

4 PORT ETHERNET & POE OVER COAX  
**HIGHWIRE™**  
 POWERSTAR  
 QUAD



## Connect up to four IP cameras with HIGHWIRE Powerstar Quad over an existing coax cable

HIGHWIRE Powerstar Quad uses existing coax cabling as a reliable Ethernet network connection and is very easy to use and fast to install.

- | Re-uses existing coax cable for up to 4 IP cameras or devices
- | Integrated 4-port POE switch (POE Plus with local power option)
- | Eliminates separate power cabling with POE-over-Coax™
- | Compatible with all HIGHWIRE Powerstar Base units (1, 4 & 8ch)
- | Instantly check connection and power level with SafeView™
- | Completely automatic connection, no configuration required
- | 100BaseTX performance over 300m of RG59 (500m on RG11)

# HIGHWIRE Powerstar Quad incorporates a four-port POE switch for IP cameras

HIGHWIRE makes the most of your legacy cabling and multiplies its capability by connecting up to four IP cameras or other network devices

## Ethernet Over Coax

HIGHWIRE Powerstar Quad's unique ultra low-power design and efficient power delivery enables long range Ethernet over coax. It works even over the lowest grade cable, such as the high-resistance, copper-clad steel (CCS) types found in many legacy installations. This means that legacy coax upgrades can be planned with confidence, while a quick check of the SafeView™ power level display reaffirms that the device connections will continue to be reliable, whatever the cable used.

For predictable network operation with no restrictions, HIGHWIRE technology delivers a full 200Mbit/s of bandwidth

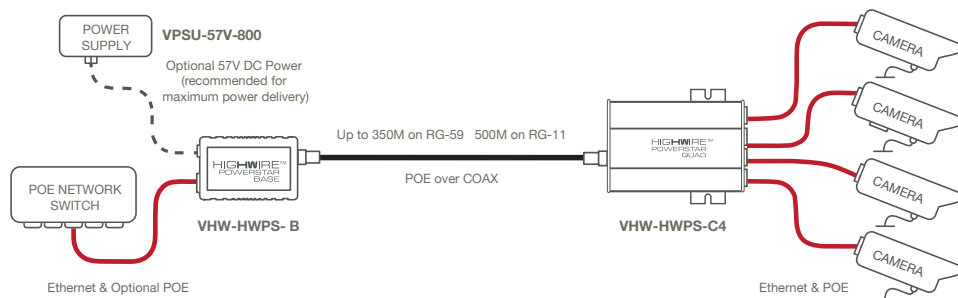
at 300m (1000 ft) of RG-59 or 500m (1600 ft) of RG-11 coax. For full information on POE-over-Coax™ distances achievable, please refer to the Range Table in the HIGHWIRE Powerstar datasheet or on the Veracity website. For POE power budget and power supply options, see the POE Power Budget Table opposite.

## HIGHWIRE Powerstar QUAD

The QUAD variant of HIGHWIRE is designed for the camera end of the coax and, with an integrated four-port POE switch, enables connection of up to four IP cameras over a single coax. With no need to configure IP addresses, set DIP switches, or make awkward

measurements and calculations, installing HIGHWIRE Powerstar QUAD is simple. The Base end of the coax is driven by single-channel, 4-channel or 8-channel HIGHWIRE Powerstar Base unit. The QUAD unit can be powered either by POE over coax, delivering a maximum total POE power budget of 25 watts, or by one of the optional local PSUs, delivering 40 or 78 watts. HIGHWIRE Powerstar Quad features Veracity's unique SafeView™ display, to provide IP camera installers with an instant and very easy-to-understand confirmation of correct operation from either end of the cable.

## POE OVER COAX Application Diagram



The diagram shows POE power delivery over coax from the Base end. The Powerstar Base unit may be powered by a POE or POE Plus switch, or for maximum power delivery

over coax, by Veracity's 57V DC PSU. See POE Power Budget Table for POE power outputs.

# HIGHWIRE Powerstar Quad allows one analogue camera to be replaced with four IP cameras

## POE over Coax or Local Power

In the simplest implementation (shown below left) the BASE unit receives power from a standard POE switch or Veracity's 57V DC PSU and transmits POE over the coax. The QUAD unit receives this power and delivers up to 25 watts shared between up to four IP cameras. No external power cabling is required, and all detection and setup occurs automatically. For higher POE power budgets, an optional Veracity 57V DC PSU may be used to power the QUAD locally at the camera end (shown below right) delivering 40 watts or 78 watts depending on PSU model. See POE budget table for details.

