



Bandwidth-hungry? Secure your enterprise at full duplex speeds of 1 Gbps with the KG-255. In a stackable 1U form factor, the KG-255 is the fastest certified Type 1 GIGEE HAIPE with the lowest power and operating temperature. The KG-255 supports the secure exchange of classified information up to the TOP SECRET level at full duplex speeds of 1 Gigabit per second over commercial IP Wide Area Networks.

The KG-255 is a highly network capable Gigabit Ethernet INE, capable of exceeding the HAIPE IS threshold level features in areas where users want them. By incorporating the latest networking features with an intuitive secure browser based management interface, the KG-255 is easy to configure and use, so operators can focus on other primary responsibilities. ViaSat has priced the KG-255 for widespread usage.

ViaSat is committed to keeping our customers up to date as new HAIPE IS versions are approved, retaining interoperability with our existing fielded products, and obtaining and maintaining interoperability with our competitor's HAIPE IS products. This is a considerable challenge as both the specification and each vendor's products evolve, but it is one we are prepared to meet aggressively.

You can depend on ViaSat to offer network encryption products that are flexible, capable, and leverage your existing investments in your network infrastructure.

### AltaSec KG-255 At-A-Glance

#### HAIZE IS v1.3.5 Compliant

- Interoperable - Scalable - Manageable - Upgradable
- HAIPE IS v3 (IPv4/IPv6 Dual Stack) via SW download<sup>1</sup>

#### Networking Features

- Small form-factor pluggable (SFP) optical modular transceivers for increased link characteristic and connector style flexibility
- HAIPE IS dynamic discovery
- Provides both copper and fiber 1 Gbps interfaces
- Trusted bypass, key management, traffic flow security countermeasures, networking protocols

#### Management

- Field tamper recoverable<sup>2</sup>
- Intuitive, secure browser based management interface
- Authenticated local and remote management
- Centrally and remotely managed by ViaSat INE (VINE™) Manager software
- Secure remote software download
- Battery & temperature status/indicator

#### Crypto-Modernization Centric

- Authenticated, embedded local and remote management
- Intuitive, secure browser based management interface
- Dynamic Firefly, enhanced Firefly & pre-placed keys (PPK)

#### Performance

- 1 Gbps full line rate speeds across all packet sizes
- 2 Gbps aggregate line rate
- Low latency
- High performance in VoIP applications

#### Premium Secure Networking Solution

- 3-Year HW & SW warranty
- Extended warranty options
- Free training and tech support
- KG-250 and other INE trade-ins accepted<sup>3</sup>

# AltaSec® KG-255: Type 1 Gigabit Ethernet In-Line Network Encryptor

## SPECIFICATIONS

### NETWORKING FEATURES & PROTOCOLS

|                                 |   |
|---------------------------------|---|
| <b>Protocols Supported</b>      | TCP, UDP, IPv4/IPv6 <sup>1</sup> Dual Stack, ICMPv4, ARP  |
| <b>Networking Features</b>      | Dynamic Key Management, red address confidentiality, tunnel end point discovery (HAIPE IS Dynamic Discovery), support for "JUMBO" ethernet frames |
| <b>Key Exchange</b>             | HAIPE IS IKE  |
| <b>Quality of Service (QoS)</b> | Type of service (TOS) octet bypass, random early drop   |
| <b>Fragmentation</b>            | Supports fragmentation and header options for plaintext IP packets<br>Supports reassembly for ciphertext IP packets                               |
| <b>Traffic Flow Security</b>    | All HAIPE IS mandatory countermeasures  |

### SECURITY CHARACTERISTICS

|                            |   |
|----------------------------|---|
| <b>Algorithms</b>          | US Type 1 traffic encryption (SBU to Top Secret/SCI), Type 1 image confidentiality, NATO & Non-NATO Suites <sup>1</sup>   |
| <b>Key Management</b>      | Dynamic FIREFLY Key Generation, Pre-placed Keys. Type 1 key authentication, 9000 maximum simultaneous active security associations (SAs), DS-101 key fill interface |
| <b>Flexibility</b>         | Modular, programmable architecture  |
| <b>Crypto Ignition Key</b> | CIK based access control, CIK removal to unclassified CCI   |

### MANAGEMENT

|  |  |
|--|--|
| <b>Local &amp; Remote Browser-Based Management</b> | HTTP through SSL tunnel (HTTPS); Command Line Interface (CLI) through local serial console                   |
| <b>Mandatory Access Control</b>                    | CIK possession required to access key material   |
| <b>Discretionary Access Control</b>                | Operator unique password for command line interface and HTTPS access. ECU unique certificates for SSL tunnel |
| <b>Secure Remote Software Download</b>             | Advanced networking features and algorithm upgrades (e.g., IPv6, SNMPv3)                                     |
| <b>Type 1 Key Load</b>                             | DS-101 red key load through fill port  |
| <b>Reachability Support</b>                        | ECU to ECU ping to support installation  |

