Model: FS-HDA4501R

Features

Single Channel Active Video Receiver

• Real-time transmission over UTP cat5e/6

• Compatible with HD-TVI,CVI, AHD & CVBS analog cameras

• Female BNC connector

• Power Supply: DC12V / 1A input

• Built-in solid state TVS (Transient Voltage Suppressor) for surge protection

• Wave Filter Design, Anti-Static Design

• Lightning protection design Grade: III

• 60 dB crosstalk and noise immunity

• Exceptional interference rejection

• ABS engineering plastic housing

FS-HDA4501R

Overview

The FS-HDA4501R video balun is an active (amplified) device that allows the transmission of real-time CCTV HD video signal via cost-effective Unshielded Twisted Paired (UTP) cable. The FS-HDA4501R can be used with active transmitter of FS-HDA4501T which is compatible with all HD-TVI, HD-CVI, AHD and CVBS analog cameras. Transmission distance within a certain range can be flexibly adjusted by the dial switch of FS-HDA4501R.

The superior interference rejection and low emissions of the FS-HDA4501R allow video signals to coexist in the same wire bundle as telephone, datacom, or low-voltage power circuits. This allows the use of a shared or existing cable plant. The FS-HDA4501R is built-in surge suppressor to protect video equipment against damaging voltage spikes. Its crosstalk and noise immunity ensure quality video signals.

Wire and Cable Recommendations

The FS-HDA4501R is recommended to use with Unshielded Twisted Paired (UTP) wiring from 24AWG through 22AWG.Individually shielded pairs should be avoided, as they reduce the operating range of the systems drastically. Multi-pair cable (25-pair or more) with an overall shield are acceptable. Video signals can coexist in the same wire bundle as telephone, datacom, or low-voltages power circuits. While video may be routed through telephone punch-down block terminals, any bridge-taps, also called T-taps and any resistive, capacitive or inductive devices MUST BE removed from the pair.

For more specific information regarding wire types, gauges and proper installation techniques, please contact us for technical assistance.

Dip Switch Configuration

Distance Adjustment Table

HD Active Transmitter+FS-HDA4501R

Video Format	Transmission Distance (M)	Code dial options	
		1080P ①②③	720P ①②③
TVI	400m/1312ft	LHH/HHH	LHH/HHH
	350m/1148ft	LLH	LLH
	300m/984ft	LLL	LLL
	<300m/984ft	not recommend	not recommend
CVI	550m/1804ft	XXX	HHH
	450m/1476ft	HHH	HHH/LHH
	400m/1312ft	LHH	LHH
	300m/984ft	LLH	LLH
	250m/820ft	LLL	LLL/LLH
	<200m/820ft	not recommend	not recommend
AHD	700m/2296ft	XXX	HHH
	550m/1804ft	HHH	LHH
	500m/1640ft	LHH	
	400m/1312ft	LLH	LLH
	300m/984ft	LLL	LLL
	<300m/984ft	not recommend	not recommend

HD Passive Transmitter+FS-HDA4501R

Video Format	Transmission Distance（M）	Suggestions for code dial	
		1080P ①②③	720P ①②③
TVI	320m/1050ft	HHH	HHH
	250m/820ft	HHL	HHL
	<200m/656ft	not recommend	not recommend
CVI	350m/1148ft	not recommend	HHH
	300m/984ft	HHH	HHL
	200m/656ft	HHL	HLL
	<200m/656ft	not recommend	not recommend
AHD	600m/1968ft	not recommend	HHH
	500m/1640ft	HHH	HHL
	450m/1476ft	HHL	
	200m/656ft	HLL	HLL
	<200m/656ft	not recommend	not recommend

Note:

The"H"means the code is dialed to "H"side, "L" means the code is dialed to "L" side, and "XXX" means that maximum transmission distance under each video format has exceeded. "•①②③, ƒ"digital code represents each section of Dip Switches. Above dialing mode instruction is for your reference, appropriate dialing mode is adjusted according to the actual situation in order to achieve best video transmission.
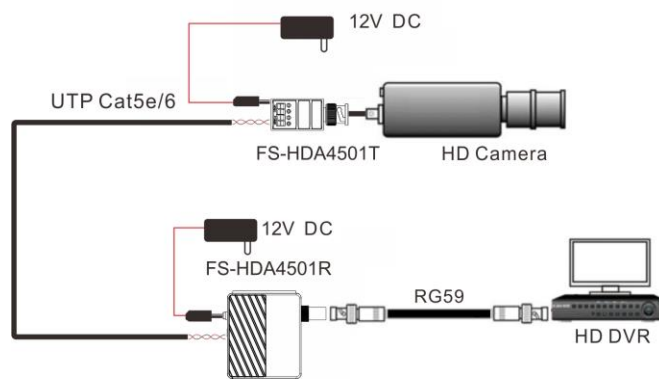
Technical Specifications

Model	FS-HDA4501R
Product Name	Single Channel HD Active Video Receiver
Applied Devices	CCTV cameras, monitors, DVR

Video	Video Format	HD-TVI,CVI, AHD and CVBS
	Operating Frequency	Signal bandwidth:205MHz(-3db)
	Max Distance	Please refer to distance chart
	Impedance	BNC side 75Ω unbalanced, UTP side 100Ω balanced
	Video Distance Adjustment	2 position dip switches
LED Indicator	Red	Power-On
Wire Type	Network Wiring	One Unshielded Twisted Pair (for each video signal) 24-16 AWG (0.5-1.31mm)
	Category Type	UTP cat 5e/6
	Impedance	100 ± 20 ohms
	DC Loop Resistance	30.5 ohms per 1,000ft (10 ohms per 100m)
	Mutual capacitance	18 pF/ft max (59 pF/m max)
Power	Adaptive Voltage Arrange	12VDC power adapter
	Power Consumption	<400mW
Connector	Video Input	Female BNC Connector
	Video Output	Pluggable screw terminal for UTP cable
Protection	Ground Isolation	Ground connection available for STP or ground loop removal
	Antistatic	YES
	Video Input	1KV(different mode),2KV(common mode), 10/700us IEC6100-4-5/1955(GB/T 1726, 5-1999)
	Video Output	2KV(common mode), 10/700us IEC6100-4-5/1955(GB/T 1726, 5-1999)
MTBF	Mean Time Between Failure	50000h
Mechanical	Housing	ABS engineering plastic
	Body Color	Black
	Dimensions (L*W*H)	68*526*22.5mm (BNC connector & mounting bracket excluded)
	Net Weight	48g
Environmental	Operating Temperature	-5º ~ 45º C
	Relative Humidity	0~95% (non-condensing)
	Storage Temperature	-45º ~ 85º C

Applications

- Security Monitoring System
- Multimedia Network Teaching System
- Medical Monitoring Display System
- Industrial Automation Control System
- Banking, securities, financial information display system
- Remote Network Server Monitoring
- Department Store Security
- Casino Security
- Hospitals, Airports and banks
- School Campuses

Application Diagram

1.HD Active Transmitter + HD Active Receiver

2. HD Passive Transmitter + HD Active Receiver