Optic Video Transceiver

User Manual

1 Product introduction

1.1 Function:

Digital optical transceiver is a series of digital high-speed fiber products. It USES the advanced high-speed optical fiber communication technology, digital video technology and data communication technology and by using the high reliability of the large-scale application-specific integrated circuit and the SMT, it is the current remote use real-time monitor of high resolution video of the most advanced transmission produds.

The products was made up by transmitter and receiver, it can transmit 1-16channel forward broadcasting signal, 1 channel bidirectional high-speed asynchronous data （forward and reverse） signal.

1.2 Main Features:

- Surge & lightning protection
- Available in popular configurations, stand alone or rack mounted (2U/4U)
- Meets RS250C short Haul transmission specifications, with NTSC, PAL and SECAM compatibility
- Support any high resolution video signal
- LED indication of power and other parameter status, monitoring real-time operation
- Real time 8/10 bit uncompressed video
- Transmission of video, audio, data , infrared alarm, phone and Ethernet
- 24 bit audio processing
- Multi-protocol data channels – field configurable
- Surface Mount Technology

1.3Video Features

- Video Interface: BNC
- Video input/output impedance: 75(ohm) unbalanced

◆Video input/output Voltage: 1V p-p
◆Video Bandwidth : 5MHz-6MHz
◆Video sampling: 15MHz high speed sampling
◆Differential gain: (10%-90%APL) DG<1%(Typical value)
◆Differential phase : (10%-90%APL) DP<0.7°(Typical value)
◆Video SNR: S/N: ≧70 dB (Maximum optical link loss)

1.4 Parameters and index:

◆Transmit Distance:

Multimode: □0-2 KM □0-5KM
Single mode: □0-20KM □0-25KM □0-40KM
□0-60KM □0-80KM □0-120KM

◆Optic port: □FC
◆Transmitting Media: □Duplex fiber □Simplex fiber
◆Transmit optic power:
◆Receiver sensibility:

★Note: The transmission distance have the relationship with the actual optical fiber loss and other index which influence the quality of the optical fiber links, so the actual transmission index distance may have the difference with the indicators.

◆Video

*Number of channels:	forward 1-16channel
*Format :	NTSC, PAL and SECAM compatibility
*Voltage/Impedance:	1Vp-p, 75Ohm
*bandwidth of Each channel:	6.5MHz
*sampling frequency:	13.5MHz
*quantization level:	10bit
*differential gain:	1%
*differential Phase:	10
*SNR:	67dB
*Delay of LPD:	10ns
*LPD gain:	±10%

◆Asynchronous data

*Interface type:	RS232/485
*Working mode:	Duplex/half duplex
*Data rate:	300-115.200Kbps
Bit Rate Error:	< 10-9
*Connector:	Industry Terminal Block

1.5Working environment:

*Power Supply:	AC180V-240V; DC -48V; DC +24V
*power consumption:	≦5W
*Operating Temperature:	0° C - 50°C
*Storage Temperature:	- 40° C-75°C
*Humidity:	95%
*Non-Condensing	

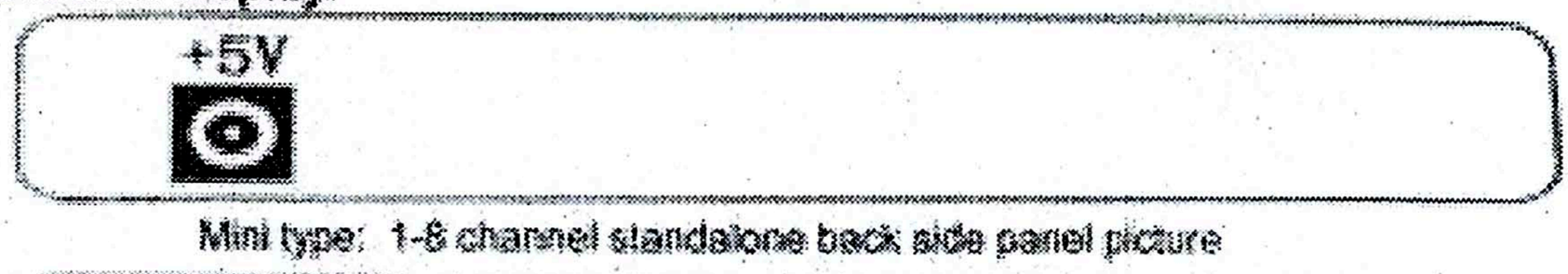
1.6Packing List:

Video optic transceiver shipped with following items.

