The Datacryptor® Ethernet Layer 2 is a family of high-speed, stand-alone security platforms that deliver full duplex point-to-point bulk, tunnel and clear header encryption of sensitive data. The multipoint option allows units to also secure fully-meshed connections in an Ethernet collision domain. Using a clear header encryption mode, the multipoint option secures the confidentiality of sensitive and high-value data, voice and video by protecting broadcast and multicast connections. The multipoint capability, supplied as a software license, enables the 100 Mbps, 1 Gbps and 10 Gbps models operating in this mode to address the market’s need for high-speed fully-meshed data security over Ethernet Layer 2 and MPLS Wide Area Networks (WANs).

**Key Benefits**
- Point-to-point and multipoint encryption with 100 Mbps, 1 Gbps and 10 Gbps models
- MPLS-aware mode for efficient switching of encrypted traffic
- Fully-meshed multipoint encryption mode
- Frame authentication and replay protection using Galois Counter Mode (GCM)
- Fully automated centralized key management application
- Combined encryptor and central key generation/distribution center capability
- FIPS 140-2 Level 3 and Common Criteria EAL3 certified*
Datacryptor® Ethernet Layer 2
TECHNICAL SPECIFICATIONS

Maximum data transfer rate
- 100 Mbps full duplex with 37-40 µsec latency
- 1 Gbps full duplex with 7 µsec latency
- 10 Gbps full duplex with 5 µsec latency

Cryptographic algorithms
- AES FIPS 197 with 256-bit key length
- Frame authentication in multipoint mode using Galois Counter Mode (GCM)

Key management
- Centralized key generation/distribution
- Signed Diffie-Hellman key agreement protocol
- ECDSA and SHA-384 (FIPS 180-2)
- Hardware random number generation
- Automatic-time triggered key change without interruption of connections

Device management
- Thales’ Element Manager (EM) secured with AES
- Front Panel Viewer (FPV) Graphical User Interface
- Secure download of software updates
- SNMP v1, v2c and v3 network monitoring
- Thales’ Certificate Manager (CM)

Connection interfaces
100 Mbps platform
- Fixed RJ-45 copper 10 or 100BaseT host and network ports
- Serial V.24 and Ethernet management ports

1 Gbps platform
- Removable RJ-45 copper (SFP) host/network ports
- Removable multi-range and DWDM optical (SFP) duplex LC host/network ports
- Serial V.24 and Ethernet management ports

10 Gbps platform
- Removable multi-range and DWDM optical (XFP) host and network ports
- Serial V.24 and Ethernet management ports

Flexibility
- Bulk, Tunnel and Clear Header point-to-point encryption
- Clear Header multipoint encryption
- Transparent to line protocols
- MPLS-awareness mode
- AC and DC redundant power options
- Redundant power (1 Gbps and 10 Gbps models only)
- Secure auditing

Synchronization
- Automatic, continuous

Physical security
- Tamper-resistant metal casing
- Tamper-response circuit

Safety and security certifications
- FIPS 140-2 Level 3 and Common Criteria EAL3*
- FCC Part 15 Class B, UL, CE
- Unified Capabilities Approved Products List*

Power
100 Mbps platform
- Single AC (universal) or DC (-48v), 25 Watts, 86 BTU

1 Gbps platform
- Dual-redundant AC (universal) or DC (-48v), 120 Watt, 410 BTU

10 Gbps platform
- Dual-redundant AC (universal) or DC (-48v), 140 Watt, 480 BTU

Temperature
- Operating 5°C to 40°C (40°F to 100°F)
- Storage -10°C to 60°C (15°F to 140°F)

Relative humidity
- 10% to 90% at 25°C (77°F) non-condensing, falling to 50% maximum at 40°C (100°F)

Barometric pressure
- 780 to 1100 mBar

Physical specifications
100 Mbps platform
- 19”, 1RU housing
- Height: 4.20cm (1.70”)
- Width: 43.00cm (16.93”)
- Depth: 22.30cm (8.80”)
- Weight: 3.70kg (8.00lb)

1 Gbps platform
- 19”, 1RU housing
- Height: 4.40cm (1.70”)
- Width: 43.00cm (16.93”)
- Depth: 37.00cm (14.60”)
- Weight: 8.50kg (18.75lb)

10 Gbps platform
- 19”, 2RU housing
- Height: 8.80cm (3.50”)
- Width: 43.00cm (16.93”)
- Depth: 38.50cm (15.20”)
- Weight: 9.75kg (21.50lb)

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* Certifications have been issued for all Datacryptor Ethernet Layer 2 products and are also ongoing for different versions of software. Please go to www.thales-esecurity.com or contact Thales sales for up-to-date certification status information.