

## 1-CH Passive Video Balun & Power Receiver for Camera Side

Model: VBU110RJ-DCPA

## 1-CH Passive Video Balun with Power Assurance for Power Adaptor Side

Model: VBU01DC 1-CH

## 5-CH / 9-CH / 16-CH Passive Balun & Power Server for Power Side

Model: VBU05DC-1UPA 5-CH  
 VBU09DC-1UPA 9-CH  
 VBU16DC-1UPA 16-CH

VBU01DC is a passive video balun device capable of transmitting 1 channel of baseband video signal and providing 12 VDC power for 1 channel at the same time using UTP cable. This device is designed to be used with VBU110RJ-DCPA passive video and power assurance balun. Passive video signal transmission up to 1000ft / 300m and provide the camera with 12V DC @ 300mA maximum.

VBU16DC-1UPA, VBU09DC-1UPA, and VBU05DC-1UPA are passive video balun power hub devices capable of transmitting 16/9/5 channels of baseband video signal and providing 12 VDC power for all 16/9/5 channels at the same time using UTP cable. These devices are designed to be used with VBU110RJ-DCPA passive video and power assurance balun. Passive video signal transmission up to 1000 ft / 300m and provide the camera with 12V DC @ 300mA maximum. Built-in Lightning surge protection and interference rejection.

### VBU110RJ-DCPA Features – Camera Side:

- Using UTP cable to transmit video signal and delivering power to camera at the same time
- Passive video balun with step down power stabilizer to 12V DC
- Low cost with no additional cabling for power, save time on installation and trouble shooting
- Transmission distance up to 300m / 1000ft
- Support all baseband signal formats including PAL, NTSC and SECAM
- Power input range from 15V to 40V DC
- Maximum output power 12V DC with 500mA @ 180m / 600ft
- Over current trouble indicator LED
- RJ45 jack design for easy connection
- RJ45 jack 568A & 568B miss wiring prevention design protect device from damage
- Built-in Static Electricity and Lightning Surge Protection

### Components are Made In USA for this product:

Name of Component	Manufacturer
DCDC Power IC	National Semiconductor

R&D Designed in Taiwan  
 Assembled in China




### VBU01DC Features – Power Adaptor Side:

- Uses an Unshielded Twisted Pair cable (UTP), to transmit full motion camera video signal in color up to 300m / 1000ft and in B/W up to 600m / 2000ft
- **Surge / Lightning Protection**  
 10/700 μs Pulses: 2KV  
 Standard: IEC61000-4-5
- **ESD : Electrostatic Discharge Protection!**  
 Contact Discharge: 6KV / Air Discharge: 8KV  
 Standard: IEC61000-4-2
- **Wave / Interference Rejection & Noise Filter**  
 Built-in Filter: 0~6HMz with Extra Interference Rejection <60db
- DC Power Lead: 12V~24V DC



**Optional Wall Mount Adaptor**  
 Input: 100-240V~,50-60Hz,0.8A  
 Output: 24.0V DC 1000mA  
 USA, Canada – UL Approval  
 Europe – CE, GS



