

Model: FS-HD4301VPC

Features

Single Channel HD Video & Power Balun (Convert 36VDC to regulated 12VDC)

- Real-time transmission over UTP cat5e/6
- No power required
- Compatible with all HD-TVI/CVI/AHD/CVBS analog cameras
- Please refer to “Transmission Distance Chart” Part to find out distance of 720P/960P/1080P/3MP/4MP/5MP/4K cameras
- Power distance is up to 305m(1000ft) over 3 pairs of UTP cat 5e/6
- Male BNC connector with extended mini-coax pigtail
- RJ-45 Jack for UTP cable
- 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



Overview

The FS-HD4301VPC is video & power balun that allows the transmission of real-time CCTV HD video and power signal via cost-effective unshielded Twisted Paired (UTP) cable. The FS-HD4301VPC is compatible with all HD-TVI, HD-CVI, AHD & CVBS analog cameras.

The FS-HD4301VPC can convert 36VDC into regulated 12VDC which allows power transmission max up to 305m(1000ft).

The superior interference rejection and low emissions of the FS-HD4301VPC allow video & power 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-HD4301VPC is built-in surge suppressor to protect video equipment against damaging voltage spikes.

Its crosstalk and noise immunity ensure quality video signals.

Video Distance Chart

Camera Type	HD-TVI	HD-CVI	HD-AHD
720P camera	250m(820ft)	440m(1443ft)	320m(1049ft)
960P camera	Not tested	Not tested	320m(1049ft)
1080P camera	250m(820ft)	250m(820ft)	250m(820ft)
3MP camera	250m(820ft)	Not tested	250m(820ft)
4MP camera	180m(590ft)	200m(656ft)	200m(656ft)
5MP camera	180m(590ft)	Not tested	180m(590ft)
4K camera	130m(426ft)	200m(656ft)	150m(492ft)
CVBS	400m(1312ft)		



Note:

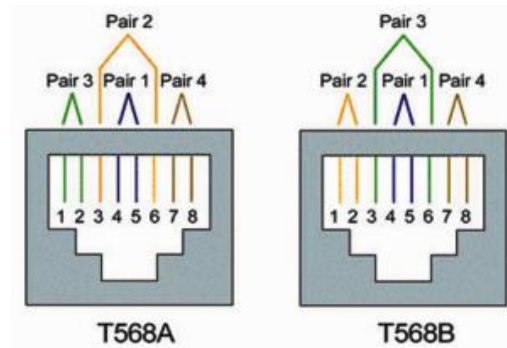
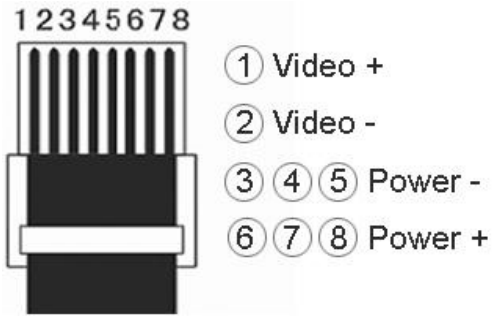
1. The actual transmission distance will vary according to the quality of the cable, specific camera, and on-site environment.
2. Please make sure to install transmitter at camera side and receiver at DVR side to achieve best video quality.
3. If you adjust saturation of DVR, video transmission distance could be farther. HD-CVI 720P: max up to 470m (1541ft).
4. If chromatic aberration occurs, please also adjust saturation, the picture will recover perfectly automatically.

Wire and Cable Recommendations (one pair for video, 3 pairs for power)

The FS-HD4301VPC is recommended to use with Unshielded Twisted Paired (UTP) wiring from 24AWG through 22AWG. Individually shielded pairs should be avoided, as they reduced the operating range of the systems drastically. Multi-pair cable (25-pair or more) with an overall shield is 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.





EIA/TIA-568A Wiring Specifications

Wire	Pin #	Configuration
Green White	1	Video (+)
Green	2	Video (-)
Orange White	3	Power (-)
Blue	4	Power (-)
Blue White	5	Power (-)
Orange	6	Power (+)
Brown White	7	Power (+)
Brown	8	Power (+)

EIA/TIA -568B Wiring Specifications

Wire	Pin #	Configuration
Orange White	1	Video (+)
Orange	2	Video (-)
Green White	3	Power (-)
Blue	4	Power (-)
Blue White	5	Power (-)
Green	6	Power (+)
Brown White	7	Power (+)
Brown	8	Power (+)



Technical Specifications

Model		FS-HD4301VPC
Product Name		Single Channel HD Video & Power Transmitter & Receiver
Applied Devices		CCTV cameras, monitors, DVR, switchers, IP encoders, and other CCTV equipments
Video	Video Format	HD-TVI/CVI/AHD/CVBS
	Operating Frequency	DC to 71MHz
	Common-mode/Differential-mode	15KHz to 71MHz 60 dB typ.
	Impedance	Coax: Male BNC 75Ω unbalanced
		UTP: RJ45 100Ω balanced
Attenuation	1.5 dB typ. Max	
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	52 ohms per 1,000ft (18 ohms per 100m)
	Differential Capacitance	19 pF/ft max (62 pF/m max)
Power	Power Input	36VDC
	Power Transmission	Power distance max up to 305m(1000ft) over 3pairs of UTP cat 5e/6
Connector	Video input/output	Male BNC connector
	Video input/output	RJ45 Jack
Protection	Surge Protection	renewable solid state surge protection
	Video Input	2KV (common mode), 10/700us IEC61000-4-5/1955(GB/T 1726, 5-1999)
	Video Output	2KV (different mode), 10/700us IEC61000-4-5/1955(GB/T 1726, 5-1999)
Mechanical	Housing	ABS engineering plastic
	Body Color	Black
	Dimensions(L*W*H)	60.4*29*20.4mm (BNC connector & cable excluded)
	Net Weight	60g
Environmental	Operating Temperature	-20° ~ 70° C
	Relative Humidity	0~95% (non-condensing)
	Storage Temperature	-40° ~ 150° 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

