

EXTERNAL ETHERNET & POE OVER COAX  
**HIGHWIRE®**  
POWERSTAR XT



Application | HIGHWIRE Powerstar XT provides HIGHWIRE performance in a robust external weatherproof housing

## Ethernet and POE over coax to IP cameras without the need to re-cable

HIGHWIRE Powerstar uses existing coax cable to connect and power IP cameras without cabling costs. Easy to use and fast to install. Full 100Base-TX Ethernet performance. Highest resilience IP rating.

- | External version of HIGHWIRE Powerstar Camera
- | Re-use existing coax cable for IP cameras
- | Eliminate power cabling with POE-over-Coax™
- | Reliably power POE Plus cameras (25 watts)
- | IP66/67/69K & Nema 4X/6 rated housing & cable glands
- | Smart POE power & diagnostic display for reliable installation
- | Includes easy to fit, wall or pole-mounting adaptor plate
- | Compatible with multiple types and diameters of conduit



## Robust weatherproof housing with integrated SAFEVIEW® diagnostics display

HIGHWIRE Powerstar XT provides a true plug-and-play solution for connecting and powering external IP cameras over legacy coax cabling. Our design ensures reliable power and data links even over low-quality coax.



The XT package includes three different compressible glands (black, green and red as above), for different network and coax cable diameters, to ensure a tight seal.

### Reliability Assured

HIGHWIRE Powerstar's unique ultra low power design and efficient power delivery enables long range extension 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 display reaffirms that the device connection continues to be reliable, whatever the cable used. Reliable power delivery is also ensured at the source, where the Base can be powered by POE

or external DC power. For predictable network operation with no restrictions, HIGHWIRE delivers a full 200Mbit/s of bandwidth at 300m (1000ft) of RG59 or 500m (1600ft) of RG11 coax.

### Simply Add Power

With no need to configure IP addresses, set DIP switches, or make awkward measurements and calculations, installing HIGHWIRE Powerstar is so straight forward, all you do is plug it in.

In the most simple implementation, the BASE device receives POE power from a standard POE switch or

injector and transmits it down the coax. The CAMERA device receives this power and forwards it on to the IP camera. No external power cabling is required, and all of the detection and setup occurs automatically.

For maximum power delivery, the HIGHWIRE Base device should be powered by a Veracity 57V DC PSU as shown in the diagram opposite.

### External HIGHWIRE

Any HIGHWIRE Powerstar Base device may be used with HIGHWIRE Powerstar XT, including Base 4 or 8.

### POE-OVER-COAX RANGE TABLE

POWER SOURCE	POE OR POE PLUS SWITCH					VERACITY POWER SUPPLY				
Camera Power (watts)	5	10	15	20	25	5	10	15	20	25
<b>RG59 (22AWG core)</b> <i>Copper Core</i>	300m 1000ft	300m 1000ft	265m 880ft	195m 650ft	N/A N/A	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft
<b>RG59 (20AWG core)</b> <i>Copper Core</i>	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	N/A N/A	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft
<b>RG11 (14AWG core)</b> <i>Copper Core</i>	500m 1600ft	500m 1600ft	500m 1600ft	500m 1600ft	N/A N/A	500m 1600ft	500m 1600ft	500m 1600ft	500m 1600ft	500m 1600ft
<b>RG59 (22AWG CCS)</b> <i>Copper Coated Steel</i>	225m 750ft	125m 420ft	100m 330ft	60m 200ft	N/A N/A	270m 900ft	265m 880ft	185m 620ft	140m 460ft	110m 360ft

RG6 coax cable range can be calculated as halfway between the RG59 (20AWG core) and RG11 (14AWG core) range figures.





## HIGHWIRE Powerstar XT, External Housing Features



Hidden till lit 7 Segment LED Indicator  
Shows Power Level and Status



Rear Mounting Plate  
(removable for easy installation)



Cable Glands with Conduit Adaptors  
for Liquid Tight, Spiral & Plastic  
Corrugated Conduit



Front View Installed  
Orientation

The Base device provides POE power over the coax cable to the CXT device. The CXT is in a robust, sealed, external weatherproof housing (rated to IP66, IP67, IP69K and NEMA 4X & 6) and provides power and data connection to the IP camera (or other IP device) at the far end of the coax cable.

As usual with HIGHWIRE, all detection and connection is fully automatic with zero configuration.

### POE-over-Coax™ Range

HIGHWIRE Powerstar delivers reliable power over long range, even over low

grade cable. The SAFEVIEW display confirms it automatically on installation (see P codes and E codes under LED Indicators in the Tech Specs on the following page). In most cases the full 25 watts for POE Plus is available. The table (opposite page, bottom) shows the POE level versus range for four cable types and two power sources.

