

HIGHWIRE POWERSTAR™

ETHERNET AND POE OVER COAX



Ethernet and POE over video coax to
IP cameras without having to re-cable

- Re-use existing coax cable for IP cameras
- Eliminate power cabling with POE over Coax™
- Reliably power POE Plus cameras (25watts)
- Instantly check connection and power status with SafeView™
- Fully automatic - no configuration required
- Simple fast, cost-effective installation





HIGHWIRE PowerStar™ adds the convenience of POE over Coax™ technology and gives the reassurance of SafeView™ monitoring to Veracity's industry-leading HIGHWIRE Ethernet over Coax product range.

Simply add power

With no need to configure IP addresses, set DIP switches, or make awkward measurements and calculations, installation of HIGHWIRE PowerStar™ is as straightforward as plugging it in.

In the most simple implementation, shown below, the BASE unit receives POE power from a standard POE switch or injector and transmits it down the coax. The CAMERA unit receives this power and forwards it on to the IP camera. No external power cabling is required, and all detection and setup occurs automatically.

If POE is not available, or for an extra power boost at either end of the cable, just connect the optional power supply.

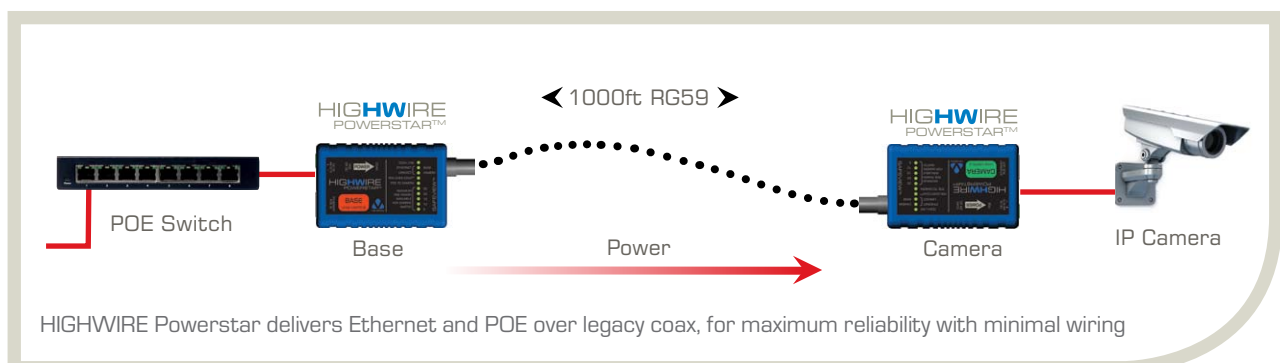
Installer friendly

HIGHWIRE PowerStar™ features Veracity's unique SafeView™ display, to provide IP camera installers with an instant and 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 unit, 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 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.



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 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.

And for predictable network operation with no restrictions, HIGHWIRE delivers a full 200Mbit/s of bandwidth at 300m

(1000 feet) of RG-59 or 500m (1600 feet) of RG-11 coax.

If a custom application demands a greater range, simply connect sections together to deliver network connections up to 4km [2.5 miles], at full bandwidth and with no extra power wiring.



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 cameras is available. The table below shows the range achievable by cable type, power source, and camera wattage.

POE over Coax™ Range

Power Source	POE or POE Plus Switch					Veracity Power Supply				
Camera Power (watts)	5	10	15	20	25	5	10	15	20	25
RG-59 (22AWG CCS)	750ft 225m	420ft 125m	330ft 100m	200ft 60m	N/A N/A	900ft 270m	880ft 265m	620ft 185m	460ft 140m	360ft 110m
RG-59 (22AWG core)	1000ft 300m	1000ft 300m	880ft 265m	650ft 195m	N/A N/A	1000ft 300m	1000ft 300m	1000ft 300m	1000ft 300m	1000ft 300m
RG-59 (20AWG core)	1000ft 300m	1000ft 300m	1000ft 300m	1000ft 300m	N/A N/A	1000ft 300m	1000ft 300m	1000ft 300m	1000ft 300m	1000ft 300m
RG-11 (14AWG core)	1600ft 500m	1600ft 500m	1600ft 500m	1600ft 500m	N/A N/A	1600ft 500m	1600ft 500m	1600ft 500m	1600ft 500m	1600ft 500m

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POWERSTAR™

Technical Specification:

POWER	Unit Power	1.5 watts
	BASE POE In	IEEE 802.3af (POE) or IEEE 802.3at (POE Plus), 2-event, power class 4
	CAMERA POE Out	IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)
	DC Power Input	40-57 volts, 0.7 amps maximum, class 2 isolated, detachable screw terminal
COAXIAL	Connector	BNC 75 Ohm
	Cable	Any 75 Ohm coaxial (other impedances supported)
	Range	To 500 metres (1600 feet) at full rate, see table
	Bandwidth	200 Mbit/s
ETHERNET	Connector	RJ45
	Cable	Patch or crossover, auto-detected
	Rate	100Base-T full-duplex with auto-negotiation
LEDs	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	Dimensions	L 104mm / 4.0in (84mm / 3.3in excluding connector)
		W 54mm / 2.2in
		H 24mm / 0.9in
	Weight	140g / 5oz
	Operating Temp	-10°C to 50°C / 14°F to 122°F (delivering POE <15w)
		-10°C to 40°C / 14°F to 104°F (delivering POE Plus >15w)
	Relative Humidity	85% non-condensing
	Compliance	FCC, CE, RoHS
	PRODUCT CODES	
	VHW-HWP-S-B	
HIGHWIRE PowerStar™ Base unit, for installation at the switch side. Features 802.3af/802.3at POE or 57VDC power input, and POE over Coax™ output		
VHW-HWPS-C		
HIGHWIRE PowerStar™ Camera unit, for installation at the camera side. Features POE over Coax™ or 57VDC power input, and 802.3af/802.3at POE output		
VPSU-57V-800		
Optional 57VDC 800mA power supply. Recommended for maximum range and power over coax, or as a convenient alternative to a POE switch or injector.		
VHW-WMB		
Wall mounting bracket for a single HIGHWIRE unit		
VHW-1U		
Rack-mounting bracket for eight HIGHWIRE units in 1U		



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