

## Model CPC-VB

### Single Channel HD Passive Video Balun

#### Features

- Real-time transmission over UTP cat5e/6
- No power required
- NTSC, PAL & SECAM video format compatible
- Compatible with all HD-TVI, HD-CVI & AHD analog camera
- Color video max up to 440m(1443ft) for HD-CVI 720P analog camera  
Color video max up to 240m(787ft) for HD-CVI 1080P analog camera
- Color video max up to 230m(754ft) for HD-TVI 720P analog camera  
Color video max up to 250m(820ft) for HD-TVI 1080P analog camera
- Color video max up to 320m(1050ft) for AHD 720P analog camera  
Color video max up to 330m(1082ft) for AHD 960P analog camera
- Male BNC connector
- Two screw terminals connection for UTP cable
- Built-in 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 CPC-VB 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. Baseband (composite) signals of any type are supported.

The CPC-VB is compatible with all HD-TVI, HD-CVI and AHD analog camera.

Male BNC of the CPC-VB allows connection directly to the camera and DVR. Screw terminals of the CPC-VB allows easy connection of UTP cable output. Used in pairs, the CPC-VB eliminates costly and bulky coaxial cable.

The superior interference rejection and low emissions of the CPC-VB 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. With built-in TVS(Transient Voltage Suppressors) for surge protection, damaging voltage spike problems are eliminated.

## Wire and Cable Recommendations

The CPC-VB 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-voltage 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		CPC-VB		
Product Name		Single Channel HD Passive Video Balun		
Applied Devices		CCTV cameras, monitors, DVR, switchers, IP encoders, and other CCTV equipment		
Video	Video Format	PAL, NTSC, SECAM		
	Operating Frequency	DC to 42MHz		
	Max Distance	HD-TVI 720P: 230m	HD-CVI 720P: 440m	AHD 720P: 320m
		HD-TVI 1080P: 250m	HD-CVI 1080P: 240m	AHD 960P: 330m
	Common-mode/Differential-mode rejection	15KHz to 42MHz 60 dB typ		
	Impedance	Coax, Male BNC		75Ω unbalanced
		UTP, screw terminal		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	2 or better		
	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	Screw terminal		
Protection	Surge Protection	renewable solid state surge protection		
	Video Input	2KV(common mode), 10/700us IEC6100-4-5/1955(GB/T 1726, 5-1999)		
	Video Output	2KV(different mode), 10/700us IEC6100-4-5/1955(GB/T 1726, 5-1999)		
Mechanical	Housing	ABS engineering plastic		
	Body Color	Black		
	Dimensions(L*W*H)	42.4*17.8*17.4mm(BNC connector excluded)		
	Net Weight	20g		
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

### Note:

1. Please make sure to install transmitter at camera side and receiver at DVR side to achieve best quality
2. If you adjust saturation of DVR, video transmission distance could be farther. (HD-CVI 720P: max up to 470m(1542ft))
3. If chromatic aberration occurs within 30 meters, please also adjust saturation, the picture will recover perfectly automatically.(only for HD-CVI 1080P)

## Application Diagram