1. Receiver &transmitter	2 unit
2. User manual	1

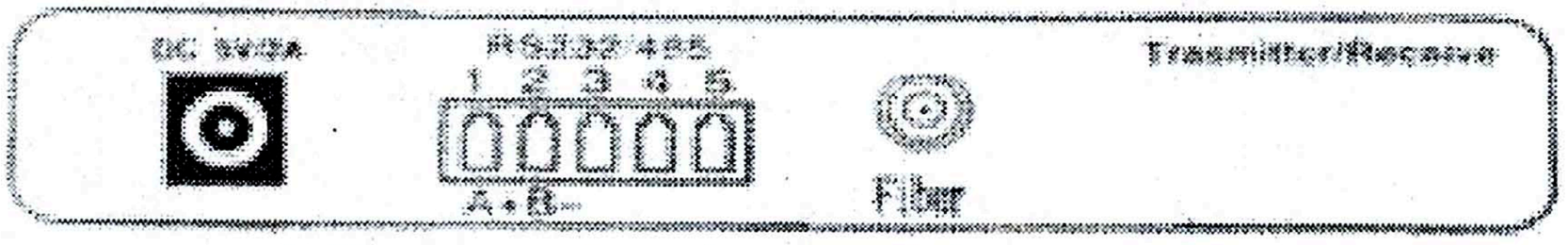
2 Installation instruction

2.1Panel display:

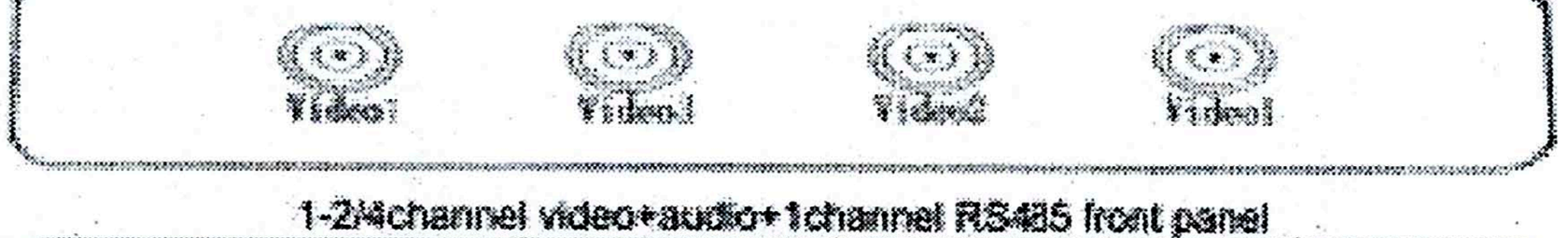


Mini type: 1-8 channel standalone back side panel picture

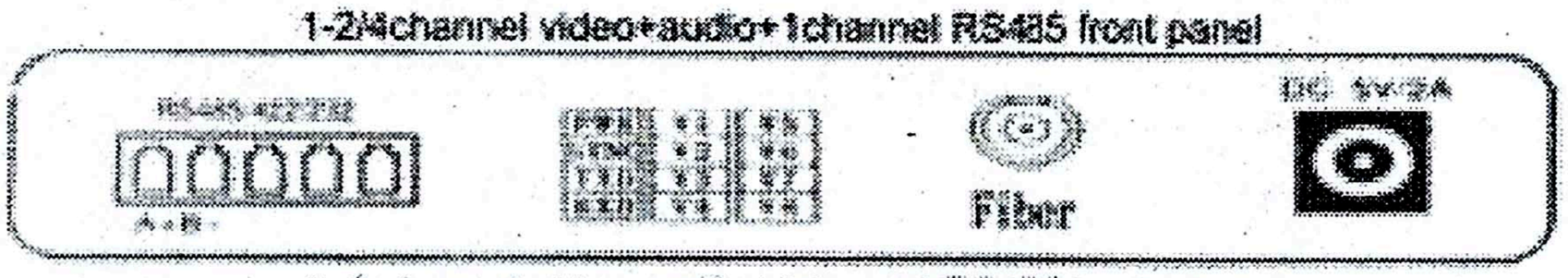
1-4channel video+1channel RS485 standalone front panel



