

# CEP5 LC

## Cost-effective Multi-layer Encryption Appliance

### Product Overview

The CEP5 LC is a multi-layer encryption appliance that provides tunnel-less data protection, including Ethernet frame encryption for Layer 2 networks, IP packet encryption for Layer 3 networks, and Layer 4 data payload encryption for IP and MPLS networks. The CEP5 LC offers full-duplex encryption at speeds up to 5 Mbps using the AES-256 algorithm.

The CEP5 LC provides affordable and centrally managed encryption for large numbers of branch offices or edge devices such as ATMs, kiosks, gas pumps, industrial controllers, SCADA and Smart Grid distribution systems. Environmental hardening for enclosed outdoor environments and a very small form factor allow the CEP5 LC to be deployed at the network edge where encryption was previously difficult to deploy and manage. Furthermore, the CEP5 LC includes an integrated Ethernet switch, so it can switch traffic locally while encrypting traffic to and from the wide area network. This reduces costs by avoiding the need to deploy additional Ethernet switches at the network edge.

The CEP5 uses Group Encryption technology to provide scalable encryption without tunnels allowing multicast, load balancing, disaster recovery and other fundamental full-mesh network capabilities and benefits to operate normally while encryption is enabled and active. Tunnel-less encryption also allows networking and application monitoring and services such as QoS to operating without modification. The CEP5 can be managed centrally from a clientless browser-based interface that provides simple policy management of multi-layer encryption.



### FEATURES AND BENEFITS

- Interoperable with Certes CEP product family
- Encrypted throughput up to 5 Mbps
- Seamless scalability
- Infrastructure neutral
- Transparent to network and applications
- Easy installation and management
- Per-frame/packet authentication

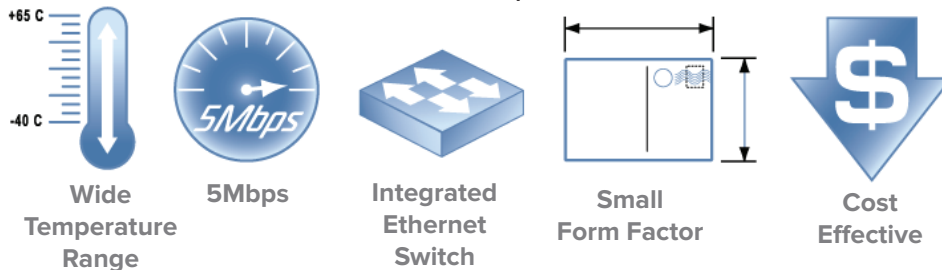
### COMPREHENSIVE DATA PROTECTION

- IPsec site-to-site networks
- MPLS meshed networks
- Metro Ethernet and VPLS networks
- Voice and video over IP applications

### ABOUT CERTES NETWORKS

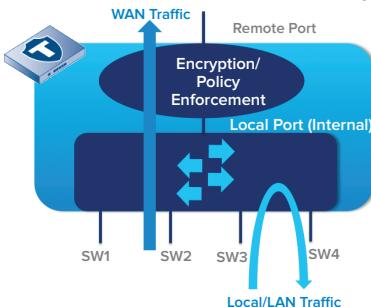
Certes Networks protects data in motion. The company provides advanced data protection solutions for both physical and virtual networks that enable secure connectivity over any infrastructure without compromising performance or availability. Customers rely on Certes Networks to protect data, decrease risk and reduce the cost of compliance by enabling secure connectivity to critical infrastructures.

### Product Snapshot



The features of the CEP5 LC make it an affordable solution for small branches, remote terminals, kiosks, ATM machines or any location that requires environmental hardening where remote management helps reduce ongoing management costs and local switching capability helps reduce the number of devices to be managed.

### Integrated Ethernet Switch



The diagram to the left illustrates how WAN traffic is passed through the switch and to the policy enforcement engine, while LAN traffic is switched locally, so it doesn't use any CPU cycles.

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### Performance

- Encrypted throughput: 5.8 Mbps (bidirectional) \*
- Encrypted latency: 4.9 ms \* per hop
- \* Measured with 512 byte packets with L3 encryption enabled. Results depend on packet size and may be affected by policy and key updates or other management activity.

### Security

- Encryption: AES-CBC (256 bit) (FIPS 197), Triple-DES-CBC (168 bit) (NIST 800-67)
- Authentication (Message Integrity): HMAC-SHA-256-96 (FIPS 180-3, FIPS 198)
- Signature generation and verification: ANSI X9.31, RSASSA-PS, RSASSA-PKCS v1.5, DSA FIPS 186-2
- Management session authentication: RSA, DSS
- Automatic or manually triggered hitless key rotation
- Group keying with TrustNet Manager SSL/TLS (bilateral authentication) based on certificates
- Certificate revocation: OCSP (RFC 2560), CRL (RFC 5280)
- IPSec (RFC 2401) for Layer 3 encryption

### Network Support

- Ethernet
- VLAN tag preservation
- MPLS tag preservation
- IPv4
- IPv6 (Layer 2 Ethernet encryption mode)
- Secure NTP

### Policy Selector Options

- Source or destination IP address
- Source or destination port number
- Protocol ID (L3 and L4 options)
- VLAN ID (L2 option)
- Multicast address

### Transforms

- Certes Networks ESP Tunnel Mode (header preservation option)
- Certes Networks ESP Transport Mode (L4 option)
- Certes Networks Ethernet ESP Mode

### Management Communication Security Options

- X.509 v3 digital certificates
- TLS (full bilateral authentication)
- SSH

### Device Management

- TrustNet Manager
- Command Line Interface
- Out-of-band management
- SNMPv2c and SNMPv3 managed object support
- Alarm condition detection and reporting (traps and SNMP alarm table)
- Syslog support
- Audit Log

### Indicators

- Power LED

### Environmental

- Operational: temperature -40°C to +65°C (-40°F to 149°F) (fanless); humidity up to 95% relative humidity (non-condensing)
- Cold start: temperature -20°C

### Regulatory

- Safety: EN 60950 (TUV), UL/CSA 60950
- Emissions: FCC Part 15 Class A
- Immunity : EN55024, EN61000
- Environmental : WEEE, RoHS

### Physical

- Small form factor chassis
- Dimensions: 4 in x 5.25 in x 1 in (102 mm x 134 mm x 26 mm)
- Desktop or wall-mount with optional rack mount kit available for one or two units in a standard 19 inch rack
- External AC power adapter: input 100-240V AC @ 0.8A, 50/60 Hz; output 24V DC, 1000mA
- Power consumption: 7W at maximum load
- Weight: desktop: 1.08 lbs (including external AC adapter)
- MTBF: CEP5 LC 832, 200 hours; AC power adapter 50,000 hours

### Interfaces

- Four 10/100/1000 RJ45 locally switched network interfaces to the local (trusted) network
- One 10/100/1000 RJ45 network interface to the remote (untrusted) network
- Integrated four-port Ethernet switch
- Auto MDI/X (straight or crossover correction)
- One DB9 RS232C asynchronous serial port (male)

Information in this data sheet is preliminary and subject to change without notice.

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