



Datacryptor®

Link & Frame Relay Encryptors

KEY BENEFITS

- Secures wide area networks
- Provides up to 8 Mbps throughput
- Supports point-to-multipoint networks
- Adapts as your requirements evolve
- Meets the highest security standards

Many wide area networks (WANs) today are based on simple leased line or frame relay services, providing a guaranteed bandwidth and high availability. Historically these services have benefited from a degree of security inherent in a dedicated, switched network infrastructure. However, they are now increasingly being transported over shared, packet-based next generation networks (NGNs) that may be less trusted. Thus, to guarantee the on-going confidentiality of information over such networks, it is advisable to use certified network encryptors at each end-point.

Datacryptor 2000 (DC2K) and Datacryptor AP (DCAP) Link and Frame Relay encryptors offer a proven, high-assurance solution for protecting sensitive or high-value information to provide complete peace-of-mind. Based on over 30 years of experience, Datacryptor protects your investment through its unique flexibility, ease of deployment and field upgradeability, whilst meeting the highest security standards.

The Datacryptor range offers a wide choice of protocols, speeds and interfaces to suit individual requirements, and is available with the strongest commercially-available encryption algorithms or customised government ciphers. Datacryptor also offers a high degree of flexibility, with unframed, framed and channelised modes of operation to support a variety of point-to-point and point-to-multipoint applications, and a -48V DC power option on the E1/T1 models.



>> Datacryptor® Link & Frame Relay

Technical Specifications*

Interfaces

- > **Network ports (serial):** Multi-function (DA26)
- > **Network ports (E1/T1):** Balanced 120Ω (RJ48C) - DCAP only
- > **Management port:** 10BASE-T Ethernet (RJ45)
- > **Control port:** RS-232 serial (DE9)

Adapter cables

- > **Serial:** RS-232C/V.24 (DB25), RS-530 (DB25), V.35 (MRAC-34), X.21/V.11/RS-422 (DA15)
- > **E1/T1:** Unbalanced 75Ω (BNC)

Cryptography

- > **Encryption algorithms:** Triple DES, AES (128, 192, 256-bit key lengths); government and custom algorithms also available
- > **Encryption mode:** OFB (Link), CFB8 (Frame Relay and management traffic)

Key Management

- > **Unit authentication:** X.509 certificates
- > **Key agreement:** Diffie-Hellman (or national/custom algorithm)

Security Features

- > **Management traffic:** Encrypted, authenticated using HMAC
- > **Random number generator:** Hardware
- > **Firmware signing:** DSA, SHA-1
- > **Tamper detection:** Voltage, temperature, motion, physical penetration; automatically erases certificates, keys, algorithm (even when unit is unpowered)
- > **Other protection:** Tamper-resistant security module (SGSS); Tamper-evident enclosure; Keylock, Erase button

Certifications

- > **FIPS:** 140-2 Level 3 (SGSS and Bootstrap code); cryptographic algorithms validated under NIST CAVP
- > **CAPS:** Baseline Grade, Enhanced Grade (up to UK SECRET)
- > **Common Criteria:** EAL4, EAL5

Device Management

- > **Thales management software:** Element Manager, Front Panel Viewer
- > **Network monitoring support:** SNMPv1

Frame Relay

- > **Standards:** FRF 1.1 (UNI), FRF 3.1 (MEI), ITU I.122, ITU I.233
- > **Link management:** LMI (FRF 1.1), ANSI T1.617 Annex D
- > **Encrypted DLCIs:** Up to 992

E1/T1

- > **Modes:** Unframed, Framed
- > **Line encoding:** HDB3, AMI, B8ZS
- > **Framing:** G.704, SF/D4, ESF

Special Features

- > **Synchronisation:** Automatic (continuous)
- > **Point-to-multipoint:** Channelised Link & Frame Relay models
- > **Upgradeability:** Firmware, algorithms, protocol, interface speed

Physical

- > **DC2K models:** 220 x 240 x 41mm (W x D x H), weight 1.5kg
- > **DCAP models:** 432 x 240 x 44mm (W x D x H), weight 4.0kg
(dimensions exclude mounting ears and connectors)

Power

- > **Type:** External PSU (DC2K), internal PSU (DCAP)
- > **AC power option:** 100 - 240 V_{AC} 50/60 Hz auto-sensing (DC2K/DCAP)
- > **DC power option:** -48 V_{DC} (DCAP only)
- > **Maximum dissipation:** 9 W/31 BTU (DC2K), 25 W/85 BTU (DCAP)

Environment

- > **Temperature:** 5 - 40°C (operating), -10 - 65°C (storage)
- > **Relative humidity:** 10 - 90% at 25°C (non-condensing)

Regulatory

- > **Approval marks:** CE (EU), UL (US/Can), C-Tick (Aus/NZ)
- > **EMC emissions:** EN55022 Class B, FCC Class B, VCCI Class B
- > **EMC immunity:** EN55024
- > **Safety:** EN60950-1, UL60950-1, IEC60950-1

Ordering Details

(algorithm, cable and power options should be specified at time of ordering)

Speed	Link	Channelised Link	Frame Relay
Standard (up to 256kbps):	-	-	DC2K-FX
Standard (up to 512kbps):	DC2K-LX	-	-
High speed (up to 2Mbps):	DC2K-LH	-	DC2K-FH
Very high speed (up to 8Mbps):	DC2K-LV	-	DC2K-FV
E1:	DCAP-LE	DCAP-CE	DCAP-FE
T1:	DCAP-LT	DCAP-CT	-

*Specifications may vary with model, algorithm and firmware release - contact Thales for further information; model availability varies by territory.



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