

Passive Video Balun



1.2.51.32.13539-000

Important Safeguards and Warnings

The following description is the correct application method of the device. Please read the manual carefully before use, in order to prevent danger and property loss. Strictly conform to the manual during application and keep it properly after reading.

Operating Requirement

- Please don't place and install the device in an area exposed to direct sunlight or near heat generating device.
- Please don't install the device in a humid, dusty or fuliginous area.
- Please don't drip or splash liquids onto the device; don't put on the device anything filled with liquids, in order to prevent liquids from flowing into the device.
- Use the device only within rated input and output range.
- Please don't dismantle the device arbitrarily.
- Please transport, use and store the device within allowed humidity and temperature range.

Auxiliary Material Requirement

- Power of this product applies to load camera with small power. Power adapter within the indicated voltage range can be bought by yourself according to actual use.
- The power of power adapter shall be larger than total power of load camera, and output voltage of adapter shall meet input voltage of load camera; otherwise, it may fail to start, power down suddenly or the camera may go wrong. Please refer to Product Power Config Table (Table 4-2) for details.
- CAT5E or CAT6 Unshielded Twisted Paired (UTP) shall have copper conductor, and cable performance shall meet standard requirements. For example, CAT5E conductor resistance shall be less than 9.5ohms/100m and CAT6 conductor resistance shall be less than 9.38ohms/100m.

About this Document

- The Manual is for reference only. If there is inconsistency between the Manual and the actual product, the actual product shall prevail.
- We are not liable for any loss caused by the operations that do not comply with the Manual.
- Upgrade the reader software or try other mainstream reader software if the Guide (in PDF format) cannot be opened.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the Manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.

1 Product Overview

1.1 Product Profile

Passive video balun connects front-end camera with DVR device, transmits video signal and power with one network cable. Front-end camera doesn't need power adapter to supply power.

1.2 Product Feature

- Support power supply of camera;
- Support HDCVI/AHD/TVI/CVBS multi-mode transmission;
- Support DC12V~15V power supply;

2 Port

NOTE

- Structural drawings are only schematic diagrams for you to know cable port functions.
- Different devices may have different cable structures. Please refer to actual products.

2.1 Transmitter End

As power receiving device in power supply system, transmitter end of passive video balun receives electric energy from receiver end and sends it to the camera, while transmitting video from the camera to receiver end.

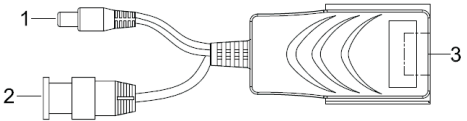


Figure 2-1

No.	Port Name	Functional Description
1	DC male connector	Supply DC12V to camera
2	BNC male connector	Connect camera
3	RJ45 port	Connect transmitter end with receiver end.

2.2 Receiver End

As power supply device in power supply system, receiver end of passive video balun provides transmitter end with electric energy, while sending video signal of transmitter end to the DVR device.

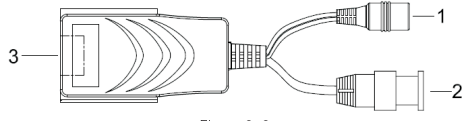


Figure 2-2

No.	Port Name	Functional Description
1	DC male connector	DC 12V ~ 15V power input
2	BNC male connector	Connect DVR device
3	RJ45 port	Connect transmitter end with receiver end.

3 Application Network

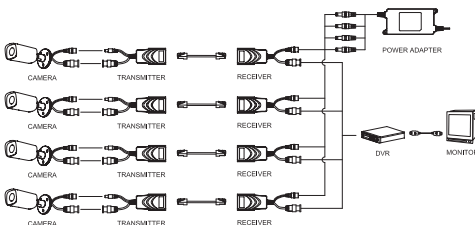


Figure 3-1

Operating Steps

Step 1 Connect the ports of passive video balun, as shown in Figure 3-1.

1. Receiver RJ45 and transmitter RJ45 are connected with network cable.
2. Receiver BNC male connector is connected with DVR device.
3. Transmitter BNC male connector, DC male connector and camera are connected.

NOTE


Buy power adapter according to actual use.

CAUTION

This product doesn't have voltage stabilization function. Please select an appropriate power adapter according to actual transmission distance; otherwise, it may lead to the following problems:

1. With insufficient output voltage or power of the power adapter, the camera will fail to start and work normally.
2. With excessive output voltage of the power adapter, the camera will be burnt out.

