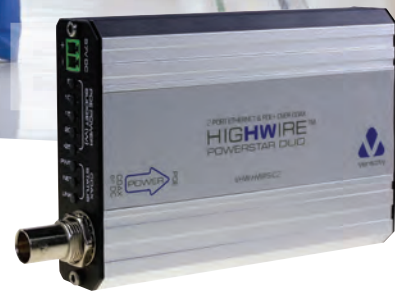


2 PORT ETHERNET & POE OVER COAX  
**HIGHWIRE™**  
 POWERSTAR  
 DUO



## Connect two IP cameras with HIGHWIRE Powerstar Duo over an existing coax cable

HIGHWIRE Powerstar Duo 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 2 IP cameras or devices
- | Integrated 2-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 Duo incorporates a two-port POE switch for IP cameras

HIGHWIRE Powerstar Duo makes the most of your legacy cabling and multiplies its capability by connecting two IP cameras or other network devices

## Ethernet Over Coax

HIGHWIRE Powerstar Duo'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

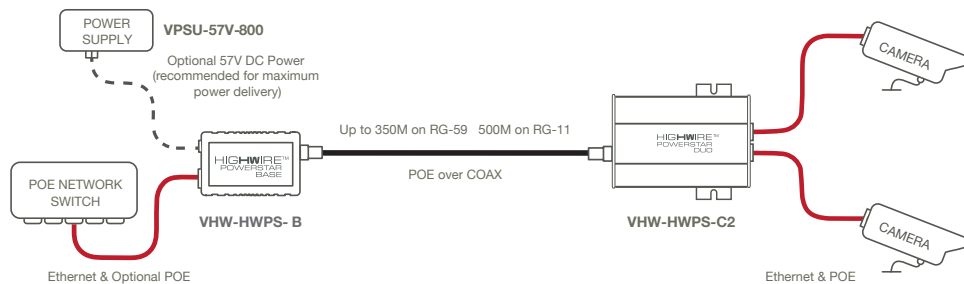
at 300m (1000 ft) of RG-59 or 500m (1600 ft) of RG-11 coax. For full information on POE-over-Coax™ distances achievable, please refer to the Range Table in the HIGHWIRE Powerstar datasheet or on the Veracity website. For POE power budget and power supply options, see the POE Power Budget Table opposite.

## HIGHWIRE Powerstar DUO

The DUO variant of HIGHWIRE is designed for the camera end of the coax and, with an integrated two-port POE switch, enables connection of two 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 Duo is simple. The Base end of the coax is driven by single-channel, 4-channel or 8-channel HIGHWIRE Powerstar Base unit. The DUO 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 Duo 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 Duo allows one analogue camera to be replaced with two 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 DUO unit receives this power and delivers up to 25 watts shared between two 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 DUO locally at the camera end (shown below right) delivering 40 watts or 78 watts depending on PSU model. See POE budget table for details.

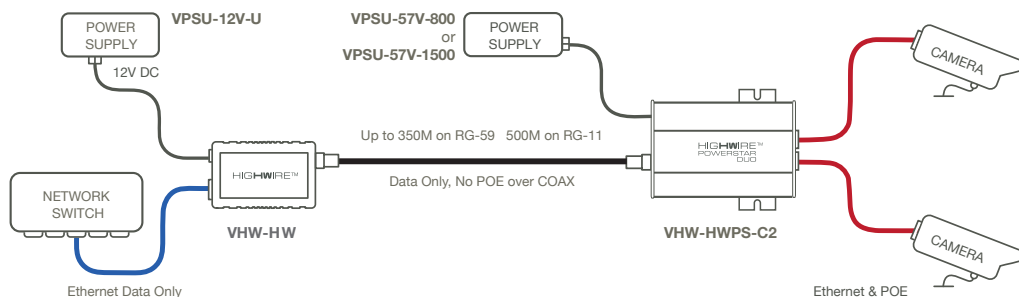
## POE POWER BUDGET TABLE

| POE AVAILABLE FROM HIGHWIRE POWERSTAR DUO |                 |                                  |
|---|-----------------|----------------------------------|
| 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 two ports on the HIGHWIRE Powerstar Duo. *Note that the maximum power available from any one port is 25W.*

## POWER SUPPLY TO DUO

### Application Diagram



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

## TECHNICAL SPECIFICATION

HIGHWIRE™  
POWERSTAR  
DUO

|   |  |  |
|---|--|--|
| <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)<br>managed across 2 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 2, 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-C2   | HIGHWIRE Powerstar Duo   | Ethernet over coax camera unit with integrated 2-port POE switch |
| VHW-HWPS-C4   | HIGHWIRE Powerstar Quad  | Ethernet over coax camera unit with integrated 4-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 QUAD is also available with 4-port POE switch



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