

- » NSA-Certified Type 1 HAIPE® IS V4.2.5 Compliant including VLAN/Ethernet Tunneling
- » Minimize Network Overhead and Simplify Configurations with Embedded OSPF/PIM
- » Software-Upgradable to Host Future Cybersecurity Requirements
- » ACC, OTNK KMI Aware, PDE enabled
- » Multi-Speed capable, 200Mbps or 2Gbps options
- » Pass through Layer 2 traffic using VLAN/Ethernet Tunneling over Layer 3 networks or True Layer 2 EDE-CIS mode*



Viasat KG-255X is a rugged, Type 1 Inline Network Encryptor (INE) certified by the National Security Agency for up to TS/SCI. This flexible security appliance delivers trusted protection for your enterprise or tactical network by leveraging 2 Gbps aggregate processing power and a software-programmable architecture to meet evolving cybersecurity requirements. The KG-255X supports standard copper, fiber single-mode/multi-mode SFPs commonly used with networking equipment.

The KG-255X's thermal design and packaging provides effective power management, high reliability and lower touch temperatures. Combined with Viasat's high-availability rack, Viasat can accommodate high density 1U stacking of encryptors.

With the ability to host a wide range of networking features such as Open Shortest Path First (OSPF) and Protocol Independent Multicast (PIM), the Viasat KG-255X can help reduce your network overhead and seamlessly integrate remote Plain Text networks. Remotely rekey a network of HAIPE devices from a physically secure location with HAIPE-to-HAIPE over-the-air/net keying. Improve performance over high-latency links with embedded TCP/IP acceleration (xPeP). Viasat's INE supports configurations for one-to-one, many-to-one and many-to-many multicast scenarios improving flexibility and reducing administrative overhead.

KG-255X can be used either as a Layer 3 HAIPE or Layer 2 EDE depending on the mode of operation that is activated via user selection.*

In HAIPE mode it can interoperate with KG-250X/KG-250XS/IPS-250X or any other HAIPE compliant device. It also has VLAN/Ethernet tunneling for Layer 2 data over Layer 3 networks.

In the EDE-CIS mode it can interoperate directly with Viasat's Type 1 high speed ethernet encryptors, for example the KG-142, using MACSEC to aggregate data for data center interconnect.

KG-255X AT-A-GLANCE

HAIPE Capabilities

- » Packet-by-packet suite agility
- » Suite A and/or Suite B or IPMEIR
- » HAIPE IS v4.2.5 compliant VLAN
- » HAIPE-to-HAIPE over the air/net keying
- » Fully FI compliant with software and key material source authentication and programmability
- » Usable by coalition allies and Department of Homeland Security

HAIPE Enhanced Networking Capabilities

- » VLAN/Ethernet tunneling for Layer 2 data over Layer 3 networks
- » Software upgradable to meet evolving cybersecurity requirements
- » Embedded OSPF and PIM routing
- » Multicast video on demand
- » Embedded TCP/IP accelerator (xPeP)
- » Browser-based HMI configurations
- » Centralized INE management; VINE Manager™ software provided at no extra cost
- » High performance in VoIP applications

Crypto-Modernization Centric

- » Programmable encryption
- » Key and algorithm agile per packet
- » Classified and Unclassified Device Generated Shared Key (CDGSK/DGSK); as well as centralized key distribution sources (for example KMI)

Support

- » 5-year warranty (extended options available)
- » Free training and 24/7 technical support
- » INE trade-in program available

*Future capability available via software upgrade.

SPECIFICATIONS

NETWORKING FEATURES AND PROTOCOLS

Protocols Supported	TCP, UDP, IPv4/IPv6 Dual Stack, ICMP, IGMP, ARP, DHCP, PIM
Networking Features	Dynamic IP addressing, dynamic key management, plaintext address confidentiality with dynamic peer discovery, embedded OSPF routing, support for "JUMBO" Ethernet frames
Management	SNMP & HTTPS browser-based management, VINE Manager software
Multicast	IGMP on plaintext and ciphertext subnet
Quality of Service (QoS)	Type of service octet bypass
Fragmentation	Supports fragmentation and header options for plaintext IP packets

NETWORK INTERFACES

Plaintext Data Interface	
» Electrical/Mechanical	IEEE 802.3; copper RJ-45 SFP 10/100/1000 Base-T, IEEE 802.3; optical SFP 1000 base-SX, LX, ZX, various connector styles (LC, MT-RJ)
Ciphertext Data Interface	
» Electrical/Mechanical	IEEE 802.3; copper RJ-45 SFP 10/100/1000 Base-T, IEEE 802.3; optical SFP 1000 base-SX, LX, ZX, various connector styles (LC, MT-RJ)
Management Interface	
» Electrical/Mechanical	IEEE 802.3; 10/100/1000 Base-T; copper RJ-45
Future Interfaces	Supports up to three plaintext and three ciphertext ports

COMSEC CHARACTERISTICS

Algorithm Agile	ACC compliant Type 1 Suite A and/or Suite B (AES-EFF) or IPMEIR
Key Fill Interface	DS-101
Flexible Keying	Crypto Ignition Key removal to unclassified CCI, OTNK (KMI Aware, PDE enabled), unclassified/classified Device Generated Shared Key (DGSK)

