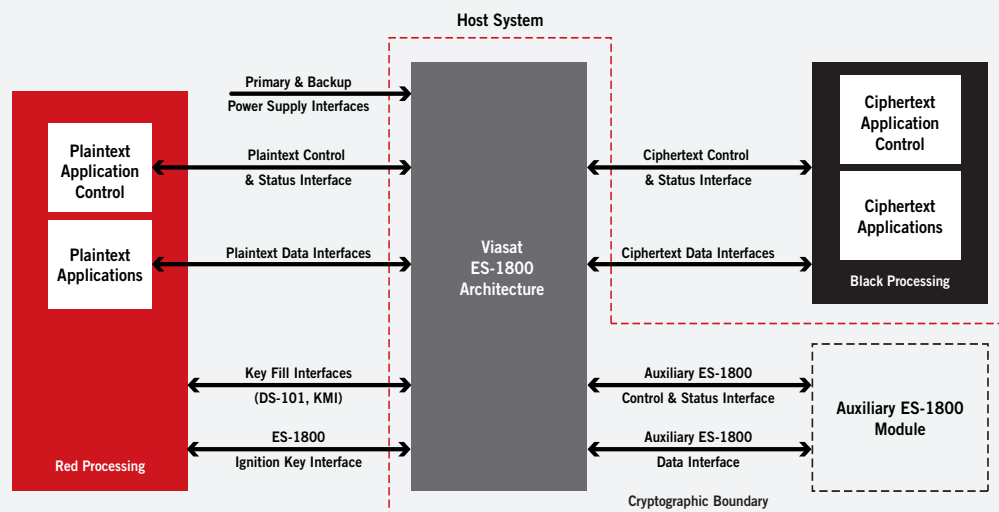
### EMBEDMENT APPLICATIONS

- » Single and Multi-Channel Radios
- » HAIPE® Networking Devices
- » Crypto Modernization Programs
- » Satellite Terminals

### ORDERING INFORMATION

#### PART NUMBERS

Viasat P2CM\*/ ES-1800 1078573



## CONTACT

### SALES

TEL 888 842 7281 (US Toll Free) or +1 760 476 4755 FAX +1 760 683 6815 EMAIL insidesales@viasat.com

### TECHNICAL SUPPORT

TEL 888 842 7284 (US Toll Free) or +1 760 476 4754 FAX +1 760 929 3938 EMAIL altasec@viasat.com WEB www.viasat.com/secure

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