

## Model: FS-HDP4201P

### Features

#### Single Channel HD Passive Video Balun

- 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
- Male BNC connector with extended mini-coax pigtail
- 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-HDP4201P video balun is a passive (non-amplified) device that allows the transmission of real-time CCTV HD video signal via cost-effective Unshielded Twisted Paired (UTP) cable. The FS-HDP4201P is compatible with all HD-TVI, HD-CVI, AHD and CVBS analog cameras.

The FS-HDP4201P has a mini-coax pigtail lead which allows quick mounting onto fixed cameras, allows in-camera mounting in most dome cameras and allows flexible connection with DVR. Push-pin terminal block allows tool-less connection of UTP cable output. Used in pairs, the FS-HDP4201P eliminates costly and bulky coaxial cable.

The superior interference rejection and low emissions of the FS-HDP4201P 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-HDP4201P is built-in surge suppressor to protect video equipment against damaging voltage spikes. Its crosstalk and noise immunity ensure quality video signals.

## Transmission 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 camera	400m(1312ft)		



## Connectable design for neat installation

Old baluns make the cabinet a mess



Baluns click together for a neat installation



## Wire and Cable Recommendations

The FS-HDP4201P 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, capacity 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.



## Technical Specifications

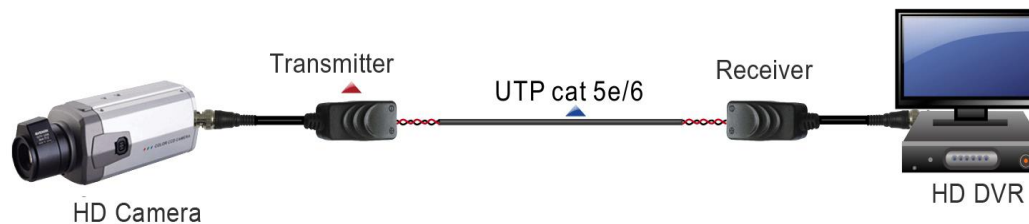
Model		FS-HDP4201P	
Product Name		Single Channel HD Passive Video Balun	
Applied Devices		CCTV cameras, monitors, DVR, switchers, IP encoders, and other CCTV equipment	
Video	Video Format	HD-TVI/ CVI/AHD /CVBS	
	Operating Frequency	DC to 71MHz	
	Common-mode/Differential-mode rejection	15KHz to 71MHz 60 dB typ.	
	Impedance	Coax: Male BNC	75Ω unbalanced
		UTP: push-pin terminal block	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		No external power required	
Connector	Video input/output	Male BNC connector	
	Video input/output	Tool-less push-pin terminal block	
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 (differential mode), 10/700us IEC61000-4-5/1955(GB/T 1726, 5-1999)	
Mechanical	Housing	ABS engineering plastic	
	Body Color	Black	
	Dimensions(L*W*H)	38.4*18.6*19.5mm (BNC connector & cable excluded)	
	Net Weight	40g	
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



### 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 the 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.
5. The device is not waterproof and not to be used at outdoors.