

# ECT5000 SERIES

## ECT5142 1 CHANNEL VIDEO/12BIT, 4 CHANNEL AUDIO/24 BIT AND 2 CHANNEL DATA DIGITAL LINK



### 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 or 1 x RS-485 Data Channels
- Multifunction Power and Signal Status Indicators

|       |       |      |
|-------|-------|------|
| 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 500 Mbit/sec.

| Fiber Type            | Multimode     | Singlemode   |
|-----------------------|---------------|--------------|
| Optical Core Diameter | 50μ/62.5μ     | 8/10μ        |
| Operating Wavelength  | 850           | 1310/1550 nm |
| Optical Power Source  | Laser (VCSEL) | Laser        |
| Optical Power Output  | -2 dBm        | -4 dBm*      |
| Receiver Sensitivity  | -24 dBm       | -26dBm       |
| Optical Connectors    | ST, SC**      | FC, ST, SC** |

*\*higher power laser sources are available per special request;*

*\*\*for transceivers only*

### Video Channel Characteristics

|                                 |                                 |
|---------------------------------|---------------------------------|
| Video Bandwidth @1dB            | 10MHz                           |
| 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*



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# ECT5000 SERIES

## Audio Channel Characteristics

|                             |  |
|-----------------------------|--|
| Audio Input                 | 600 $\Omega$ or 10K, Balanced  |
| Audio Input Levels          | 0 to +18 dBm   |
| Audio Output                | Balanced or Unbalanced   |
| Audio Output Levels         | 0 to +18 dBm (balanced, 10K load),<br>0 to +12dBm (unbalanced, 10K load) |
| Audio Bandwidth             | 10Hz to 20 kHz   |
| Audio Signal-to-Noise Ratio | < 90 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       | RS-485  |
| Duplex                  |   |
| Data Channel Bit-Rate   | Up to 2.5Mb/sec (1Ch. mode)<br>Up to 300 Kbit/sec (2Ch. mode) |
| Bit Error Rate          | $10^{-9}$   |

|                                  |  |
|----------------------------------|--|
| Power Requirements:              |  |
| Transmitter or Receiver          | 12 V DC @ 0.5A                           |
| Transceiver                      | 12 V DC @ 1.0A                           |
| Operating Temperature            | -30°C to +70°C (-22°F to +158°F)         |
| Dimensions (without connectors): |  |
| Transmitter or Receiver          | 11.6"(295mm) x 5.20"(133mm) x 1.0"(26mm) |
| Transceiver                      | 11.6"(295mm) x 5.20"(133mm) x 2.0"(52mm) |

## ORDERING INFORMATION

5142F-VADTU-M1Z – video, audio & data transmitter module  
 5142F-VADRU-M1Z – video, audio & data receiver module  
 5142F-VADTU-C1Z – video, audio & data transmitter card\*  
 5142F-VADRU-C1Z – video, audio & data receiver card\*  
 5142F-VAT/DXU-MYZ – video, audio transmitter & data transceiver module  
 5142F-VAR/DXU-MYZ – video, audio receiver & data transceiver module  
 5142F-VADXU-MYZ – video, audio & data transceiver module  
 5142F-VADXU-CYZ – video, audio & data transceiver card\*

- F = M for multimode 850nm
- = M(13) for multimode 1300nm
- = S for singlemode 1310nm
- = S(15) for singlemode 1550nm
- 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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