### NETWORK INTERFACES

**Plaintext**  
Electrical/Mechanical: IEEE 802.3; copper RJ-45 100/1000 baseT, IEEE 802.3; optical SFP 1000 base-SX, LX, ZX, various connector styles (LC, MT-RJ)

**Ciphertext**  
Electrical/Mechanical: IEEE 802.3; copperRJ-45 100/1000 baseT, IEEE 802.3; optical SFP 1000 base-SX, LX, ZX, various connector styles (LC, MT-RJ)

### PHYSICAL

|                         |   |
|-------------------------|---|
| <b>Dimensions (WHD)</b> | 17 x 1.72 x 19.8 in., 1U 19" rack mountable or desktop  |
| <b>Weight</b>           | 13.3 lbs. (6.0Kg)   |
| <b>Power</b>            | 9- 264 Wrms autoranging, 47-63 Hz, 72W typ. 89W max   |
| <b>Battery</b>          | External user replaceable battery, two "AA" alkaline cells, 3-Year operating life, changed annually; internal lithium battery 15+year shelf life, capacity used only if replaceable batteries neglected |

### ENVIRONMENT

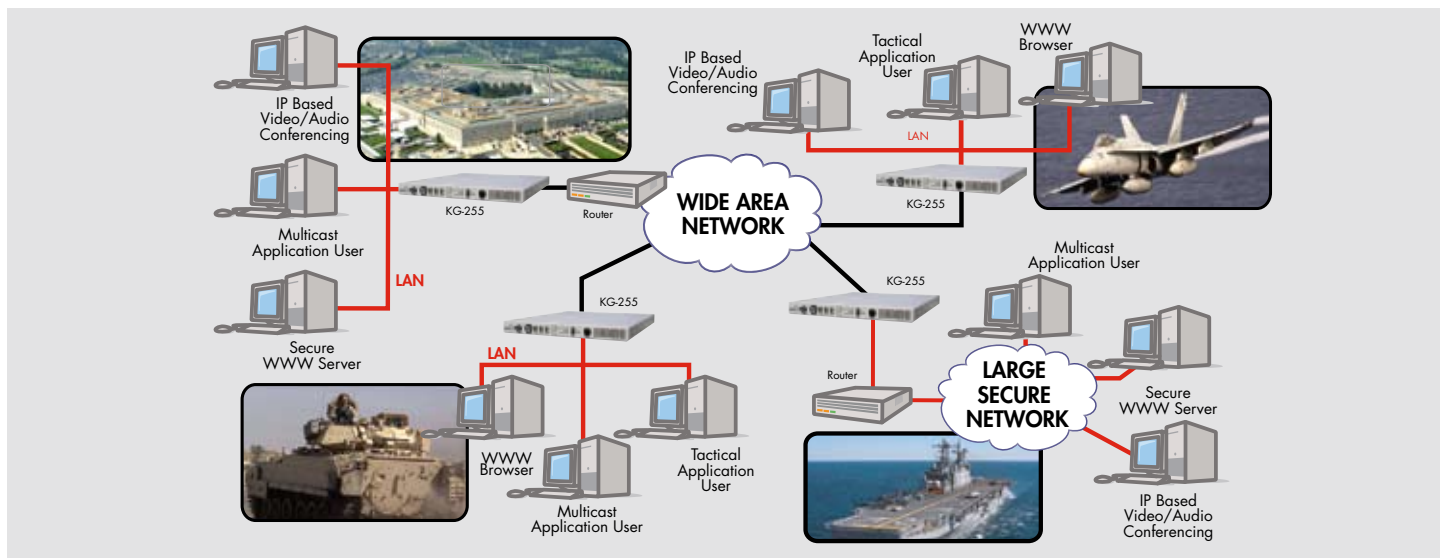
|                                  |  |
|----------------------------------|--|
| <b>Operating Temperature</b>     | 0°C to +40°C at sea level                    |
| <b>Non-Operating Temperature</b> | -25°C to 70°C                                |
| <b>Operating Altitude</b>        | 10,000 feet above sea level                  |
| <b>Non-Operating Altitude</b>    | 40,000 feet above sea level                  |
| <b>Humidity</b>                  | 10% to 85% relative humidity, non-condensing |
| <b>EMI/EMC</b>                   | FCC class A and EN 55022 class A             |
| <b>Mean Time Between Failure</b> | 170,000 hours demonstrated                   |

### CERTIFICATION

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

### NOTES

- <sup>1</sup> IPv6 available with future HAIPE IS v3 sw download
- <sup>2</sup> Based on NSA approval and future software download
- <sup>3</sup> Call for details



### Ordering Information

NSN 5810-01-541-8542  
Part Number SI-1034961-0000

Available for order through ISSP, IDIQ, and ViaSat

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