4 Specifications

Properties			
Power Supply	DC12~15V Taking DC12V0.7A Power Adapter and CAT5E Cable as an example		
	Input Voltage	Distance	Output Power
	DC12V	0~20m	7.5W
		20~40m	6.2W
		40~60m	4.5W
		60~80m	3.7W
		80~100m	2.9W
 NOTE The above data is only the result of laboratory test; actual distance will depend on the camera's inrush and operating current, minimum operating voltage, the wire's quality and environmental factors.			
Category Type	UTP CAT5E/6 (material: CU)		
Video Transmission Properties			
Coaxial Video Connector	BNC-M		
Connection Way	RJ45		
Compatible Format	HDCVI/AHD/TVI/CVBS		

Protection	
ESD	1a contact discharge electricity level 3
	1b air discharge electricity level 3 Per: IEC61000-4-2
Coaxial Cable Connector	2KV(common-mode), 1KV (different-mode) Per: IEC61000-4-5
Power Connector	2KV(common-mode), 1KV (different-mode) Per: IEC61000-4-5
UTP Cable Connector	2KV(common-mode), 1KV (different-mode) Per: IEC61000-4-5
Impedance	
BNC Male	75 ohms
UTP Cable	100 ohms
Physical Properties	
Dimension(L*W*H)	61.5 × 33.5 × 20.5mm(without cable)
Shell	ABS
N.W.	85g
Stability	
MTBF	>10000H
Environmental	
Operating Temperature	-10℃~+55℃(14℉~131℉)
Storage Temperature	-20℃~+70℃(-4℉~158℉)]
Humidity	0~95%(non-condensing)

Table 4-1

1) DC12V 1A Power Input

Load Current (A)	20m		40m		60m		80m		100m	
	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)
0.20	11.50	2.07	11.18	2.01	10.82	1.95	10.63	1.91	10.40	1.87
0.25	11.36	2.56	11.01	2.46	10.55	2.37	10.29	2.32	10.02	2.25
0.30	11.30	3.05	10.84	2.93	10.30	2.78	9.99	2.70	9.62	2.60
0.35	11.12	3.50	10.69	3.37	10.06	3.17	9.72	3.06	9.25	2.91
0.40	11.03	3.97	10.52	3.79	9.84	3.54	9.40	3.38	8.87	3.19
0.45	10.85	4.39	10.34	4.19	9.58	3.88	9.10	3.69	8.50	3.44
0.50	10.75	4.84	10.17	4.58	9.33	4.20	8.79	3.96	8.12	3.65
0.55	10.63	5.26	9.97	4.94	9.09	4.50	8.47	4.19	7.74	3.83
0.60	10.53	5.69	9.80	5.29	8.85	4.78	8.17	4.41	7.37	3.98
0.65	10.41	6.09	9.63	5.63	8.61	5.04	7.84	4.59	6.98	4.08
0.70	10.38	6.54	9.44	5.95	8.34	5.25	7.53	4.74	6.59	4.15

2) DC15V 1A Power Input

Load Current (A)	20m		40m		60m		80m		100m	
	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)	Load Voltage (V)	Load Power (W)
0.20	14.54	2.62	14.27	2.57	13.98	2.52	13.63	2.45	13.42	2.93
0.25	14.43	3.25	14.1	3.17	13.74	3.09	13.32	3.00	13.03	3.41
0.30	14.32	3.87	13.93	3.76	13.5	3.65	12.99	3.51	12.63	3.86
0.35	14.21	4.48	13.75	4.33	13.26	4.18	12.67	3.99	12.25	4.28
0.40	14.1	5.08	13.58	4.89	13.01	4.68	12.36	4.45	11.88	4.66
0.45	13.99	5.67	13.4	5.43	12.77	5.17	12.05	4.88	11.5	5.09
0.50	13.88	6.25	13.23	5.95	12.52	5.63	11.76	5.29	11.31	5.33
0.55	13.77	6.82	13.05	6.46	12.28	6.08	11.44	5.66	10.76	5.61
0.60	13.66	7.38	12.88	6.96	12.04	6.50	11.15	6.02	10.38	5.86
0.65	13.54	7.92	12.7	7.43	11.79	6.90	10.88	6.36	10.01	6.07
0.70	13.46	8.48	12.52	7.89	11.56	7.28	10.55	6.65	9.64	6.25
0.75	13.35	9.01	12.37	8.35	11.26	7.60	10.23	6.91	9.26	2.93

Table 4-2

NOTE

The above data is only the result of laboratory test; actual distance will depend on the camera's inrush and operating current, minimum operating voltage, the wire's quality and environmental factors.

5 Points for Attention

1. Pay attention to connection; ensure that T end is connected with camera and R end is connected with DVR.
2. Network cable conductor is copper, and it shall conform to international CAT5E or CAT6 electrical performance standard.
3. Adjust saturation of DVR, so image transmission distance will be farther.
4. In case of no image or unrecognizable image, please adjust saturation of DVR.
5. Since this product is non-waterproof, please don't use it outdoors.
6. Since this product doesn't own voltage stabilization function, please choose the right power adapter according to the actual distance and the power of camera; protect the camera from damages due to overvoltage.