



## COE X-Net™ Optical Modules



Digital video, high speed data & CD quality audio transmission product for singlemode or multimode optical fibre.

The COE X-Net™ optical modules provide transmission of 1, 4 or 8 video channels, 2 duplex 128kbps data channels, 2 CD quality duplex audio channels and 2 contact closure channels on one singlemode or multimode optical fibre. X-Net has been designed specifically for the professional surveillance market where high performance, high quality and flexible product configuration is required and introduces numerous innovative features which have been previously unavailable in CCTV products.

### System Features and Benefits

- **Up to 8, 10-bit encoded, uncompressed digital video channels** - 4 times more sensitive to contrast changes than competing products. Ensures highest video quality under varying light and contrast conditions.
- **Field upgradeable SFP lasers** - Modules can be field upgraded to CWDM or Long Haul version thus future proofing the investment.
- **18 wavelength CWDM** - For up to 144 video channels on a single fibre.
- **Comprehensive network management features and SNMP support** – Enables remote administration of complex CCTV installations via a standard web browser or applications such as HP OpenView, thus reducing the maintenance costs.
- **Ultra low loss LC connectors** - For reduced insertion loss and increased operation range.
- **CD quality audio** - For high grade intercom or PA applications.
- **High speed data channels** - Two independently configurable 128kbps data channels with support for RS232/422/485, easily configured via DIP switches.
- **Flexible dual redundant power supply options** - Support for rack mounted or external 12V DC, 24V AC, 220V AC or 48V DC dual redundant power supplies.
- **Comprehensive range of companion cards** - For cost effective system expansion (such as adding contact closures or supporting more telemetry devices) without the need for additional fibre.
- **Comprehensive 5 year warranty** - All X-Net modules are covered by a comprehensive 5 year warranty and have MTBF in excess of 100,000 hours.

### Sales Codes

X-Net OPT1T/R-VID	X-Net 1 x simplex video channel transmit/receive module for singlemode/multimode fibre, including 2 x simplex contact closure channels. Utilises 1 rack slot.
X-Net OPT1T/R-MAX	X-Net 1 x simplex video channel transmit/receive module for singlemode/multimode fibre, including 2 x duplex data, 2 x duplex audio, 2 x duplex contact closure channels. Utilises 1 rack slot.
X-Net OPT1T/R-MM	X-Net Multimode only 1 x simplex video channel transmit/receive module, including 1 x duplex data, 1 x duplex audio, 1 x duplex contact closure channel. Utilises 1 rack slot.
X-Net OPT4T/R-VID	X-Net 4 x simplex video channel transmit/receive module for singlemode/multimode fibre, including 2 x simplex contact closure channels. Utilises 1 rack slot.

## Sales Codes Continued...

X-Net OPT4T/R-MM	X-Net Multimode only 4 x simplex video channel transmit/receive module, including 1 x duplex data, 1 x duplex contact closure channel. Utilises 1 rack slot.
X-Net OPT4T/R-PTZ	X-Net 4 x simplex video channel transmit/receive module for singlemode/multimode fibre, including 1 x duplex data, 2 x duplex contact closure channels. Utilises 1 rack slot.
X-Net OPT4T/R-MAX	X-Net 4 x simplex video channel transmit/receive module for singlemode/multimode fibre, including 2 x duplex data, 2 x duplex audio, 2 x duplex contact closure channels. Utilises 2 rack slots.
X-Net OPT8T/R-VID	X-Net 8 x simplex video channel transmit/receive module, including 2 x simplex contact closure channels. Utilises 2 rack slots.
X-Net OPT8T/R-MAX	X-Net 8 x simplex video channel transmit/receive module, including 2 x duplex data, 2 x duplex audio, 2 x duplex contact closure channels. Utilises 2 rack slots.

## Performance and Specifications

### Video

Video Channels	1/4/8
Format	10 bit uncompressed
Channel bandwidth	6.5MHz min
Video Input level	1Vp-p with +3dB overload point
Video channel gain	1
Impedance	75 Ohms unbalanced
Signal/Noise ratio	>65 dB weighted
Diff Phase	0.5 °
Diff gain	0.5 %
K rating	<1 %
Connector	75 Ohms BNC

(Meets overall requirements of RS250B medium haul)

### Data

Channels	Up to 2 independent channels
Rate	128kbps
Format	RS 232/422/485 (DIP switch configured)

### Optical

Optical budget (dB)	20 (37dB available on request)
Range on 50 or 62.5/125um multimode fibre (Km)	4 (2km for 8 channel)
Range on 9/125um singlemode fibre (Km)	60 (>100km available on request)
Connector	LC

### EMC

EN55022 Class B, EN61000-3-2 Class A, EN61000-3-3, EN61000-4-2 6kV(C), 8kV (A), EN61000-4-3 10V/m, EN50204 20V/m, EN61000-4-6 10V, EN61000-4-4 2kV, EN61000-4-5 2kV, EN61000-4-8 50Hz & dc 100A/m, EN61000-4-9 300A/m, EN61000-4-11, EN60950-1:2002 + A1:2003, EN60825-2:2000

### Audio

Channels	Up to 2
Bandwidth	20Hz to 20KHz
Format	16bit PCM
Input Impedance	600 Ohms
Output Impedance	< 30 Ohms
Distortion	< 4 %
Input Level	0 dBm (2.2V p-p)
System Gain	Unity
Configuration	Balanced

### Contact Closure

Channels	Up to 2
Direction	Simplex or Duplex

### Environmental

Operating temperature	-40 °C to +74 °C
Storage temperature	-40 °C to +85 °C

### Mechanical

Single slot variants	6HP x 4U x 167mm
Double Slot variants	12HP x 4U x 167mm

### Power requirements

X-Net OPT1	+12VDC @200mA
X-Net OPT4	+12VDC @400mA
X-Net OPT8	+12VDC @500mA

### MTBF

All Modules	>100,000 hours
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Issue 1.1 09/06

In line with the company policy of continuous improvement, COE reserves the right to vary descriptions and specifications without notice.

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