ETHERNET & POE OVER COAX

HIGHWIRE®
POWERSTAR
BACKBOX

HIGHWIRE Powerstar Backbox is used inside camera housings at security access points in galleries

Compact Ethernet and POE over coax fits easily inside IP camera housings

HIGHWIRE Powerstar uses existing coax cable to connect and power IP cameras without re-cabling costs. Designed for installation inside camera backboxes.

| Compact device for inside cameras housings

| Flexible leads for easy connection in small spaces

| Reliably powers POE Plus cameras up to 25watts

| SAFEVIEW™ instantly checks connection + power status

| Compatible with all HIGHWIRE Powerstar Base devices

| Simple fast, cost-effective installation

| Full 100Base-TX Ethernet performance

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A version of our highly successful HIGHWIRE Powerstar specifically designed for inside camera housings

A true plug-and-play solution for connecting and powering IP cameras over legacy coaxial cabling

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 devices' connection will continue to be reliable, whatever the cable used. Reliable power delivery is also ensured at the source, where either dependable screw terminal connections or a UPS-backed POE supply can be used. For predictable network operation with no restrictions, HIGHWIRE delivers a full 200Mbit/s of bandwidth at 300m (1000 ft) of RG-59 or 500m (1600 ft) of RG-11 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.

Designed For Camera Housings

HIGHWIRE Powerstar Backbox has connectors on flexible flying leads for easier mounting inside camera housings, allowing the connectors to be moved into convenient positions. Note that Backbox is powered by POE only (no external DC power option).

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
RG59 (22AWG core) *Copper Core*	300m 1000ft	300m 1000ft	265m 880ft	195m 650ft	N/A N/A	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft
RG59 (20AWG core) *Copper Core*	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	N/A N/A	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft	300m 1000ft
RG11 (14AWG core) *Copper Core*	500m 1600ft	500m 1600ft	500m 1600ft	500m 1600ft	N/A N/A	500m 1600ft	500m 1600ft	500m 1600ft	500m 1600ft	500m 1600ft
RG59 (22AWG CCS) *Copper Coated Steel*	225m 750ft	125m 420ft	100m 330ft	60m 200ft	N/A N/A	270m 900ft	265m 880ft	185m 620ft	140m 460ft	110m 360ft

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Once HIGHWIRE Powerstar is connected SAFEVIEW™ will automatically indicate available POE power level

HIGHWIRE Powerstar adds the convenience of POE-over-Coax™ technology and gives you the reassurance of SAFEVIEW™ monitoring which displays at either end, the POE power available for the camera or other remote device.

POE-over-Coax™ Range

HIGHWIRE Powerstar delivers reliable power at long range, even over low grade CCS cable, and SAFEVIEW™ confirms it automatically on installation. In most cases the full 25 watts required by the most powerful POE Plus IP cameras is available. The table below shows the range achievable by cable type, power source and camera wattage.

Installer friendly

HIGHWIRE Powerstar 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. For example, the network link/activity and POE status of the IP camera can be viewed from the BASE device, saving the time of accessing remote equipment.

Cable length and quality can be hard to predict or measure, especially in legacy upgrade scenarios, which is why SAFEVIEW™ includes a reassuring bar - graph display of the POE power available, and a warning if the camera's requirement approaches it.

True POE Plus detection means that all POE (IEEE 802.3af) and POE Plus (IEEE 802.3at) cameras are fully supported, and non-POE equipment can be safely connected as well.

Careful POE-over-coax™ detection and management is also employed, to prevent accidental damage to legacy equipment and allow operation with other HIGHWIRE models.

Multichannel Options

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

ETHERNET AND POWER OVER COAX CONNECTION DIAGRAM
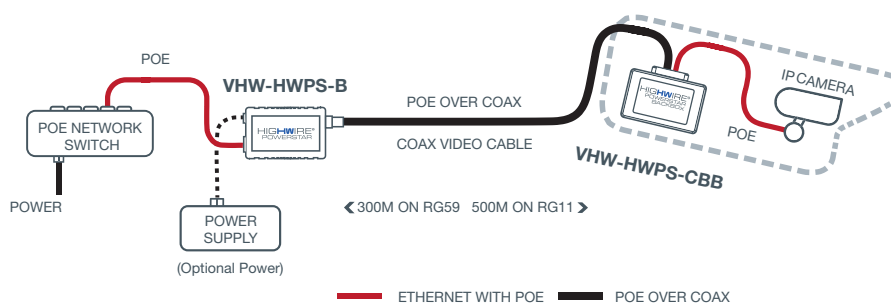
HIGHWIRE Powerstar Backbox delivers Ethernet and POE over legacy coax, for maximum reliability with minimal wiring.

TECHNICAL **SPECIFICATION**

**HIGHWIRE®
POWERSTAR
BACKBOX**

POWER

Device power	1.5 watts
POE In	POE over coax from Base device
POE Out	IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)
DC Power input	None

HIGHWIRE INTERFACE

Connector type	BNC 75 ohm
Cable type	Any 75 ohm coaxial (other impedances supported)
Range	Up to 300 metres [1100ft] on RG59 or 500 metres [1600 feet] on RG11 at full rate
Bandwidth	200 Mbps (total up + down)

ETHERNET INTERFACE

Connector type	RJ45
Cable type	Patch or crossover, auto-detected
Rate	100Base-TX full-duplex with auto-negotiation

LEDS

Status indicators	HIGHWIRE coax link
	Ethernet link/activity (BASE)
	Ethernet link/activity (CAMERA)
	POE-over-coax
	POE to camera
	Power available (5/10/15/20/25W)
Colours	Off - Disabled. Green - Enabled. Red - Fault.

PHYSICAL/ENVIRONMENTAL

Dimensions	L 84mm W 62mm H 23mm (Lead lengths: 150mm)
Weight	103g [3.7oz]
Operating temperature	-10ºC to 50ºC [14ºF to 122ºF] (delivering POE <15w)
	-10ºC to 40ºC [14ºF to 104ºF] (delivering POE Plus >15w)
Relative humidity	85% non-condensing
Compliance	FCC, CE, UL, RoHS, UKCA

PRODUCT CODES

VHW-HWPS-CBB	**HIGHWIRE Powerstar® Camera Backbox for installation at the camera side**
VHW-HWPS-B	HIGHWIRE Powerstar® Base device, for installation at the switch side
VHW-HWPS-C	HIGHWIRE Powerstar® Camera device, for installation at the camera side
VPSU-57V-800	Optional 57V DC 800mA power supply. Recommended for maximum range and POE-over-coax™, or as a convenient alternative to a POE switch or injector
VHW-WMB	Wall mounting bracket for a single HIGHWIRE or HIGHWIRE Powerstar device
VHW-DNB	DIN rail mounting bracket kit
VHW-HWPS-B8	HIGHWIRE Powerstar Base 8® - eight channel EOC base device (optional rackmount)

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
sales@veracityglobal.com

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