

## Model FS-HDP4101P

### Features

#### Single Channel HD Passive Video Balun

- Real-time transmission over UTP cat5e/6
- No power required
- Stackable for neat installation
- Compatible with all HD-TVI/CVI/AHD/CVBS analog cameras
  - Color video max up to 190m (623ft) for HD-TVI 720P camera
  - Color video max up to 190m (623ft) for HD-TVI 1080P camera
  - Color video max up to 200m (656ft) for HD-TVI 3MPX camera
  - Color video max up to 180m (590ft) for HD-TVI 5MPX camera
- Color video max up to 440m (1443ft) for HD-CVI 720P camera  
If you adjust saturation of DVR, max up to 470m (1541ft)  
Color video max up to 230m (754ft ) for HD-CVI 1080P camera  
Color video max up to 230m (754ft ) for HD-CVI 4MPX camera
- Color video max up to 320m (1049ft) for HD-AHD 720P camera  
Color video max up to 320m (1049ft) for HD-AHD 960P camera  
Color video max up to 250m (820ft) for HD-AHD 1080P camera  
Color video max up to 180m (590ft) for HD-AHD 3MPX camera  
Color video max up to 200m (656ft ) for HD-AHD 4MPX camera  
Color video max up to 200m (656ft ) for HD-AHD 5MPX camera
- Color video max up to 400m (1312ft) for CVBS camera
- Male BNC with extended 5.9inch (150mm) mini-coax pigtail
- Reliable push-pin terminal block connection for UTP cat5e/6
- 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-HDP4101P 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-HDP4101P is compatible with all HD-TVI, HD-CVI, AHD and CVBS analog cameras.

The FS-HDP4101P 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-HDP4101P eliminates costly and bulky coaxial cable.

The superior interference rejection and low emissions of the FS-HDP4101P 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-HDP4101P is built-in surge suppressor to protect video equipment against damaging voltage spikes. Its crosstalk and noise immunity ensure quality video signals.

## Connectable design for neat installation

**Old baluns make the cabinet a mess**



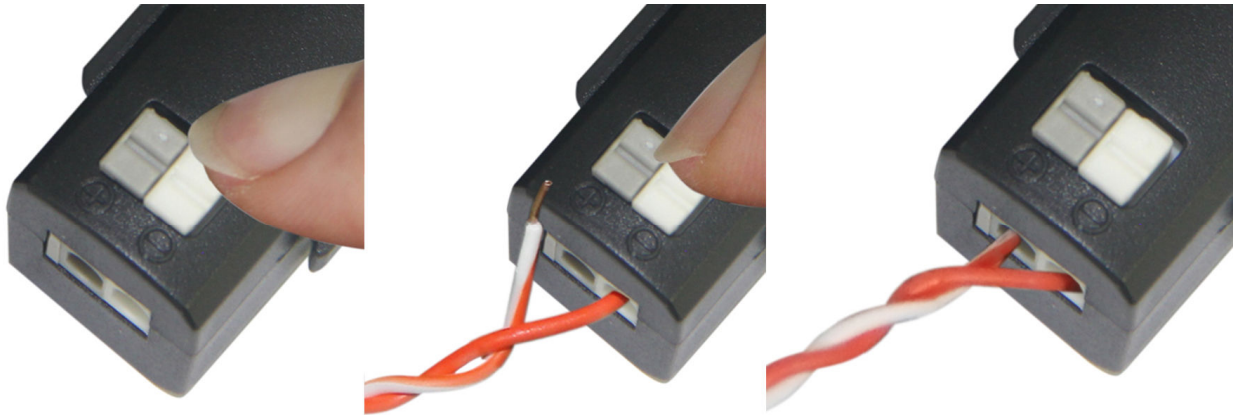
**Baluns click together for a neat installation**



## Wire and Cable Recommendations

The FS-HDP4101P 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.



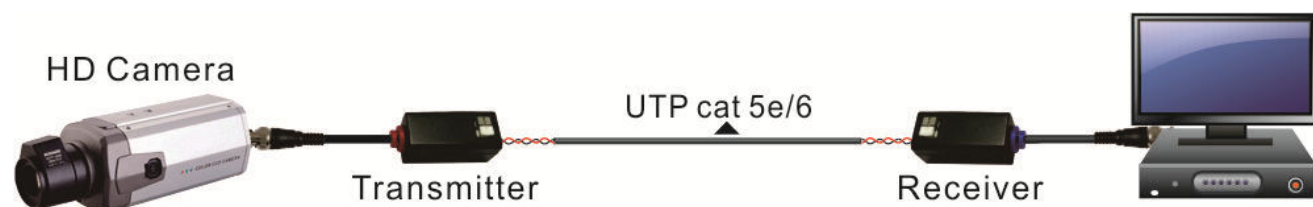
## Technical Specifications

Model		FS-HDP4101P					
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 42MHz					
	Max Distance	HD-TVI 720P 190m(623ft)	HD-TVI 1080P 190m(623ft)	HD-TVI 3MPX 200m( 656ft)	HD-TVI 5MPX 180m( 590ft)		
		HD-CVI 720P 440m(1443ft)	HD-CVI 1080P 230m(754ft)	HD-CVI 4MPX 230m(754ft)			
		HD-AHD 720P 320m(1049ft)	HD-AHD 960P 320m(1049ft)	HD-AHD 1080P 250m(820ft)	HD-AHD 3MPX 180m(590ft)	HD-AHD 4MPX 200m(656ft )	HD-AHD 5MPX 200m(656ft )
	Common-mode/Differential-mode rejection	15KHz to 42MHz 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(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)	38.4*18.6*19.5mm (BNC connector & cable excluded)					
	Net Weight	22g					
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 specific camera, DVR 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.
5. The device is not waterproof and not to be used at outdoors.