1-2/4channel video+audio+1channel RS485 back panel

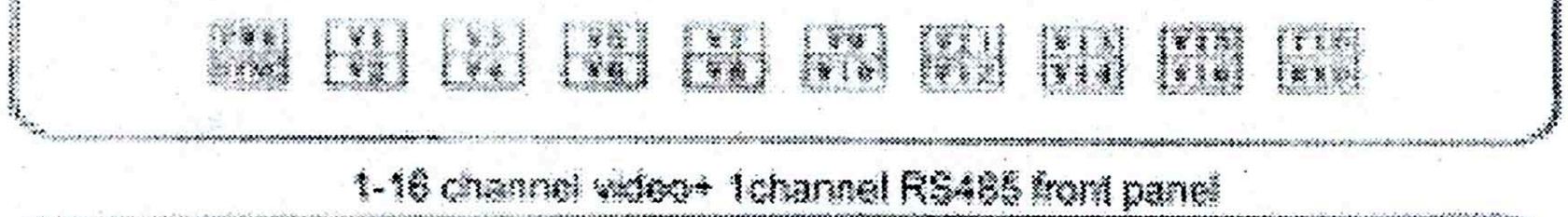


1-2/4channel video+audio+1channel RS485 front panel

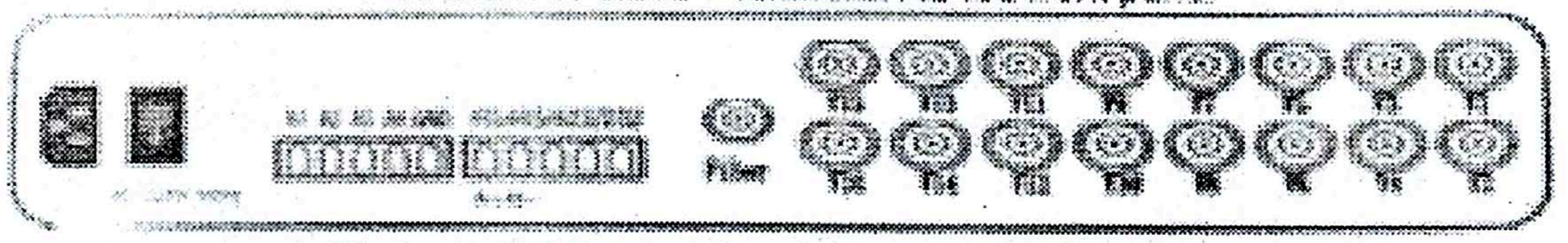


1- 8 channel video+audio+1channel RS485 back panel

1- 8 channel video+audio+1channel RS485 front panel



1-16 channel video+ 1channel RS485 front panel



1-16 channel video +audio+ 1channel RS485 back panel

2.2 Power supply

Power supply port: the first port on the left in the front panel is the power supply port.

2.3 optic port:

The back panel has fiber output port; FC/SC/ST is optional.

2.4 video signal port:

Front panel have 1-16 BNC port, please see the Video1-16.

2.5 Asynchronous Data port:

The front panel has terminal port: printed RS232/485 is Asynchronous Dataport

2.6 Indicator light

Name	Color	Status	Description
SYNC	Green	On	Optic transmitter: Reverse data receive synchronization
			Optic receiver: video and forward data receive synchronization
		Off/Blink	Optic transmitter: Reverse data receive with no sync
			Optic receiver: video and forward data receive with no sync
VI-16	Green	On	Video is okay
		Off	Video is not access to video transceiver or not received video data
PWR	Green	On	Power supply is okay
		Off	Power supply not access
TXD	Green	On	Serial data sending
		Off	Serial data not sending
RXD	Green	On	Serial data receive
		Off	Serial data not receive

3 Installation steps

◆Open-package, according to the packing list check the equipment and accessories, the quantity and model of the number is correct and check all items are in good condition, if have discrepancy , please contact with our company.

◆Check the power supply configuration, if dire ct current input please note voltage and then according to the requirement enter the power supply

◆Video link: bring the 75 Ohm plug BNC coaxial cable to link with video signal and BNC socket (video) of the transmitter/receiver's video input/output

◆External data sending equipment (such as the control of the output terminal keyboard) data (TX+ and TX-) should be direct linked with RX+ and RX- of the optic transmitter , and external data receiver equipment (such as decoder or video camera) input terminal (Rx + and Rx) should be connected with the TX + and TX- of the optical transmitter

◆Optical fiber connection: by FC/PC or ST/PC fiber optic fiber connectors through the activity of the optic fiber to connecting flange, and link with optica l receiver, optical transmitter respectively with the optic cable

Add power use:

◆The above link wha n confirmed okay and respectively access to the power, under normal circumstances, the front green lights PWR are normally on, the front panel green l light PWR also normally on the receiver

◆For single VIDEO and two-way data optical transceiver, when acce ss to optical fiber and video, the front panel SYNC, VIDEO machine light are on of the transmitter and the receiver

◆For single video optical transceiver, such as no asynchronous data, when access to optical fiber and video, the front panel VIDEO light alw ayson, and SYNC are off, the receiver optic video transceiver of SYNC VIDEO light are on