

MULTI-LINK ENCRYPTOR FAMILY

Omnisec 660 Family



The Multi-Link Encryptor Omnisec 660 family exemplifies Omnisec as the world's leading manufacturer of maximum-security, high-quality (ISO 9001 approved) communication solutions.

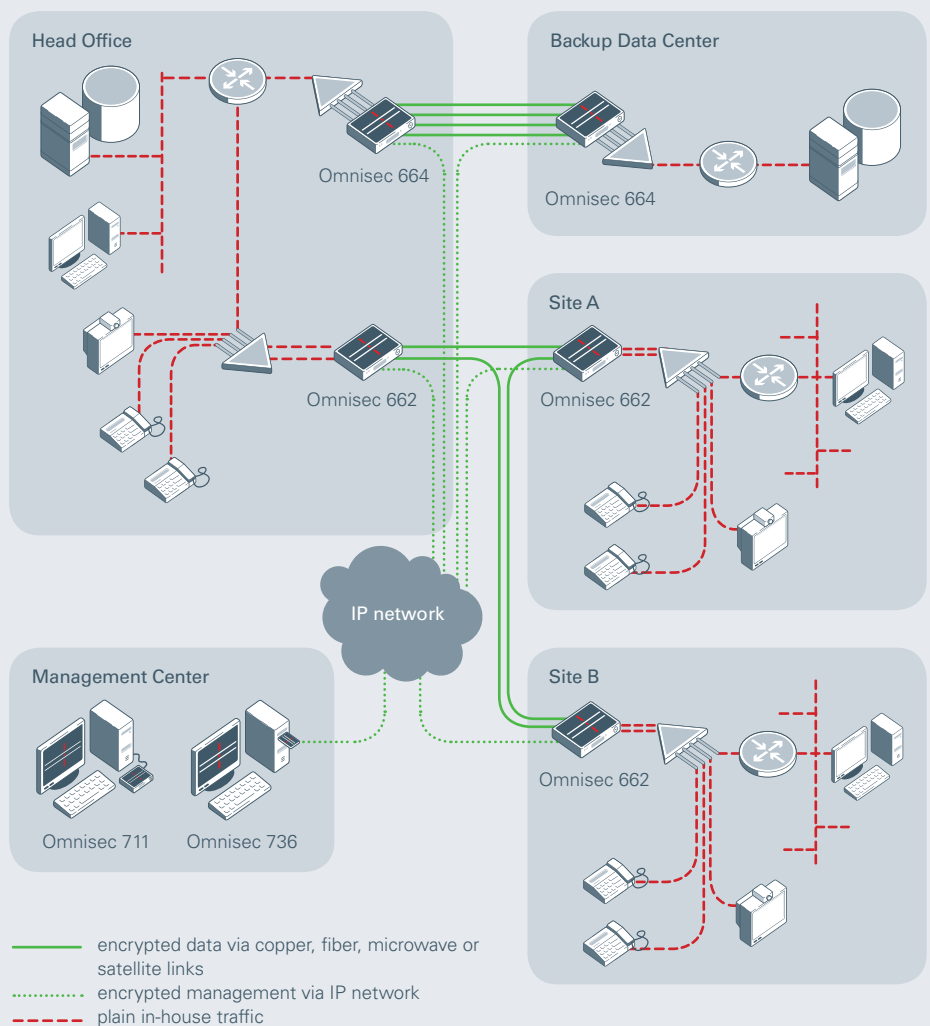
Communication security is based on the security architecture **OmniCrypt™**: unique short-lived bilateral Session Keys are generated from secret, long-lived Master Keys stored in removable **Security Modules**. Each link owns an exclusive, bilateral Session Key for each direction of traffic; these are renewed automatically after a preselected time interval.

Customers are invited to assess and verify for themselves the implemented encryption procedures and algorithms.

The **Omnisec 660 family** of Multi-Link Encryptors protect all kinds of data over leased lines or private data links. The 19" rack-mount devices have redundant power inputs, front panel controls and independent, exchangeable encryption modules providing full-duplex, synchronous link encryption compliant with international electrical and optical standards at up to 1 Gbit/s.

Variants. The Omnisec 662, a single-height unit with one or two encryption modules, is ideal for branch offices or field sites. The dual-height Omnisec 664 has up to four encryption modules.

Ease of use. After simple configuration, all functions are fully automatic. State-of-the-art network management software offers local or remote monitoring, firmware updating and key distribution via an encrypted IP network.