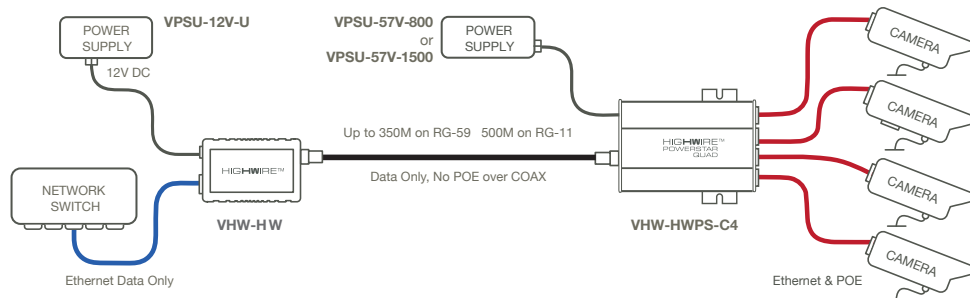
## POE POWER BUDGET TABLE

POE AVAILABLE FROM HIGHWIRE POWERSTAR QUAD		
PSU LOCATION	POWER SUPPLY	POE POWER BUDGET (To IP Cameras)
Base End	POE Switch	10W
Base End	POE Plus Switch	20W
Base End	VPSU-57V-800	25W
Camera End	VPSU-57V-800	40W
Camera End	VPSU-57V-1500	78W

The table shows the total POE power budget available from the four ports on the HIGHWIRE Powerstar Quad. *Note that the maximum power available from any one port is 25W.*

## POWER SUPPLY TO QUAD

### Application Diagram



The diagram shows power injection at the Camera end, using a PSU for HIGHWIRE Powerstar Quad, with no power delivery over coax. This option allows the maximum POE power output.

## TECHNICAL SPECIFICATION

**HIGHWIRE™**  
**POWERSTAR**  
**QUAD**

<b>POWER</b>		
Input connector	Detachable screw terminal	
Power input	POE OR 57V DC	
Power consumption	3W - 8W depending on POE load	
<b>POE STANDARDS</b>		
IEEE 802.3af and IEEE 802.3at compliant		
<b>POE POWER OUTPUT</b>		
Between 10W and 78W depending on power source (see table) managed across 4 ports. Max 25 watts per port (POE Plus)		
<b>HIGHWIRE INTERFACE</b>		
Connector type	BNC 75ohm	
Cable type	75ohm coax cable (RG59, RG6, RG11 or similar)	
Range	Up to 300m on RG59, 350m on RG6, 500m on RG11, all at full rate	
Bandwidth	200Mbps (total up + down)	
<b>ETHERNET INTERFACE</b>		
Connector type	RJ45 x 4, unmanaged 10/100 switch	
Rates	10BASE-T or 100BASE-TX and full duplex, auto configuring	
Cable type	Straight through or cross-over Cat 5, Cat 5e or Cat 6 patch	
<b>LED INDICATORS</b>		
RJ45 Yellow	Network link and activity	
RJ45 Green	POE status (on/off)	
Coax Status	Coax link, Base network link, coax power (POE)	
POE Power	Power budget (in steps of 5W)	
<b>PHYSICAL/ENVIRONMENTAL</b>		
Dimensions	L 132mm (inc. BNC) W 75mm H 22mm (W 94.6mm with wall mount lugs)	
Mounting	4mm mounting holes on 86.1mm centres	
Weight	179g [6.3oz] (183g with wall mount brackets) [6.4oz]	
Operating temperature	-10°C to 50°C [14°F to 122°F]	
Relative humidity	85% non-condensing	
Compliance	CE, FCC, RoHS	
<b>PRODUCT CODES</b>		
VHW-HWPS-C4	HIGHWIRE Powerstar Quad	Ethernet over coax camera unit with integrated 4-port POE switch
VHW-HWPS-C2	HIGHWIRE Powerstar Duo	Ethernet over coax camera unit with integrated 2-port POE switch
VHW-HWPS-B	HIGHWIRE Powerstar Base	Single-port Ethernet over coax base unit
VHW-HWPS-B4	HIGHWIRE Powerstar Base 4	Four-port Ethernet over coax base unit
VHW-HWPS-B8	HIGHWIRE Powerstar Base 8	Eight-port Ethernet over coax base unit
VPSU-57V-800	57V DC 800mA PSU	Optional 40 watt PSU for Quad /Duo
VPSU-57V-1500	57V DC 1500mA PSU	Optional 78 watt PSU for Quad /Duo
VHW-HW	HIGHWIRE	Ethernet over coax cable adaptor
VPSU-12V-U	12V DC Power Supply	PSU for standard HIGHWIRE VHW-HW



HIGHWIRE POWERSTAR DUO is also available with 2-port POE switch



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