



COE X-Net™ OPT4-ETH & OPT8-ETH



Digital video, high speed data, CD quality audio & Ethernet transmission over a single optical fibre.

The X-Net OPT4-ETH & OPT8-ETH optical modules provide transmission of 4 or 8 video channels respectively, 2 x duplex 128kbps data channels, 1 x CD quality duplex audio channel, 2 x contact closure channels and 1 x 10/100 BaseT Ethernet channel over a single optical fibre.

These modules are ideally suited for scenarios where highest quality video (uncompressed 10-bit digital) and lowest PTZ latency (<5ms) is required but additionally an Ethernet channel is required for devices such as PLCs, Traffic Light Management, Alarm Systems, Access Control, DVRs etc.

System Features and Benefits

- **4 or 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.
- **Built-in Ethernet LAN Extender** - 10/100 BaseT IEEE 802.3 Ethernet Half/Full Duplex with automatic flow control.
- **Field upgradeable SFP lasers** - Modules can be field upgraded to CWDM or Long Haul version thus future proofing the investment.
- **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 12VDC, 24VAC, 220VAC or 48VDC dual redundant power supplies.
- **Support for 18 wavelength CWDM** - For up to 144 video channels on a single 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.

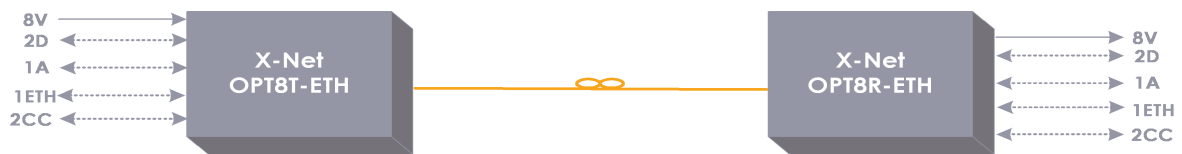
System Description

Security systems nowadays encompass much more than just CCTV systems. The two major factors determining the effectiveness of a surveillance system are the quality of its output and how well are the various subsystems integrated. X-Net OPT4-ETH & OPT8-ETH were designed to address these very goals. X-Net OPT4-ETH provides four and X-Net OPT8-ETH provides eight, 10-bit digital uncompressed video channels (10-bit video has 4 times more levels than corresponding 8 bit video systems and hence is very effective even in low light conditions).

Both offer a PTZ latency of less than 5ms, thus ensuring that the PTZ response is instantaneous. The Ethernet channel can be used to provide IP connectivity to other devices such as PLCs, Access Control Systems, Alarm panels etc.

Each unit can either be mounted in the 19" X-Net Rack or as a stand-alone module in an X-Net Box Double thus offering maximum flexibility at minimum cost. Additionally, the units are fully compliant with transport Environmental and EMC standards, thus making it an ideal platform for transport applications.

System Diagram



Sales Codes

X-Net OPT8T/R-ETH

X-Net 8 x simplex video channel transmit/receive module, including 1 x 10/100 BaseT Ethernet, 2 x duplex data, 1 x duplex audio, 2 x duplex contact closure channels. Utilises 2 rack slots.

X-Net OPT4T/R-ETH

X-Net 4 x simplex video channel transmit/receive module, including 1 x 10/100 BaseT Ethernet, 2 x duplex data, 1 x duplex audio, 2 x duplex contact closure channels. Utilises 2 rack slots.

Performance and Specifications

Video

Video Channels	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	>65dB weighted
Diff Phase	0.5°
Diff gain	0.5%
K rating	<1%
C/L Delay	40ns
Connector	75 Ohms BNC

(Meets overall requirements of RS250B medium haul)

Data

Channels	2 independent channels
Rate	128kbps
Format	RS232/422/485 (DIP switch configured)

Optical

Optical budget (dB)	20dB (up to 37dB available)
Range on 50 or 62.5/125um multimode fibre (Km)	2
Range on 9/125um singlemode fibre (Km)	60 (>100Km available)
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	1
Bandwidth	20Hz to 20KHz
Format	16bit PCM
Input Impedance	600 Ohms
Output Impedance	<30 Ohms
Distortion	<4%
Input Level	0dBm (2.2V p-p)
System Gain	Unity
Configuration	Balanced

Contact Closure

Channels	2
Direction	Duplex

Ethernet

Channels	1
Direction	Full/Half Duplex
User Bandwidth	19Mb/s
Port	1 x RJ45

Environmental

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

Mechanical

Dimensions	12HP x 4U x 167mm
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Power requirements

X-Net OPT4/8-ETH	+12VDC @ 650mA
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MTBF

Duration	>100,000 hours
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In line with the company policy of continuous improvement, COE reserves the right to vary descriptions and specifications without notice.

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