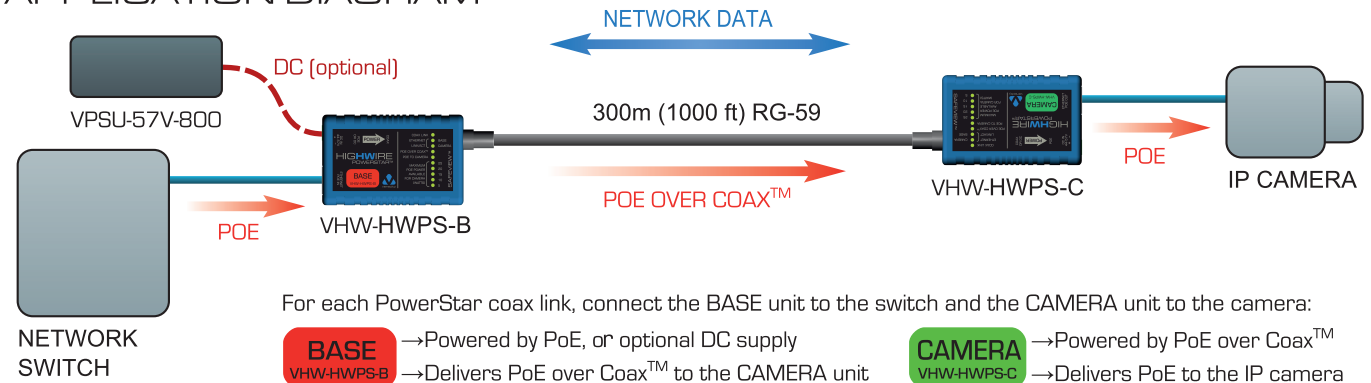


# HIGHWIRE POWERSTAR

## INSTALLATION MANUAL



### APPLICATION DIAGRAM



### CONNECTIONS

#### POWER INPUT (optional)

Connect to a Veracity 57 volt DC power supply if required, observing the correct +/- polarity  
Uses detachable screw terminal connector, supplied  
Other power inputs (PoE or PoE over Coax™) are automatically disabled if DC power is connected  
Other 44 to 57 volt DC class II isolated supplies of suitable wattage may be connected

#### MOUNTING

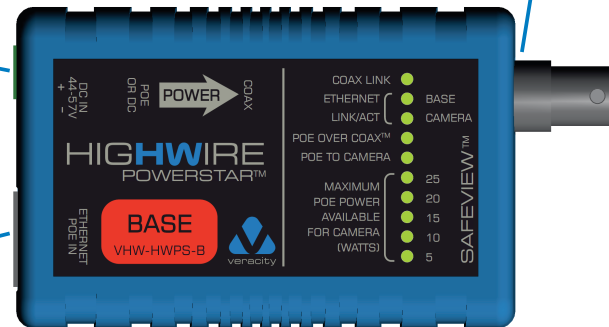
Optional wallmount bracket VHW-WMB or 8-way rackmount bracket VHW-1U allow secure mounting  
Grounding of the coax cable at the BNC is not required for operation

#### COAXIAL

Connect to the legacy coaxial video cable using a standard BNC connector  
PoE over Coax™ is enabled automatically between BASE and CAMERA units. Maximum range and power is listed on page 2  
Network communication over coax is also established automatically. The HIGHWIRE connection is unrestricted and transparent to all network traffic  
HIGHWIRE PowerStar is not compatible with legacy equipment such as analogue video amplifiers

#### NETWORK and POE

Connect to any 100BASE-T Ethernet compatible equipment, such as a network switch or IP camera  
Auto-crossover means either patch or crossover cables can be used, up to 100m (328ft) cat 5e / cat 6  
The BASE unit can receive Power over Ethernet (PoE) if available from a compatible switch or injector  
The CAMERA unit will only deliver PoE if connected to a compatible IP camera or other PoE-powered device  
Both units are compatible with standard PoE (IEEE 802.3af), and PoE Plus (802.3at), up to 25.5 watts