P24DC1000  
PIC: P-62

### VBU05DC-1UPA / VBU09DC-1UPA / VBU16DC-1UPA Features – Power Side:

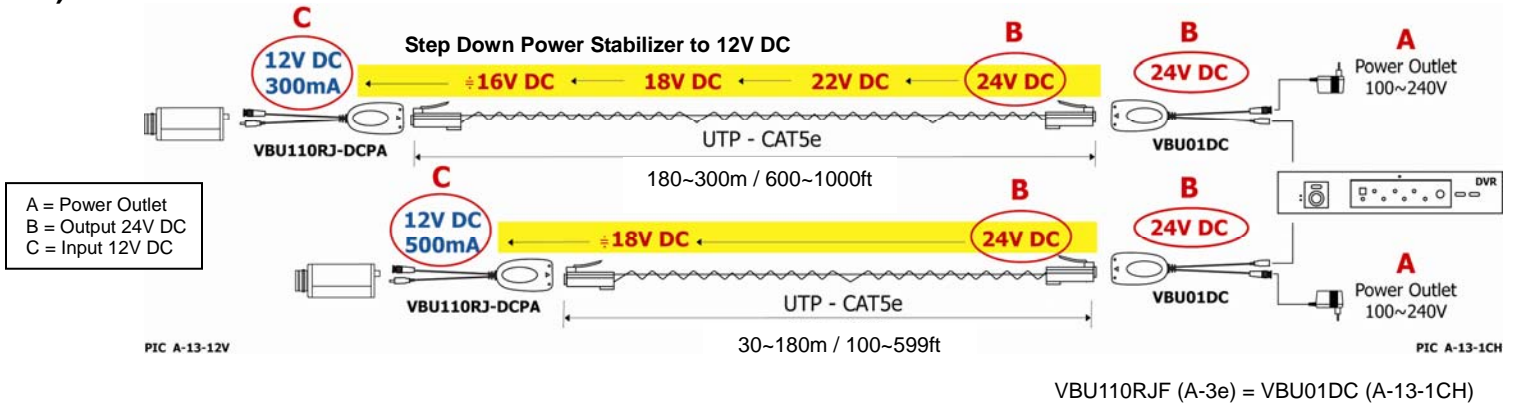
- Using UTP cable to transmit video signal and provide power to camera simultaneously
- Low cost on cabling, save time on installation and trouble shooting
- Transmission distance up to 300m / 1000ft
- Support all baseband signal formats including PAL, NTSC and SECAM
- Universal power input support 100V~240V
- Regulated 24V DC output power
- Using 3 pairs of UTP cabling to carry more current
- Over current protection and trouble indicator LED
- RJ45 jack design for easy connection
- Connector reverse polarity and short circuits protection design
- Built-in Lightning surge protection and Interference Rejection
- Low noise exhaust fan ensure system stability
- Main power switch with indicator light
- Rackmount Ear included



