

Video, Audio, Power and Data Transceiver Device – Camera Side

Model: VBDP-C

4-CH / 8-CH / 16-CH Video, Audio, Power, Data Transceiver Hub

Model: 4 Channel

VBDP24AC-4-120 120V AC

8 Channel

VBDP24AC-8-120 120V AC

16 Channel

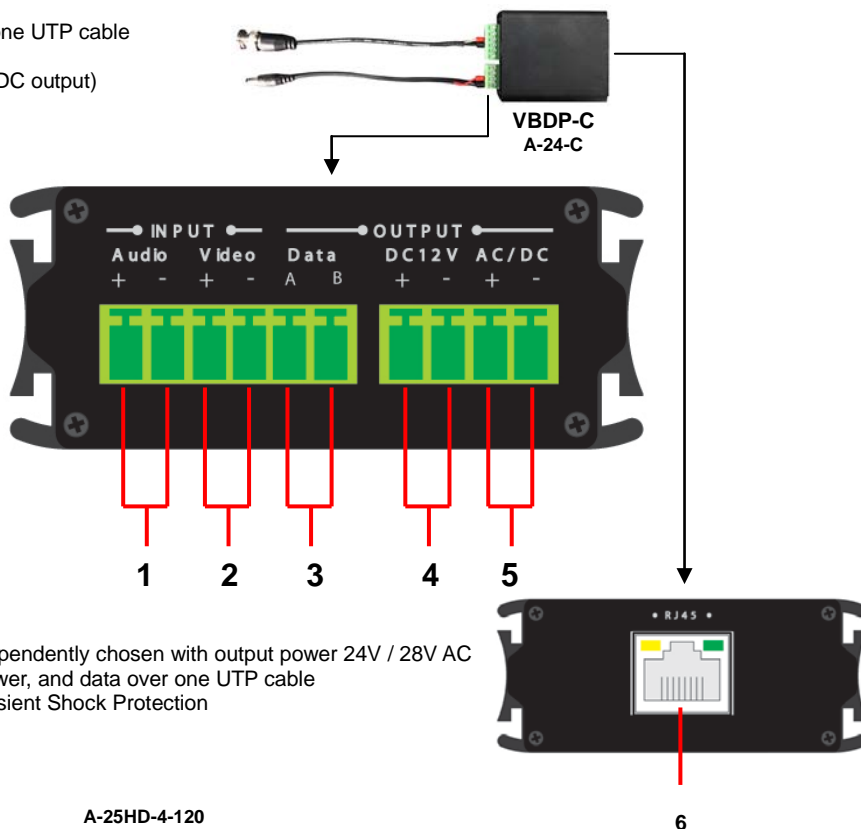
VBDP24AC-16-120 120V AC

The 4 / 8 / 16 channel transceiver hubs allow transmission of CCTV video, audio, AC power, and data over single network cable at the same time. These devices use single CAT5 / 5e / 6 UTP cable as transmission medium and work together with the camera side transceiver device, **VBDP-C**. The transceiver hub devices are capable of transmitting 4x / 8x / 16x channels of PAL, NTSC, SECAM color or monochrome video signals, mono monitor audio, RS-485 or RS-232 signals up to 300m / 1000ft, and provide 12V DC or 24V AC power to each camera.

Transceiver Features – Camera Side:

- Receives video, audio, 24V AC/12V DC power, and data with one UTP cable
- Providing 24V AC or 12V DC for camera
- Up to 100m / 300ft (24V AC output); up to 300m / 1000ft (12V DC output)
- Strong Lighting Protection, ESD And anti-interference ability
- Delicate design, Support MIT frame, and easy installation
- RJ45 standard connection installation

	Part Name	Description
1	Audio Port	Audio Signal Input
2	Video Port	Video Signal Input
3	Data Port	RS-485 Signal Input (Left is A / Right is B)
4	DC Power Port	DC 12V Power Output (Left is + / Right is -)
5	AC Power Port	AV/DC Power Output (Left is + / Right is -)
6	RJ45 Port	Standard RJ45 Plug. Check "Plug Production" Green LED: Power; ON = normal; OFF = fail Orange LED: Overload Protection Indicator



Transceiver Hub Features – DVR Side:

- Using 150W / 300W / 600W AC Power, each Channel are independently chosen with output power 24V / 28V AC
- Transmit 4x / 8x / 16x channels video, audio, 24V / 28V AC power, and data over one UTP cable
- Anti-interference, Surge Protection, Anti-static Protection, Transient Shock Protection
- Hard Anti-rust Iron Shell

VBDP24AC-4-120



Front

A-25HD-4-120



Rear

VBDP24AC-8-120



Front

A-26HD-8-120



Rear

VBDP24AC-16-120



Front

A-27HD-16-120



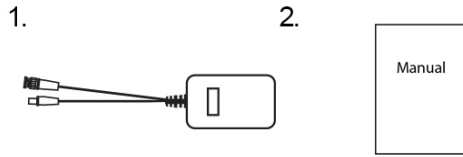
Rear

Package Contents:

Please check the device and accessories before installation. If any parts are missing, please contact your supplier.

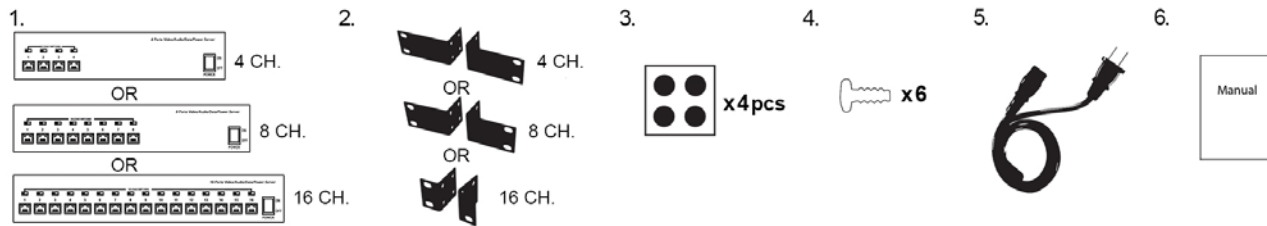
VBDP-C:

1. One (1) Video, Audio, Power and Data Transceiver – Camera Side
2. One (1) User Manual



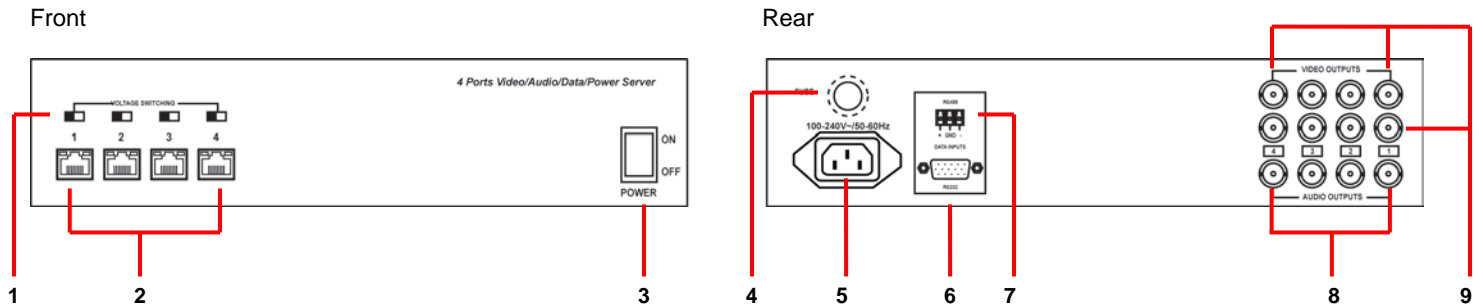
VBDP24AC-4-120 / VBDP24AC-8-120 / VBDP24AC-16-120:

1. One (1) VBDP24AC-4-120 or VBDP24AC-8-120 or VBDP24AC-16-120 Transceiver Hub
2. Two (2) Mounting Brackets for VBDP24AC-4-120 or VBDP24AC-8-120 or VBDP24AC-16-120
3. Four (4) Rubber Feet
4. Eight (8) Mounting Screws
5. One (1) Power Cord
6. One (1) User Manual



Transceiver Hub Panel Diagram:

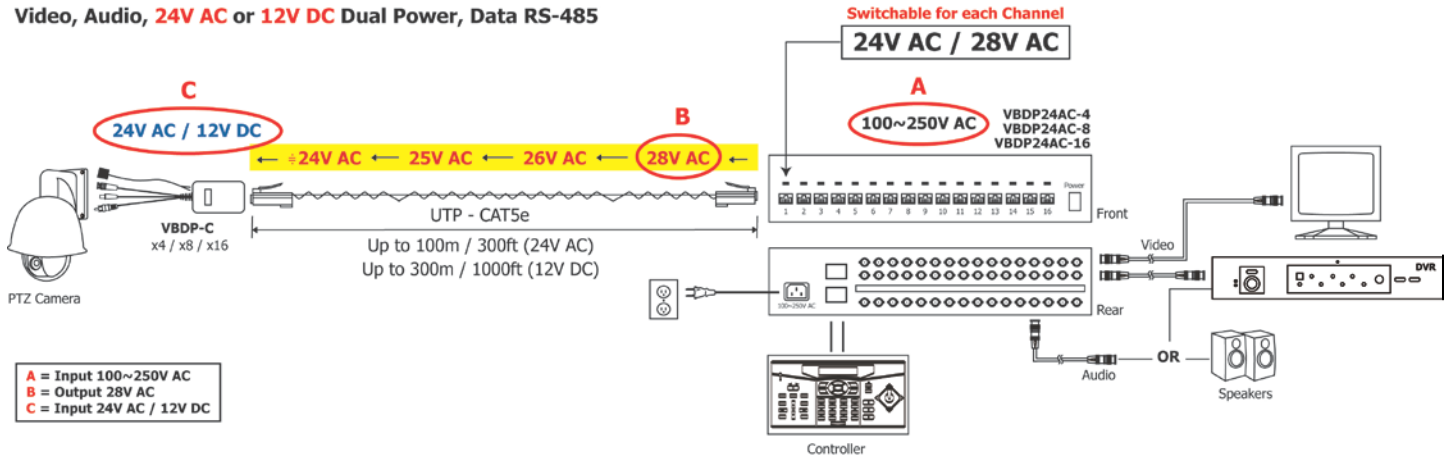
Note: Image shown is for 4-CH Transceiver Hub



	Part Name	Description
1	DIP Switch	Used to switch output power (Left is 24V AC / Right is 28V AC)
2	RJ45 Plug	Standard RJ45 Plug. Refer To "How to Make RJ45" Green LED: Power Indicator Orange LED: Over Current Protection Indicator
3	Power Switch	To turn power ON / OFF
4	Fuse Wire	220V, 3A – Replaceable Fuse Wire
5	Power Port	220V AC Power Input (110V AC need to be customized)
6	RS-232 Connector	RS-232 Control Signal Input
7	RS-485 Connector	RS-485 Control Signal Input
8	Audio Connectors	Audio Signal Output (x4 / x8 / x16 depending on model)
9	Video Connectors	Dual Video Signal Output (x4 / x8 / x16 depending on model)

Application Diagram:

Video, Audio, **24V AC** or **12V DC** Dual Power, Data RS-485



Installation:

Before installing, make sure all power is turned off. Installing these devices with electricity still on may damage it.

1. Connect the Camera Side Transceiver Device to the corresponding ports on the camera (BNC video, audio, power and data ports)
2. Connect a UTP cable to the RJ45 port of the Camera Side Transceiver Device.
3. Connect the other side of the UTP cable to the RJ45 port on the 4 / 8 / 16 Channel Transceiver Hub.
4. Use coaxial cable with BNC to connect one end from input terminal to BNC port of the receiving product output terminal.
5. Connect audio BNC port of Transceiver Hub to Audio Device (such as speakers) or to DVR.
6. Connect RS-232 or RS-485 port of Transceiver Hub to Keyboard or DVR devices to control cameras remotely.
7. Check whether installation is correct and all connections are securely connected.
8. Turn on power switch and check to see if all devices are functioning correctly as well as the image quality.

Specification for Transceiver Device – Camera Side:

*Specifications are subject to change without notice

Model		VBDP-C
Function	Transmission Channel	1 (Video, Audio, 24V AC / 12V DC Power, and Data)
	Distance	Up to 100m / 300ft (24V AC output) ; up to 300m / 1000ft (12V DC output)
Power	Power Output to Camera	24V AC or 12V DC
	Total Power	28V AC, 1A / 36V DC, 1A
	Stable Power's Max	12V DC, 1A
	Stable Power's Ripple Wave	<100 mV
Video Transmission and Property	Connector	Screw Fix Port
	Compatible System	PAL / NTSC / SECAM video with RJ45 Port
	Signal Transmission Width	0 ~ 6 MHz
	Anti-interference	>60 dB
	Video Balun Port	RJ45 Port
Audio Transmission and Property	Connection	Screw Fix Port
	Bandwidth	20 ~ 20 kHz
	Isolated Compression	>500V
Control Signal Transmission and Property	Port	Screw Fix Port
	Signal Category	RS-485
	Transmission Rate	<500 Kbps
Protection	ESD	1a Contact Discharge level 3 1b Air Discharge level 3 Per: IEC61000-4-2
Environment	Working Temperature	0°C ~ 50°C / 32°F ~ 122°F
	Storage Temperature	-20°C ~ 70°C / -4°F ~ 158°F
	Humidity (non-condensation)	0 ~ 90%
Physical Properties	Size	81.5mm x 60mm x 25mm / 3.21" x 2.36" x 0.98"
	Shell	Aluminum
	Color	Black
	Weight	145g / 5.11 oz
Stability	MTBF	>20000hrs

Specifications for Transceiver Hub – DVR Side:

*Specifications are subject to change without notice

Model		VBDP24AC-4-120	VBDP24AC-8-120	VBDP24AC-16-120
Function	Channels QTY	4 Channel	8 Channel	16 Channel
	Distance	Up to 100m / 300ft (24V AC output) ; Up to 300m / 1000ft (12V DC output)		
Power	Power Input	120V AC	120V AC	120V AC
	Max Power Consumption	150W	300W	600W
	Output Power Type	24V / 28V AC		
	Max Transmission Consumption	28V AC / 1A		
Video Transmission and Property	Connector	Female BNC Port (Dual Output)		
	Compatible System	PAL, NTSC, SECAM		
	Signal Transmission Width	6 MHz		
	Anti-interference	>60 dB		
	Video Balun Port	RF45		
Audio Transmission and Property	Connection	Female BNC Port		
	Bandwidth	20 ~ 20 kHz		
	Isolation Compression	>500V		
Data Signal Transmission and Property	Port	DB9 / Screw Fix Port		
	Signal Type	RS-232 / RS-485		
	Transmission Rate	<500 Kbps		
Electromagnetic Environment Compatibility	Connector Protection	2KV Per: IEC61000-4-5		
	ESD	1a Contact Discharge level 3 1b Air Discharge level 3 Per: IEC61000-4-2		
Operation Environment	Operation Temperature	0°C ~ 50°C / 32°F ~ 122°F		
	Storage Temperature	-20°C ~ 70°C / -4°F ~ 158°F		
	Humidity	0 ~ 95% (non-condensation)		
Physical Properties	Dimension (L*W*H)	300mm x 300mm x 66.8mm / 11.81" x 11.81" x 2.63"	430mm x 300mm x 66.8mm / 16.93" x 11.81" x 2.63"	
	Shell	Iron		
	Color	Black		
	Weight	5.2 KG / 11.46 lbs	6.1 KG / 13.45 lbs	9.37 KG / 20.66 lbs
MTBF	MTBF	>20,000 hours		

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

Troubleshoot:

Products are fully tested. If there are any failures, the problem(s) may be related to the following:

1. Please check if the product was damaged when it arrived. Was there any debris blocking the RJ45 port? Was it damaged when the customer first received the product?
2. Please check if the BNC jumper and RJ45 connectors are good and reliable. Users should pay attention to details. Usually, some errors are very low-level, but we need to fully evaluate the situation then can find the reasons.

To determine the status of the products, methods are:

1. See if the power lights are on. If so, the power supply has no problem. If they are not on, then the connection may be unstable. Check whether any impurities in the RJ45 jack connector. If the LED lights are on, but the camera is not, please check if the connectors are reliable and the wiring heads are correct.
2. The reliability of the BNC connector may also affect the video transmission.

Please gather all failed products and send it to us as soon as possible so that we can test and identify the problem. Please also collect the details of the product's applications to see if other problems are also caused by product failure! In addition, our quality control department will also check this product immediately to see if there are other quality problems.

Troubleshooting For Transceiver Hub

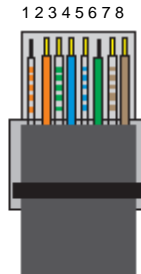
If the device trouble happened, please refer to the following solutions:

- Make sure whether device installation is according to installation manual.
- If choose RJ-45, make sure both ends of UTP cable are the same (both 568A or both 568B).
- Max transmission distance is depends on electric environment, do not exceed it.
- Please check whether connection where connected correctly to the device.
- Please contact your supplier if trouble still exists.