#### SAFEVIEW™

A brief check of the SafeView™ display lets you confirm the status of all connections, including those at the far end of the cable  
If any LED does not light green as expected, you can refer to the table on page 2

## SAFEVIEW™ LED DISPLAY

### ● NORMAL OPERATION

### ● WARNINGS

COAX LINK	Off = no power Blink = HIGHWIRE not detected on coax On = full-rate connection established
ETHERNET LINK/ACT	Off = no network connection On = Ethernet link established Blink = network activity on port
POE OVER COAX™	Off = HIGHWIRE PowerStar not detected On = PoE over Coax™ enabled
POE TO CAMERA	Off = PoE compliant device not detected On = PoE enabled to the IP camera
MAXIMUM POE POWER AVAILABLE FOR CAMERA (WATTS)	On = maximum PoE power that can reliably be delivered, from 5 to 25 watts Blink = less than 5 watts of PoE is available Available power is specific to the cable length, type, and power source used, and is calculated automatically on connection For example, to ensure reliable power delivery to a PoE IP camera whose maximum power requirement is 12 watts, check that the 15 watt LED is lit

Orange/Red = data rate <100% This may be seen when the coax connection is at the limit of power and range. Consider reducing the cable distance, or connect a 57 volt DC supply directly to the CAMERA unit
Red = 10BASE-T connection HIGHWIRE must be connected to 100BASE-T (full-duplex) compatible equipment for effective operation
Red (1 blink) = low voltage. Check power supply type/polarity Red (2 blinks) = short circuit. Check for cable faults and remove legacy video equipment Red (3 blinks) = power disconnected due to overload
Orange = low voltage, PoE device may not function Red (blink) = low voltage, PoE not available Red = PoE disconnected due to overload
Orange (flashing) = approaching power limit Red (flashing) = power limit reached If installing a PTZ camera, or any equipment whose power requirement can change, these LEDs can be checked while the equipment is drawing peak power, for example while the PTZ camera is moving For maximum PoE over Coax™ power, use Veracity's 57 volt DC power supply. If more power is required than the cable can carry, the 57 volt DC power supply may be connected at the CAMERA side. See application notes

## RANGE

For typical copper-core video coax, a full-rate network connection can be established over:

- RG-59 24AWG ➔ 300m (1000ft)
- RG-11 14AWG ➔ 500m (1600ft)

PoE power availability at full range depends on the power source connected to the BASE unit:

- PoE switch ➔ 12 watts
- PoE Plus switch ➔ 20 watts
- 57V power supply ➔ 25 watts

See the HIGHWIRE PowerStar datasheet for other cable types, distances and power levels

HIGHWIRE PowerStar's power delivery is exceptionally efficient over low-quality cable, but range can still be restricted by light-gauge or steel-core CATV cable types that are often found in legacy installations

To eliminate any risk, always check the SAFEVIEW™ power gauge on installation. This displays the power available for the camera, measured for the actual cable length, type and power source used

Veracity's 57 volt DC power supply is recommended for maximum range and PoE Plus applications:

Order code: VPSU-57V-800-xx (xx=UK/US/EU)

## FURTHER INFORMATION

To find out how to:

- ➔ extend range and power even further over coax
- ➔ deliver PoE and network connections to more cameras over one legacy video cable
- ➔ extend cat 5 connections to IP cameras
- ➔ get the most reliable IP video storage

Please view the latest product information and application notes on our website:

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

## DECLARATION OF CONFORMITY



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.



We, Veracity UK Ltd,  
of Prestwick International Aerospace Park  
4 Dow Road, Prestwick, KA9 2TU, UK  
declare under our sole responsibility that the products:  
VHW-HWPS-B, HIGHWIRE PowerStar Base  
VHW-HWPS-C, HIGHWIRE PowerStar Camera

are in conformity with the essential requirements and other relevant requirements of the EMC Directive (2004/108/EC)

The product is in conformity with the following standards:

- EN 55022:2006 including Amendment 1:2007 incorporating corrigendum No. 1
- EN 55024:1998 including Amendment 1:2001 and Amendment 2:2003

Responsible person: *Alastair McLeod* Alastair McLeod, Managing Director

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