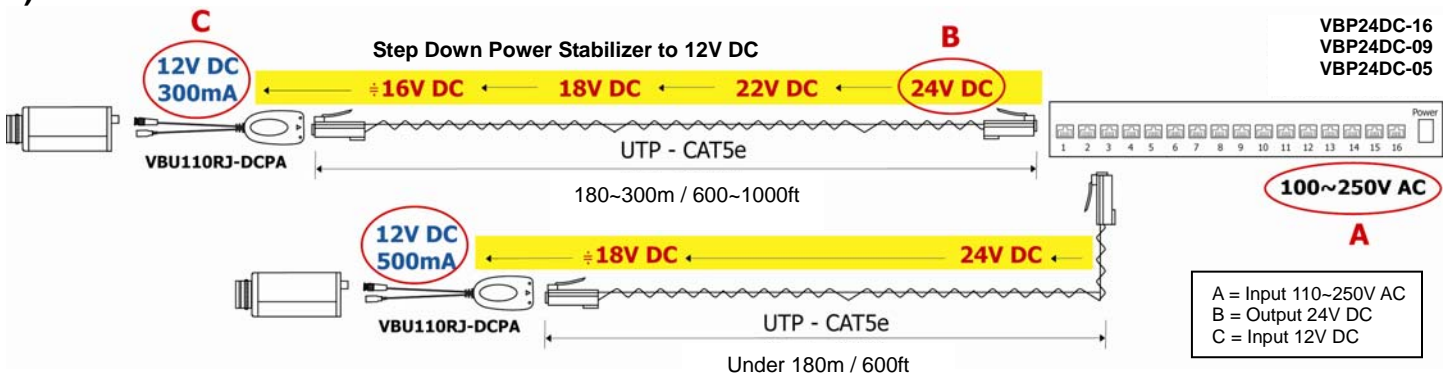
**UTP = Unshielded Twisted Pair**

# Application Diagram:

## 1) VBU110RJ-DCPA Used With 1-CH Passive Video Balun with Power Assurance



## 2) VBU110RJ-DCPA Used With 5-CH / 9-CH / 16-CH Passive Balun & Power Server



**Note:** Not recommended for High Power Infrared Cameras with power consumption over 300mA or 500mA. See diagram above.

## Specifications for Camera Side:

\*Specifications are subject to change without notice

Model Number	A-13-12V	VBP2412DC
Power	Output Voltage	12V DC $\pm$ 5%
	Output Current	12V DC 500 mA @ 0~200m / 0~600ft 12V DC 300 mA @ 200~ 300m / 600~1000ft
	Distance	0~300m / 0~1000ft
	Supported Power Consumption	6W Max.
Video Transmitting Properties	Supporting Video Signals	All Baseband Signals including PAL, NTSC, SECAM
	Balance Band	0~6MHz(-3dB)
	Maximum Transmission Distance	Color 300m / 1000ft
	Transmitting Cable	UTP CAT5e
Connection Properties	Interference Rejection	>60dB
	Transmission Channel	1
	Video Connector	1 Male BNC with Cable, Resistance 75 Ohms
Surge Protections	UTP Video and Power Transmission	1 RJ45 Jack with Indicator light
	Power Connector	12V DC Jack
Indicators	Lightning Protection	2KV IEC6100-4-5 1955 (GB/T 17626.5)
	Static Electricity Protection	1a Contact Discharge Level 3 1b Air Discharge Level 3 IEC6100-4-2
Stability	Power LED	Green
	Over Current Protection LED	Yellow
Physical Properties	MTBF	>10,000 hours
	Dimensions (L x W x H)	220mm x 36mm x 22mm / 8.66" x 1.41" x 0.86" (with Cable)
	Lead Length	11.4cm / 4.5"
Environment	Weight	0.11 lbs / 50g
	Operating Temperature	0°C ~ 50°C / 32°F ~ 131°F
	Relative Humidity	0~95% (none Condensation)
	Storage Temperature	-20°C~80°C / -4F ~ 176°F

**UTP = Unshielded Twisted Pair**

## Specification for Power Adaptor Side:

Model Number	A-13-1CH = A-3e		VBU01DC
Power	Output Voltage	12V~24V DC	
	Output Current	Depends on Wall Mount Adaptor	
	Distance	300m / 0~1000ft	
	Supported Power Consumption	500mA @ 0~200m / 0~600ft 300mA @ 200~ 300m / 600~1000ft	
Video Transmitting Properties	Supporting Video Signals	All Baseband Signals including PAL, NTSC, SECAM	
	Balance Band	0~6MHz(-3dB)	
	Maximum Transmission Distance	Color 300m / 1000ft ; B/W 600m / 2000ft	
	Transmitting Cable	UTP CAT5e	
	Interference Rejection	>60dB	
Connection Properties	Video Connector	BNC male cable & DC female, Resistance 75 Ohms	
	UTP Video and Power Transmission	RJ45 Jack with Indicator light	
Protections	Power Connector	12V DC Jack	
	Surge/Lightning Video Output Protection	2KV (common mode), 10/700µs ; IEC6100-4 2/1955 (GB/T 1726, 5-1999)	
	Surge/Lightning Video Input Protection	2KV (different mode), 2KV (common mode) ; IEC6100-4 2/1955 (GB/T 1726, 5-1999)	
	Surge/Lightning Video Input Protection for Over Current	100mA	
	Electrostatic Discharge Protection (ESD)	Contact Discharge: 6KV / Air Discharge: 8KV ; Standard: IEC61000-4-2	
Indicators	Wave / Interference Rejection & Noise Filter Protection	Built-in Filter: 0~6HMz with Extra Interference Rejection <60db	
	Power LED	Green	
Stability	Over Current Protection LED	Yellow	
	MTBF	>10,000 hours	
Physical Properties	Dimensions (L x W x H)	220mm x 36mm x 22mm / 8.66" x 1.41" x 0.86" (with Cable)	
	Power & BNC Lead Length	11.4cm / 4.5"	
	Weight	0.11 lbs / 50g	
Environment	Operating Temperature	-40°C ~ 150°C / -40°F ~ 302°F	
	Relative Humidity	0~95% (none Condensation)	