### Installer friendly

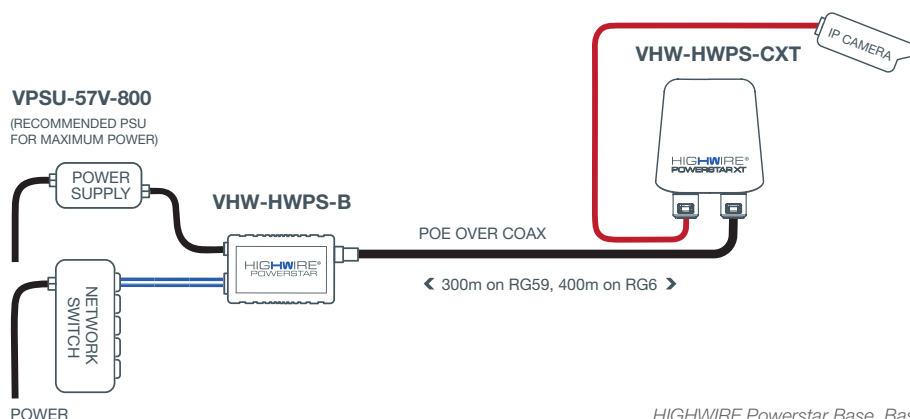
The HIGHWIRE Powerstar XT housing greatly simplifies external installation, negating the need for a separate external housing for the HIGHWIRE

camera-end device. The mounting plate is cleverly designed for easy pole or wall-mounting, with the XT housing simply clipping onto the mounting bracket. BNC connectors do not need to be removed to fit the cable ends through the watertight cable gland system (see the Quickstart Guide on the Veracity website for details).

### Multichannel Options

Multichannel HIGHWIRE Powerstar Base devices are available in 4 and 8 channel models, with full POE Plus output per port.

## EXTERIOR ETHERNET AND POWER OVER COAX APPLICATION DIAGRAM



HIGHWIRE Powerstar Base, Base 4 or Base 8 may be used with HIGHWIRE Powerstar XT to deliver Ethernet and POE over legacy coax, for maximum reliability with minimal wiring. XT, external device gives you maximum flexibility.

[www.veracityglobal.com](http://www.veracityglobal.com)

## TECHNICAL SPECIFICATION

HIGHWIRE®  
POWERSTAR XT**POWER**

Device Power	1.5 watts
POE In	From HIGHWIRE Powerstar Base device over coax
POE Out	IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)

**HIGHWIRE INTERFACE**

Connector Type	BNC 75 Ohm
Cable Type	Any 75 Ohm coaxial (other impedances supported)
Range	Up to 300m [1100 feet] on RG59; or 400 metres [1300 feet] on RG6; 500m [1600 feet] on RG11
Bandwidth	200 Mbps (total up + down)

**ETHERNET INTERFACE**

Connector Type	RJ45
Cable Type	Cat5e or Cat6 network cable; patch or cross-over auto-detected
Rate	100Base-TX full-duplex with auto-negotiation

**LEDS**

Status Indicators	HIGHWIRE Link      Green: Coax link status; Yellow: link activity Ethernet Link      Green: POE to device status; Yellow: link activity POE Power Level    P1 to P5 display code (indicating steps of 5W to 25W)
LED Colours	Green indicates power available Yellow indicates output close to power limit Red indicates power limit exceeded

**PHYSICAL/ENVIRONMENTAL**

Dimensions	W 113mm, H 144mm (inc. glands), D 69mm (inc. bracket) [W 4.45in, H 5.67in (inc. glands), D 2.72in (inc. bracket)]
Weight	347g [12.24oz] (inc. bracket)
Operating Temperature	-10°C to 60°C [14°F to 140°F]
Relative Humidity	85% non-condensing
Compliance	FCC, CE, RoHS, UKCA, IP66, 67, 69K, NEMA 4X, 6, BS EN 50121-4 (rail + metro)

**PRODUCT CODES**

VHW-HWPS-CXT	HIGHWIRE Powerstar XT, single ch camera end weatherproof Ethernet over coax device
VHW-HWPS-B	HIGHWIRE Powerstar Base, single-channel base end Ethernet over coax connection
VHW-HWPS-B4	HIGHWIRE Powerstar Base 4, four-channel base end Ethernet over coax connections
VHW-HWPS-B8	HIGHWIRE Powerstar Base 8, eight-channel base end Ethernet over coax connections

**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.

Veracity HQ  
Prestwick International Aerospace Park  
4 Dow Road  
Prestwick  
UK  
KA9 2TU

Tel +44 (0) 1292 264967  
[www.veracityglobal.com](http://www.veracityglobal.com)  
[sales@veracityglobal.com](mailto:sales@veracityglobal.com)

See [www.veracityglobal.com](http://www.veracityglobal.com) website for country and region specific contacts.