4 PORT ETHERNET & POE OVER COAX

HIG**HW**IRE®
POWERSTAR
QUAD
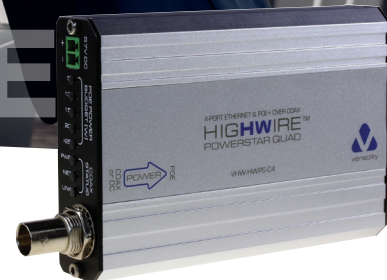
EASY TO USE

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

| 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 devices (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 uses existing coax cabling as a reliable Ethernet network connection and is very easy to use and fast to install.

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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 RG59 or 500m (1600 ft) of RG11 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 device. The QUAD device 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 100 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
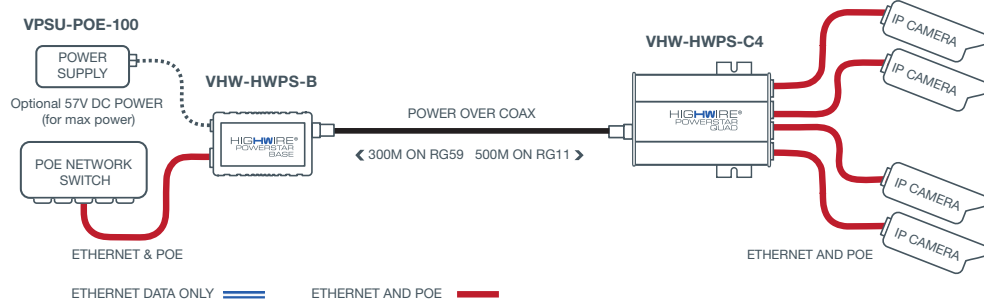
The diagram shows POE power delivery over coax from the Base end. The Powerstar Base device may be powered by a POE or POE Plus switch, or for maximum power delivery over coax, by Veracity's 57V DC PSU. See POE Power Budget Table for POE power outputs.

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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 device receives power from a standard POE switch or Veracity's 57V DC PSU and transmits POE over the coax. The QUAD device 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 100 watts depending on PSU model. *See POE output table for details.*
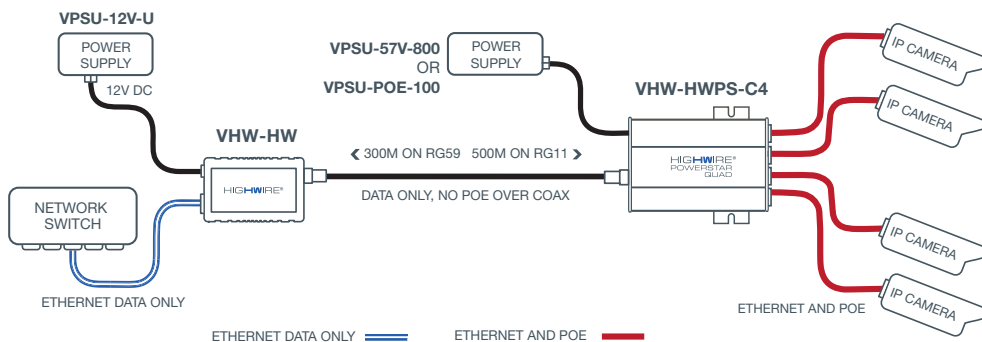
POE POWER OUTPUT TABLE

POE AVAILABLE FROM HIGHWIRE POWERSTAR QUAD		
PSU LOCATION	**POWER SUPPLY**	**POE POWER OUTPUT** (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-POE-100	100W

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

POWER

Input connector	Detachable screw terminal
Power input	POE OR 57V DC
Power consumption	3W - 8W depending on POE load

POE STANDARDS

IEEE 802.3af and IEEE 802.3at compliant

POE POWER OUTPUT

Between 10W and 100W depending on power source (see table) managed across 4 ports. Max 25 watts per port (POE Plus)

HIGHWIRE INTERFACE

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)

ETHERNET INTERFACE

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 Cat5, Cat5e or Cat6 patch

LED INDICATORS

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)

PHYSICAL/ENVIRONMENTAL

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	172g [6.3oz] (183g with wall mount brackets) [6.4oz]
Operating temperature	-10ºC to 50ºC [14ºF to 122ºF]
Relative humidity	85% non-condensing
Compliance	CE, FCC, RoHS, UKCA

PRODUCT CODES

VHW-HWPS-C4	HIGHWIRE Powerstar Quad	Ethernet over coax camera device with integrated 4-port POE switch
VHW-HWPS-C2	HIGHWIRE Powerstar Duo	Ethernet over coax camera device with integrated 2-port POE switch
VHW-HWPS-B	HIGHWIRE Powerstar Base	Single-port Ethernet over coax base device
VHW-HWPS-B4	HIGHWIRE Powerstar Base 4	Four-port Ethernet over coax base device
VHW-HWPS-B8	HIGHWIRE Powerstar Base 8	Eight-port Ethernet over coax base device
VPSU-57V-800	57V DC 800mA PSU	Optional 40 watt PSU for Quad /Duo
VPSU-POE-100	57V DC 100W PSU	Optional 100 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

Surge Protection
All Veracity products have been independently tested to verify their resilience to the stringent immunity levels of international standards. Users should note that no electronic equipment can be guaranteed to be completely protected at levels beyond the defined standard; therefore product warranty cannot include damage to products which has been caused by surges exceeding those of the standards specified, for example lightning strike activity.

It is the user's responsibility to implement relevant surge protection measures, as appropriate to the installation. This may include the fitting of additional surge protection devices where required.

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Veracity HQ
Prestwick International Aerospace Park
4 Dow Road
Prestwick
UK
KA9 2TU
Tel +44 (0) 1292 264967

www.veracityglobal.com
sales@veracityglobal.com

*See **www.veracityglobal.com** website for country and region specific contacts.*