## Specification for Power Side:

Model Number	A-14 / A-15 / A-16	VBU05DC-1UPA	VBU09DC-1UPA	VBU16DC-1UPA
Power	Input Voltage	100V-240V AC (50Hz/60Hz)		
	Supported Power Consumption	50W Max.	90W Max.	125W Max.
	Current Conversion Efficiency	>75%		
	Output Voltage	24V DC, 2 Amps	24V DC, 3.6 Amp	24V DC, 5 Amps
	Output Current	0~200m / 0~600ft @ 500mA ; 200~300m / 600~1000ft @ 300mA		
	Number of supplied Channel	5	9	16
Video Properties	Supporting Video Signals	All Baseband Signals including PAL, NTSC, SECAM		
	Balance Band	0~6MHz(-3dB)		
	Maximum Transmission Distance	Color 300m / 1000ft		
	Transmitting Cable	UTP CAT5e		
	Interference Rejection	>60dB		
Connection Properties	Number of Receiving Channel	5	9	16
	Video Connector	5 Female BNC Resistance 75 Ohms	9 Female BNC Resistance 75 Ohms	16 Female BNC Resistance 75 Ohms
	Power Connector	1 x AC input plug (black)		
Surge Protections	UTP Video and Power Transmission	5 RJ45 Jack with Indicator light (white)	9 RJ45 Jack with Indicator light (white)	16 RJ45 Jack with Indicator light (white)
	Lightning Protection	2KV IEC6100-4-5 1955 (GB/T 17626.5)		
	Static Electricity Protection	1a Contact Discharge Level 3 ; 1b Air Discharge Level 3 IEC6100-4-2 1955 (GB/T 17626.5)		
Indicators	Main Fuse	250V, 4 A		
	Power LED	Green		
	Over Current Protection LED	Yellow		
Stability	Main Switch On/Off LED	Red		
	MTBF	>10,000 hours		
Physical Properties	Dimensions (L x W x H)	230mm x 150mm x 44.5mm 9.05" x 5.90" x 1.75"	296mm x 160mm x 44.5mm 11.65" x 6.3" x 1.75"	430mm x 175mm x 44.5mm 16.92" x 6.89" x 1.75"
	Weight	3.8 lbs / 1723 g	4.4 lbs / 1995 g	6.4 lbs / 2902 g
Environment	Operating Temperature	0°C ~ 55°C / 32°F ~ 131°F		
	Relative Humidity	0~95% (none Condensation)		
	Storage Temperature	-20°C~80°C / -4F ~ 176°F		
Accessories	AC Power Cable	1		
	Rack-Mount Bracket	2		
	Spare Fuse	1		

NOTE: The current supplied to the camera depends on the lengths & quality of the cable.

## Rackmount Included for Passive Balun & Power Servers:

5-CH



9-CH

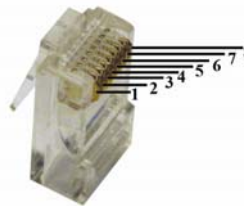
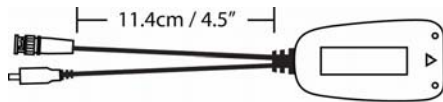


16-CH



Although the power assurance device transmits 24V DC, the Passive Balun with Power Stabilizer steps down the voltage at 12V DC when supplying power to the camera.

VBP2412DC



Wrongfully mixing the colors may result in burning the camera.

Pin	T568B Pair	T568B	Character
1	2	White/Orange Stripe	Video +
2	2	Orange Solid	Video -
3	3	White/Green Stripe	Power -
4	1	Blue Solid	Power -
5	1	White/Blue Stripe	Power -
6	3	Green Solid	Power +
7	4	White/Brown Stripe	Power +
8	4	Brown Solid	Power +

R&D Designed in Taiwan  
 Components are Made in USA: DCDC Power IC (National Semiconductor)  
 Assembled in China



### Caution :

- Do not handle the unit with wet hands.
- The unit is not waterproof and should not be used outdoors.