



MULTI CHANNEL POWER VIDEO HUB



USER MANUAL

PowerCat 4 • PowerCat 8 • PowerCat 16



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## PowerCat Multi Channel Power Video Hub

- Provides camera power while receiving video transmission over one single 4-pair UTP Cat5e/6 cable per channel
- Colour Video + Power up to 300m for 12VDC camera
- BNC output per channel to DVR
- RJ45 input per channel from camera
- PAL video format compatible
- Real-time transmission
- Exceptional interference rejection
- Built-in TVS for surge protection & ground loop isolation
- Lightning protection design Grade: III
- Wave Filter and Anti-Static Design
- Black galvanized housing
- Rack, wall mountable or desk installation

## Overview

The PowerCat is a multi channel video and power hybrid receiver that consolidates all CCTV system cabling using standard EIA/TIA 568A/B structured building wiring. Designed for installation in an IDF/Telecom Closet, MDF/Equipment Room or simply desk mounted the PowerCat allows real time transmission of CCTV video and power signal via cost-effective Unshielded Twisted Paired (UTP) cable. The included balun transmitters convert the source power of 28VDC to regulated 12VDC to allow safe powering of a 12VDC camera at cable distances of up to 300m. Superior interference rejection of the PowerCat allows video and power signals to co-exist in the large majority of applications.

## Cable Termination

The recommended cable for use with the PowerCat is unshielded Twisted Paired (UTP) wiring 24AWG or better. Individually shielded pairs should be avoided, as they reduce the operating range of the PowerCat drastically. Multi-pair cable (25-pair or more) with an overall shield is 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.

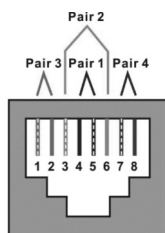
**IMPORTANT** - Check the format of your cable before starting termination and ensure matching termination at both ends of the cable. Cables should be terminated as follows using either T568A or T568B cable formats.

## Termination

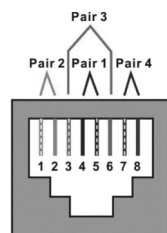
1 2 3 4 5 6 7 8



- ① Video +
- ② Video -
- ③ ④ ⑤ Power +
- ⑥ ⑦ ⑧ Power -



T568A

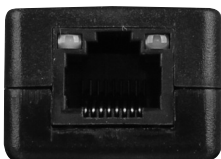


T568B

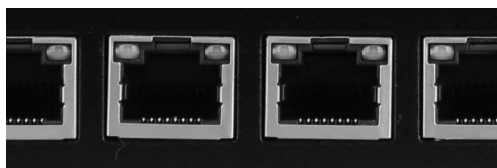
	Video+	Video-	Power-			Power+		
	1	2	3	4	5	6	7	8
<b>T568A:</b>	White Green	Green	White Orange	Blue	White Blue	Orange	White Brown	Brown
<b>T568B:</b>	White Orange	Orange	White Green	Blue	White Blue	Green	White Brown	Brown



## LED Indications



TRANSMITTER END



RECEIVER END

Yellow LED ON: Overcurrent

Green LED ON: Power ON

## Maximum Performance Chart

The maximum performance of each channel of the PowerCat is determined by a combination of cable distance and power requirements of the camera. The maximum current drain allowable at the maximum cable run of 300m is 600ma.

Colour Camera with Cat5e / Cat6 24AWG cable	
Maximum cable run	Maximum Current drain at Camera
100M	1500mA
150m	1100mA
200m	850mA
250m	700mA
300m	600ma

## Technical Specification

<b>VIDEO</b>	Video Format	PAL
	Operating Frequency	DC to 6MHz (-3db)
	Max Distance	UTP Category 5e (24AWG) Color: 300m
	Common-mode/ Differential-mode rejection	15KHz to 5MHz 60 dB typ
	Impedance	UTP, RJ45 100 ohms
	Attenuation	0.5 dB typ
<b>WIRE TYPE</b>	Network Wiring	One four-pair UTP Cat5e / Cat6 per channel
	Category Type	UTP Cat5e / Cat6
	Impedance	100 ± 20 ohms
	DC Loop Resistance	52 ohms per 1,000ft (18 ohms per 100m)
<b>POWER</b>	Power Input	220VAC, 50Hz
	Power Transmission	28VDC up to 300m via UTP Cat5e/6 (Regulated to 12vdc via balun)
	Power Consumption PowerCat 16	300W
	Power Consumption PowerCat 8	150W
	Power Consumption PowerCat 4	100W
<b>CONNECTOR</b>	Output Power Per Channel	Max 18.5W
	Video Input	RJ45 Jack
	Video Output	Female BNC connector
<b>PROTECTION</b>	Surge Protection	Built-in Transient Voltage Suppressor(TVS)
	Antistatic	YES
<b>MECHANICAL</b>	Dimensions PowerCat 16	430 x 237 x 66.5mm (excl. mounting bracket)
	Dimensions PowerCat 8	290 x 212 x 44.5mm (excl. mounting bracket)
	Dimensions PowerCat 4	290 x 212 x 44.5mm (excl. mounting bracket)
	Housing	Black galvanized
	Body Color	Black
	Net Weight PowerCat 16	3890g
<b>ENVIRONMENTAL</b>	Net Weight PowerCat 8	2280g
	Net Weight PowerCat 4	1360g
	Operating Temperature	-25° ~ 75° C
	Relative Humidity	0~95% (non-condensing)
	Storage Temperature	-40° ~ 150° C

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