Optical Video Transceiver

TYPE: Sepitam-16V1bD-T/R

One Channel Video Series

Product Introduction

The Sixteen Channel Analog Video and One channel reverse Data of our products, use advanced analog and digital technologies for pursuing high performance data transmission over fiber optic. The transceiver can send signals more than 100 kilometers on fiber.

This link work properly in critical (very high and too low) temperature environments and work for years without any degradation in expected quality.

This equipment is fully transparent from front-end video device perspective. Just one fiber core is used to transmit all mentioned signals which can be any kind of fiber cables. The equipment also adopt non-compressed analog (video composite) signal in PAL or NTSC mode.

This Optical Transceiver is easily monitored by virtue of LED indication of working status and without any electrical or optical regulation on site.

This product is released in standalone and rack-mount (2U/4U) packages.

Fundamental Features:

- FC and SC interface as fiber optic connector for your choice
- Stand-alone and Rack-mount (2U/4U Card-type) for your choice
- Sampling rate up to 20MSPS and uncompressed video transmission (NRZ method)
- supporting any kind of analog video signal
- Compatible with NTSC, PAL, and SECAM video signals
- LED indication of working status for monitoring real-time operation
- Modular industrial design ensuring reliability and flexibility

Environmental Aspects:

- Working Temperature: -20 ℃～+70 ℃
- Storage Temperature: -30 ℃～+75 ℃
- Relative humidity: 0～95% (Non-condensing)
- Input Voltage: AC85-260v/50Hz
- MTBF: More than 100000 hours
- Internal power consumption: Less than 2A on +5 Volt

Link Budget:

1- Multi mode transmitters:

Fiber Type	Lose	Maximum Transmission Distance	Link power	Wavelength
62.5 um	1 (dBm/Km)	500(meter)	-19.5~-16(dBm)	850、1310(nm)

2- Single mode transmitters:

Fiber Type	Lose	Maximum Transmission Distance	Link power	Wavelength
9/125um	0.5 (dBm/Km)	20(Kilo meter)	-8~-5(dBm)	1310,1550(nm)
9/125um	0.5 (dBm/Km)	40(Kilo meter)	-5~-3(dBm)	1310、1550(nm)
9/125um	0.25 (dBm/Km)	60(Kilo meter)	-3~-1(dBm)	1310、1550(nm)
9/125um	0.25 (dBm/Km)	100(Kilo meter)	0~+3(dBm)	1310、1550(nm)

Video Characteristics:

Interface	Input/ Output Impedance	Input/ Output Voltage	Bandwidth	Sampling	Differential gain	Differential phase	SNR
BNC	75Ω (unbalanced)	Peak value = 1V Max value = 1.2V	10MHz	Up to 20MHz high speed sampling	(10%-90% APL) DG < 1% (Typical value)	(10%-90%APL） DP <0.8° (Typical value)	S/N ≥ 70dB

Data Characteristics:

Direction	Interface terminal	Controlling Equipment	Type of data
Transmitter / Reverse	Standard industrial connector	PTZ decoder, Keyboard, data interface of Matrix, High speed dome camera, industrial equipment	RS-485 (2 lines), RS232,RS422 and so on

1- RS232Aspects:

Rate of RS-232	Bit rate error	Data Agreement	Direction	Type of data
0 -118 Kbps	Less than 10E-12	data agreement fully supporting all kinds of RS-232 agreement	Transmitter / Reverse	Bi-directional RS-232,supporting point to point

2- RS485/RS422 Aspects:

Rate of RS-485/422	Bit rate error	Maximum number of nodes	Maximum trans-mission distance	Data Agreement	Direction	Type of data
0 -255 Kbps	Less than 10E-12	128	1200 meter	Fully supporting all kinds of RS-485/RS-422 agreement, including the Modbus agreements	Transmit-ter / Re-verse	Support point to point, support point to more points

Applications:

- CCTV and Security protection system
- Tele-Communication System
- Intelligent transportation supervisory system (ITS）
- Telemedicine
- E-learning& Campus monitoring
- Skyscraper Security Protection system
- Military Tele-Com projects

Technical Specification of

Sepitam-16V1bD-T/R

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