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Omnisec 660 Family

Security Features

Security architecture OmniCrypt™

- Multi-barrier software and hardware architecture with supervision mechanisms

Encryption/Authentication

- Omnisec-proprietary cipher algorithm
- Initial cipher synchronization, refresh synchronization

Master Keys

- Unique symmetric Master Keys for each link and each direction
- Derived from white-noise source
- Length: 256 bits; diversity: 10^{77}

Session Keys

- Length: 256 bits; diversity: 10^{77}
- Used once and only once
- Automatic renewal

Key Management

- Omnisec-proprietary bilateral key management
- Key capacity: address and key storage for up to 750 stations (size of network management)
- Secure end-to-end online key distribution (remote key management)

Mechanical Lock

- Prevents unauthorized opening of the unit
- Locks in the Security Module

Emergency Erasure Function

Networking Features

Network Management (remote, out-of-band)

- Enhanced test functions: BERT
- Event agent
- SNMPv1 monitoring and traps
- Configuration, monitoring and logging
- Firmware updating
- Up to 750 stations

System Management (local)

- Configuration, monitoring and logging
- Firmware updating

Management Tools

- Key Management Center, Omnisec 711, and Security Module Programmer, Omnisec 704
- Security & Network Management Center, Omnisec 736

Technical Data

Performance

- Throughput up to 1 Gbit/s for each encryption module

Controls

- 1 slot for Security Module (E-SM)
- Status LEDs for system and for each encryption module
- 1 USB 2.0 port (hi-speed)
- 2 push buttons for reset and default settings and to trigger emergency erasure
- Control panel for menu navigation and management information
 - Omnisec 662: optional (in place of one encryption module)
 - Omnisec 664: built-in

Encryption Modules

- Omnisec 662: 1 or 2 encryption modules
- Omnisec 664: 1 to 4 encryption modules
- Available encryption modules:
 - E1/T1: 2/1.5 Mbit/s, G.703/704
 - E3/T3: 34/44 Mbit/s, G.703/751/752/753
 - STM-1/OC-3: 155 Mbit/s optical with exchangeable transceivers (SFP)
 - STM-4/OC-12: 622 Mbit/s optical with exchangeable transceivers (SFP)
 - Ethernet: 10/100/1000Base-T, RJ-45 electrical or 1000-SX/LX/ZX optical with exchangeable transceivers (SFP)
- Management port: 10/100/1000Base-T, RJ-45, min. Cat 5, IPv4 with 2 status LEDs

Power

- Redundant power inputs: 2 x 15 VDC
- Power consumption: ~33 VA
- External power supplies: 100...240 VAC, 50...60 Hz, MTBF at $t_{amb} = 25^\circ$: 4 000 000 h

Safety Conformity

- EN 60950-1:2006
- RoHS compliant

Electromagnetic Compatibility (EMC)

- Radiation: EN 55022 class B
- Immunity: EN 55024

Environmental Test Specifications

- Temperature ranges (IEC 60068-2-1 Ad, IEC 60068-2-2 Bd): storage $-25...+70^\circ\text{C}$; operation $0...45^\circ\text{C}$
- Humidity (IEC 60068-2-78 Cab): 40°C , 90% RH, non-condensing, 10 days; 8 days in operation
- Random vibration (MIL-STD-810E, method 514.4-7): $10...40\text{ Hz}$, $0.015\text{ g}^2/\text{Hz}$, $40...500\text{ Hz}$, $0.00015\text{ g}^2/\text{Hz}$, 3 axes each 1 h, equivalent to 1000 miles common carrier transportation (in transport package)
- Shock (IEC 60068-2-27 Ea): 100 g, 6 ms (all surfaces)
- Fall (IEC 721-3-2 2M2): 1.2 m (on concrete in transport package, 5 falls)
- Drop (IEC 60068-2-31 Ec): 0.1 m on concrete (all corners/edges)

Reliability

- MTBF (MIL-HDBK-217F Notice 2, IC's according to IEC 62380 CF 0.1) at $t_{amb} = 25^\circ\text{C}$:
Omnisec 662: 75 000 h, Omnisec 664: 50 000 h

Dimensions (w x h x d)

- Omnisec 662: 483 x 43 x 410 mm (1-RU 19")
- Omnisec 664: 483 x 87 x 410 mm (2-RU 19")

Weight

- Omnisec 662: 4 kg
- Omnisec 664: 7 kg

We strive to continuously improve our offerings and therefore reserve the right to change specifications without notice.