

ECT5142 1 CH. VIDEO/12 BIT, 4 CH. AUDIO/24 BIT AND 2 CH. DATA DIGITAL OPTICAL LINK



Video	Audio	Data
1	4	2

The ECT5142 system provides a high performance link for unidirectional or bi-directional transmitting of one composite video, four audio and two data channels over a single fiber optic cable. The system features broadcast video quality providing 12-bit video processing with uncompressed digital transmission.

ECT5142 utilizes high speed Analog-to-Digital and Digital-to-Analog Conversion with 12-Bit Resolution, Digital Signal Processing, Time Division Multiplexing and Fibre Optic Transmission at a data rate of up to 1.4 Gbit/sec.

FEATURES

- ❑ Broadcast Video Quality with 12-bit Uncompressed Video Processing
- ❑ Supports NTSC, PAL, SECAM and Component (YUV, RGB, Y/C) Video Formats
- ❑ Video Cable Equalization
- ❑ 2 x Stereo or 4 x Mono Audio Channels
- ❑ 2 x RS-232/RS-422/TTL/Contact Closure Data Channels
- ❑ Multifunction Power and Signal Status Indicators

Fiber Type	Multimode	Singlemode
Optical Core Diameter	50µ/62.5µ	8/10µ
Operating Wavelength	850/1310	1310/1550 nm
Optical Power Source	Laser	Laser
Optical Power Output*	-3 dBm	-3 dBm
Receiver Sensitivity (for 10 MHz video bandwidth)	-30 dBm	-33 dBm or -43 dBm***
Receiver Sensitivity (for 24 MHz video bandwidth)	-21 dBm	-24 dBm or -34 dBm***
Optical Connectors	ST, SC**	FC, ST, SC**

* with +/- 1 dBm variation; higher power laser sources are available per special request;

** for transceivers only;

*** for high sensitivity (HS) receivers with maximal optical input -9 dBm.

Video Channel Characteristics

Video Bandwidth @ 2dB	10 or 24 MHz (optional)
Video Input	75 Ohm balanced
Video Output	75 Ohm unbalanced
Video Input Level	NTSC: 1.0 V p-p, PAL: 1.3 V p-p
Video In/Out Cable Equalization	Up to 300 meters
Signal-to-Noise Ratio	72 dB*
Differential Gain	< 0.25 %
Differential Phase	< 0.25 °
Field Tilt	< 0.25 %
Luminance Non-Linearity	< 0.25 %
Chrominance/ Luminance Delay	< 20ns
K-2T Factor	< 1.0%

*measured with ECT5142 receiver as per RS-250C



ECT5000 SERIES

Audio Channel Characteristics

Audio Input	600 Ω or 10K, Balanced
Audio Output	Balanced or Unbalanced
Audio In/Out Level	0 to +18 dBm (balanced, 10K load), 0 to +12 dBm (unbalanced, 10K load)
Audio Bandwidth @ 1 dB	10Hz to 20 kHz
Audio Signal-to-Noise Ratio	< 85 dB (0 dBm, 10K Load)
THD	< 0.1% (0 dBm, 10K Load)

Data Channel Characteristics

Supported Data Formats:	RS-232, RS-422, TTL, Contact Closure
Simplex or Duplex	
Data Channel Bit-Rate	Up to 2.5Mb/sec (1Ch. mode) Up to 300 Kbit/sec (2Ch. mode)
Bit Error Rate	10^{-9}

Power Requirements

Transmitter or Receiver	11 - 15 VDC @ 0.5A
Transceiver	11 - 15 VDC @ 1.0A
Operating Temperature	-30°C to +70°C (-22°F to +158°F)
Dimensions (without connectors):	
Transmitter or Receiver	11.6"(295 mm) x 5.20"(132 mm) x 1.0"(26 mm)
Transceiver	11.6"(295 mm) x 5.20"(132 mm) x 2.0"(52 mm)

ORDERING INFORMATION

5140E-VNAT-M1Z – video, audio transmitter module
 5140E-VNAR-M1Z – video, audio receiver module
 5140E-VNAT-C1Z – video, audio transmitter card*
 5140E-VNAR-C1Z – video, audio receiver card*
 5140E-VNAX-MYZ – video, audio transceiver module
 5140E-VNAX-CYZ – video, audio transceiver card
 5142E-VNADTU-M1Z – video, audio & data transmitter module
 5142E-VNADRU-M1Z – video, audio & data receiver module
 5142E-VNADTU-C1Z – video, audio & data transmitter card*
 5142E-VNADRU-C1Z – video, audio & data receiver card*
 5142E-VNADXU-MYZ – video, audio & data transceiver module
 5142E-VNADXU-CYZ – video, audio & data transceiver card*

E = **M** for multimode 850 nm
 = **S** for single mode receiver or 1310 nm transmitter
 = **S(HS)** for single mode high sensitivity receiver
 = **SP** for single mode high power (\Rightarrow 0 dBm) 1310 nm transmitter
 = **S(15)** for single mode 1550 nm
 = **S(15)P** for single mode high power (\Rightarrow 0 dBm) 1550 nm transmitter
 = **S(15D)** for single mode 1550 nm/DFB transmitter
 = **S(15)PD** for high power (\Rightarrow 0 dBm) 1550 nm / DFB transmitter

N = **24** for 24 MHz video bandwidth
U = **1** for TTL, **3** for RS-232, **4** for RS-422, **5** for RS-485, **9** for Contact Closure
Y = **1, 2** for number of fibers
Z = **ST, FC, SC**** for optical connectors

*compatible with USR type subrack;

**for transceivers only



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