The ViaSat Embeddable Security System 2200 (ES-2200) is a complete programmable cryptographic module leveraging COTS-based technologies. Providing FIPS 140-2 Level 2 communications security for a wide range of applications, including military, government, and commercial, the ViaSat ES-2200 is optimized for embedment in applications that use a PCI Mezzanine Card (PMC) form factor.

Delivering more than just a crypto engine, the ViaSat ES-2200 module is an entire cryptographic system that includes key management, memory, IP optimization, zeroization, trusted bypass and control. With Field Programmable Gate Array (FPGA) and microcontroller technology, the ViaSat ES-2200 is a self-contained truly programmable cryptosystem that scales to your specific security requirements.

The ES-2200 module is FIPS 140-2 validated by the National Institute of Standards and Technology (NIST) and field-proven in communications equipment such as the ViaSat LinkWay S2™ modem, MD-1377 Joint IP Modem, and U.S Army Blue Force Tracking 2 network. With a long history of securing information for government and commercial organizations worldwide, we’ve established a library of crypto capabilities and waveforms that can be easily added to this programmable module for enhanced functionality.

The ViaSat ES-2200 makes securing your voice and data communications easy with a high-performance, COTS-based, fully programmable embeddable cryptosystem.

VIASAT ES-2200 AT-A-GLANCE

A TOTAL CRYPTOSYSTEM
» All the functions you need for a cryptosystem contained in one module—no extras needed
» Trusted platform capable of secure remote management
» High-performance security
» FIPS 140-2 Level 2

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

QUICK AND SEAMLESS INTEGRATION
» Industry standard PMC interface
» Adaptable for PCI or PCI Express interfaces with the addition of a standard carrier card
» Turnkey customization
» Common packet-based control interface/API

FULLY REPROGRAMMABLE
» Encryption/decryption
» Key management
» Traffic flow security
» Trusted bypass
SPECIFICATIONS

CRYPTOGRAPHIC FEATURES
» FIPS 140-2 Level 2
» Complete cryptographic system module
» Fully programmable
» Encrypt/Decrypt AES-256 CTR
» Message types data, voice, and video
» Throughput 180 Mbps; multiple stream options
» Trusted bypass cryptographic, In-band header, control/status
» Digital signatures ECDSA P-384
» Public key certificates X.509
» Plaintext override
» PIN-based authentication (supports tactical keypads)
» Key load
» Key storage
» Anti-Tamper
» TRANSEC
» Data at Rest

INTERFACES
Dual 10/100/1000 BASE-T Ethernet
Plaintext, Ciphertext
PCI Bus
(PMC, PCI or PCIe)
plaintext
Asynchronous Serial Interface (ASI)
Ciphertext
Power Input
3.3 V, 5 V

PHYSICAL
Size (WxHxD) 2.9 x 5.9 x 0.6 in.; 74 x 149 x 15 mm
Weight 6 oz
Power 10 W typical

ENVIRONMENTAL SPECIFICATIONS
Board encapsulated in hard epoxy and conformal coat
Temperature
» Operational 0º to 50º C
» Storage -40º to 70º C
Altitude
» Operational 50,000 ft
» Storage 70,000 ft
EMI/EMC
FCC Class B
Shock/Vibration MIL-STD-810G
Humidity
» Operating 95%, Non-Condensing
» Transportation and Storage 100%, Non-Condensing

SOFTWARE UPGRADEABLE FEATURES
» Variety of Suite B algorithms and modes
» Dynamically loadable guard policies
» Over-the-air rekey
» Interface to multiple key fill device types
» Extended data rates up to 1,000 Mbps
» RS-485 key fill
» KMI compatibility
» Remote zeroization

ORDERING INFORMATION
PART NUMBERS
ES-2200 1113106

PMC EMBEDMENT APPLICATION EXAMPLE

VIA SAT ES-2200 VIA SAT LINKWAY s C4I SATCOM MODEM GROUND VEHICLE

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