Viasat
BEYOND
Encryption
Edge Solutions

KG-250X family

Ruggedized encryption for tactical, mobile and airborne missions

› NSA-Certified for U.S. TS/SCI and below
› NATO approved (NATO NINE Interoperability)
› 200Mbps to 400Mbps aggregate throughput
› Heartbeat zeroize, remote zeroize, remote management
› HAIPE IS V4.2.5 and ACC Compliant

High assurance encryptors

The Viasat KG-250X portfolio of ruggedized, high-assurance encryptors consists of a family of products designed to meet a variety of unique use cases. While each product within the KG-250X family has nearly identical SWaP and environmental characteristics, each device brings unique capabilities designed to meet specific warfighter requirements. The KG-250X has a 100Mbps RJ45 interface capable of achieving 200Mbps aggregate throughput. The KG-250X-FC adds the flexibility of both 100Mbps RJ45 and Multi-Mode Fiber interfaces to a single device. The KG-250X-M provides a rugged, 100Mbps MIL connector ideal for mobile vehicle and airborne applications to meet high-vibration operational environments. The KG-250X-G has a 1Gbps copper interface and doubles the throughput to 400Mbps aggregate without any additional size, weight, power, or heat constraints. The KG-250X-G provides automatic tuning of the 400Mbps aggregate network throughput based on traffic flow activity and operational requirements. This enables users to achieve data rates that range from nearly 400Mbps in a single direction to an evenly distributed 200Mbps bi-directional data rate.

The advanced networking functions of the KG-250X portfolio make it ideal for the unique requirements of tactical networks with wired or wireless backhauls. Supporting a wide range of power sources from standard 120V DC for enterprise and 12 to 28VDC for tactical vehicle, airborne, and UXV applications, the KG-250X portfolio is suitable for both desktop and tactical operations. The embedded xPEP capability provides TCP/IP acceleration to maintain connectivity and performance over satellite and other long-range network connections. The ability to bridge layer 2 Ethernet networks over layer 3 TCP/IP networks as well as specialized OSPF functions make the KG-250X family of encryptors the ideal solution for diverse and ever-changing requirements that warfighters are faced with.

The KG-250X/KG-250X-FC/KG-250X-M/KG-250X-G thermal design and packaging provides effective power management, high reliability, lower touch temperatures, and can accommodate high-density 1U stacking of encryptors.

KEY HIGHLIGHTS

› Lowest SWaP 100 Mbps Class Encryptor
› Size: 4.46" W x 1.54" H x 8.49" D
› Weight: 3.0 – 3.2 lb.
› 12-28V power input range for both tactical and aerial applications
› Browser-based internal HMI configuration and management
› Interoperable with U.S. Army approved CHIMERA software
› XPEP TCP/IP Acceleration License for high latency, tactical networks
› VINE Manager software for advanced management and automated deployment
› 3-Year Warranty
› Training and 24/7 technical support

ACCESSORIES

Two different Rack Mount Kits are available for a standard 1U, 19" rack mount enclosure.

The Universal Rack Mount can be used to secure up to three devices from the KG-250X family.

The Power Save Rack Mount also secures up to three devices and includes a filtered power module that can run them from a single, standard KG-250X power supply.

Viasat KG-250X/KG-250X-FC/KG-250X-M/KG-250X-G
SPECIFICATIONS

NETWORKING FEATURES AND PROTOCOLS

Protocols Supported	TCP, UDP, IPv4/IPv6 Dual Stack, ICMP, IGMP, ARP, DHCP
Networking Features	Dynamic IP addressing, dynamic key management, embedded OSPF routing, plaintext address confidentiality with dynamic peer discovery
Management	SNMP and 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

KG-250X	IEEE 802.3; 100 Mbps copper, RJ-45
KG-250X-FC	IEEE 802.3; 100 Mbps copper, RJ-45 IEEE 802.3; 100 Base-FX, 1310nm optical, LC connector
KG-250X-M	IEEE 802.3; 100 Mbps copper, Glenair 801 series circular connector
KG-250X-G	IEEE 802.3; 100 Mbps copper, RJ-45

COMSEC CHARACTERISTICS

Algorithm Agile	ACC Compliant High Assurance Suite A and/or Suite B (AES-EFF) cryptography or IPMEIR
Flexible Keying	Crypto Ignition Key (removal to unclassified CCI), EKMS, unclassified/classified DGSK, IKEv2/ECDH

PHYSICAL CHARACTERISTICS

Dimensions (W x H x D)	4.46 x 1.54 x 8.49 in.	
Weight	**KG-250X**	3.0 lbs (1.4 kg)
	KG-250X-FC	3.0 lbs (1.4 kg)
	KG-250X-M	3.2 lbs (1.5 kg)
	KG-250X-G	3.0 lbs (1.4 kg)
Power	14 W typical; 12-28 VDC; MIL-STD-1275D; MIL-STD-704F	
Battery	External user replaceable battery, one "1/2 AA" lithium cell, 3.5 year operating life typical	

CERTIFICATION

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

RELIABILITY AND MAINTENANCE

Predicted MTBF	350,000 hr
Predicted MTTR	15 min
Other	Extensive power up and online BIT

ENVIRONMENT

Operating Temperature	-40° to +60°C
Non-operating Temperature	-40° to +71°C
Solar Radiation	MIL-STD-810G, Method 505.5
Humidity	To 95% MIL-STD-810G, Method 507.5
Altitude	50,000 ft operational; 70,000 ft storage; MIL-STD-810G, Method 500.5
Explosive Atmosphere	MIL-STD-810G, Method 511.5
Rapid Decompression	MIL-STD-810G, Method 511.5
Vibration	MIL-STD-810G, Method 514.6, Category 20 and 24 MIL-STD-167 High Assurance
Shock	MIL-STD-810G, Method 516.6; MIL-STD-901D Grade A Class II, Type C
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 508.5
Salt Fog	MIL-STD-810G, Method 509.5

ORDERING INFORMATION

KG-250X (Copper)	P/N 1101000 NSN 5810-01-593-8026
KG-250X-FC (Fiber/Copper)	P/N 1161607 NSN 5810-01-647-0219
KG-250X-M	P/N 1391446 NSN TBD
KG-250X-G	P/N 1379302 NSN TBD
1U, 19" Universal Rack Mount	P/N 1283625
1U 19" Power Saving Rack Mount	P/N 1276459
Available for Order	Through IDIQ and Viasat

KG-250X 100 Mbps Copper

KG-250X-FC 100 Mbps Copper/Fiber

KG-250X-M 100 Mbps MIL Std

KG-250X-G 1 Gbps Copper