How to Make RJ45 Jacks:

Instruments to be used: wire crimper, network tester. Wire sequence of RJ45 plug should conform with EIA/TIA568A or 568B.

1. Shuck off about 2cm of the insulating layer, and bar the 4 pairs UTP cable
2. Depart the 4 pairs UTP cable and straighten them.
3. Line up the 8 pieces of cables per EIA/TIA 568A or 568B.
4. Brunt cut the cables to leave 1.5cm bare wire.
5. Plug 8 cables into RJ45 plug; make sure each cable is in each pin.
6. Then use wire crimper to crimp it.
7. Repeat above 5 steps on the other end.
8. Using network tester to detect the cable whether it works normally.



	TIA568A	T568	Character
1	White/Green Stripe	White/Orange Stripe	Video +
2	Green Solid	Orange Solid	Video -
3	White/Orange Stripe	White/Green Stripe	Data +
4	Blue Solid	Blue Solid	Power -
5	White/Blue Stripe	White/Blue Stripe	Power -
6	Orange Solid	Green Solid	Data -
7	White/Brown Stripe	White/Brown Stripe	Power + & Audio +
8	Brown Solid	Brown Solid	Power + & Audio -

Limited Warranty:

LIMITED ONE (1) YEAR WARRANTY AND EXCLUSIONS

Manufacturer warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Manufacturer is free of defects in materials and workmanship under normal and proper use for one (1) year from the purchase date. Manufacturer's only obligation is to correct such defects by repair or replacement, at its option, if within such one (1) year period the product is returned prepaid, with proof of purchase date, and a description of the problem. This warrant excludes and there is disclaimed liability for labor for removal of this product or reinstallation. **This warranty is voided if this product is installed improperly or in an improper environment, overloaded, misused, opened, abused, or altered in any manner, or is not used under normal operating conditions or not in accordance with any labels or instructions. There are no other implied warranties of any kind, including merchantability and fitness or a particular purpose,** but if any implied warranty is required by the applicable jurisdiction, the duration of any such implied warrant, including merchantability and fitness of or a particular purpose, is limited to one (1) year. **Manufacturer is not liable for incidental, indirect, special, or consequential damages, including without limitation, damage to, or loss of use of, any equipment, loss sales or profits or delay or failure to perform this warranty obligation.** The remedies, provided therein are the exclusive remedies under this warranty, whether based on contract, tort or otherwise.



Caution :

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

CAUTION!!!

Failure to read this notice may result in damaging the camera or device in which the warranty will be voided due to installation error.

When using any type of RJ45 jack powered balun, a **Cable Tester** must be used to ensure proper connection. Many individuals can make RJ45 connections easily, however mistakes can be made. When making connections for powered baluns, make sure to test the connectivity and ensure proper alignment on both sides.

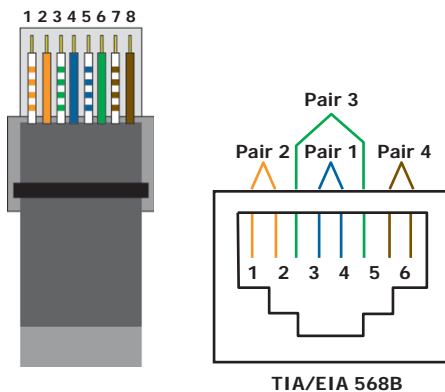


Cable Tester

When using passive or active baluns, the alignment of the cable is imperative to the success of the operation. Use a Cable Tester because it is a very simple, yet easy to find tool that can save a huge headache. For example, if one of the video wires accidentally gets crimped into the power side, and the powered balun is then hooked up to the camera, both the camera and the balun have just burned out. This is an extremely costly mistake, not only in dollars but time as well. How long does it take to test the RJ45 using a Cable Tester? **Less than one minute.**

The new terms and conditions state: When an RMA is requested and the product has been burned by bad RJ45 connections, the product is NO LONGER covered under warranty.

Note: Whichever way the RJ45 is terminated on one end of the cable, IT MUST BE THE SAME ON THE OTHER SIDE for either TIA/EIA 568A or TIA/EIA 568B. Below is an example of TIA/EIA 568B.



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