PHYSICAL CHARACTERISTICS

Dimensions (W x H x D)	7.9 x 1.5 x 12.5 in.
Weight	9 lb
Power	40 W; 12 to 28 VDC; MIL-STD-1275E; MIL-STD-704F
Battery	External user replaceable battery, one "1/2AA" lithium cell, 3.5 year operating life typical

RELIABILITY AND MAINTENANCE

Predicted MTBF	250,000 hr
Predicted MTTR	15 min
Other	Extensive power up and online BIT

ENVIRONMENT

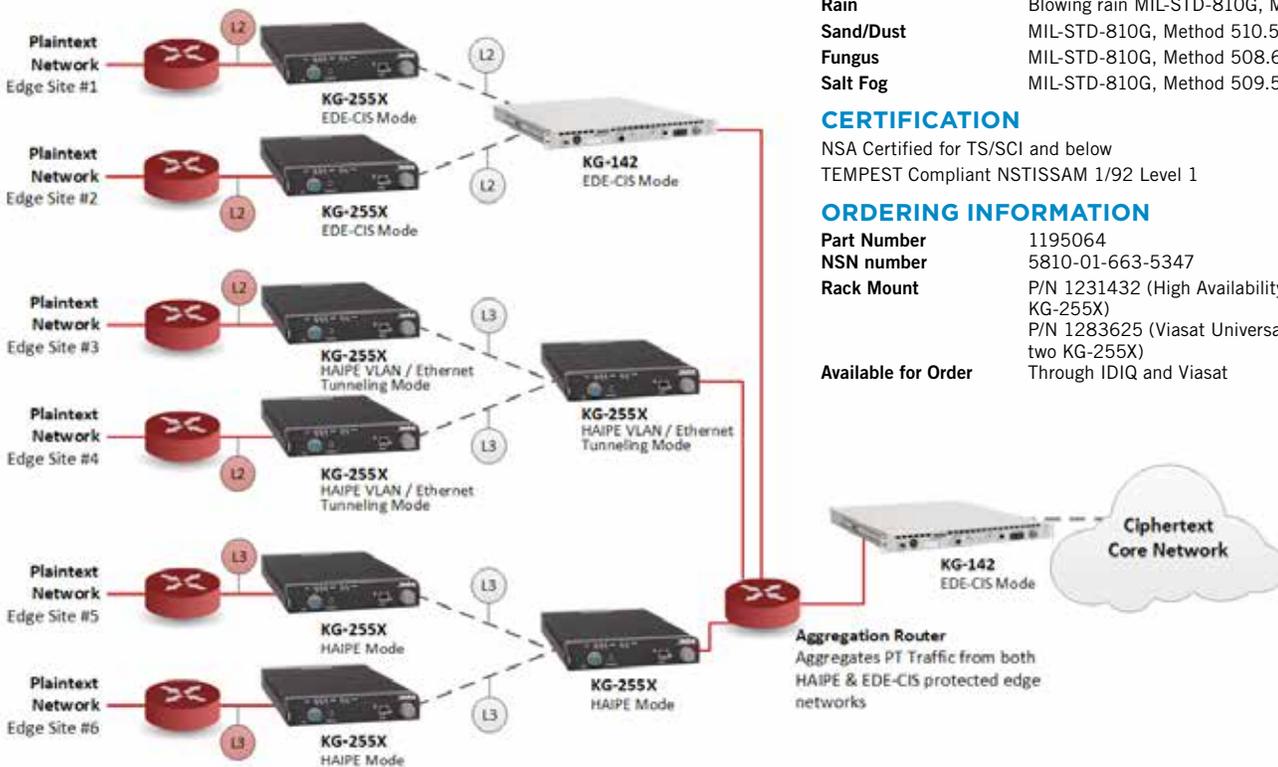
Operating Temperature	-40° to 60° C
Storage Temperature	-40° to 71° C
Humidity	To 95% MIL-STD-810G, Method 507.5 50,000 ft operational; 70,000 ft storage; MIL-STD-810G, Method 500.5
Altitude	MIL-STD-810G, Method 514.6, Category 4
Vibration	MIL-STD-810G, Method 516.5
Shock	MIL-STD-810G, Method 516.5
EMI/EMC	MIL-STD-461E
Rain	Blowing rain MIL-STD-810G, Method 506.5
Sand/Dust	MIL-STD-810G, Method 510.5
Fungus	MIL-STD-810G, Method 508.6
Salt Fog	MIL-STD-810G, Method 509.5

CERTIFICATION

NSA Certified for TS/SCI and below
TEMPEST Compliant NSTISSAM 1/92 Level 1

ORDERING INFORMATION

Part Number	1195064
NSN number	5810-01-663-5347
Rack Mount	P/N 1231432 (High Availability: holds two KG-255X) P/N 1283625 (Viasat Universal INE Rack: holds two KG-255X)
Available for Order	Through IDIQ and Viasat



CONTACT

SALES

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

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