

LONG RANGE ETHERNET OVER COAX  
**HIGHWIRE™**  
LONGSTAR



Deliver unsurpassed  
power and bandwidth  
over extreme distances  
of coaxial cable

Cut costs and installation time by re-using  
long runs of legacy coax cabling, especially  
in rail and metro applications.

- | Long range Ethernet and POE over new or legacy coaxial cable
- | Unrestricted 100BaseT and POE over 1400m (4,600ft) on RG11
- | Ruggedised for high-performance over extreme temperature range
- | Fully automatic, simple to install and maintenance-free
- | BS EN 50121-4 compliant (rail and metro)
- | Up to 4.2km ( 2.5 miles) data-only link at 10BaseT without POE

# Long-range Ethernet with POE over coax at distances up to 1,400 metres

HIGHWIRE Longstar's ruggedness and high performance is particularly suited to rail, metro and industrial applications



## HIGHWIRE Longstar delivers unsurpassed distances

HIGHWIRE Longstar delivers a full-bandwidth 100BaseT network signal and POE Plus over unsurpassed lengths of regular coaxial cable. It provides the reassurance of exceptional performance and reliability, while enabling considerable savings in the cost, time and risk of upgrading analogue camera installations to IP.

A range of 540 - 690 metres with RG-59 or even up to 1400 metres with RG-11 is supported, without compromising the 100Base-T data rate. For even greater distances it can automatically configure to 10Base-T operation, running approx. three times further with data only.

Models with optional POE in or out can deliver the full 25 watts of 802.3at POE Plus to cameras over the same legacy cable. Designed for straight-forward installation, all the HIGHWIRE Longstar models are entirely self-configuring, and feature extended temperature operation, have a rugged enclosure with both wall-mount or high density rack mounting options.

## Designed for Installers

Used in pairs, installation of HIGHWIRE Longstar is extremely fast and efficient. The devices self-configure and self optimise on connection. No set-up or system pairings are required. Data and power connections are easily monitored during installation using the embedded

LEDs. The system incorporates Veracity's SafeView™ technology, which provides instant confirmation of link status, power level and diagnostic information.

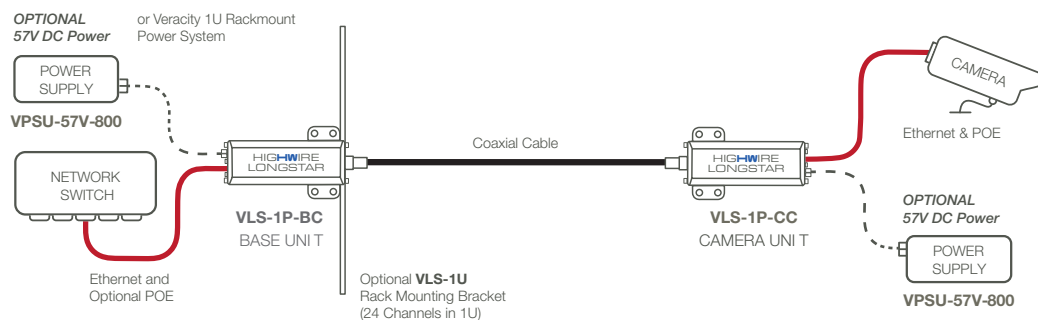
## Flexible High Performance

Although designed for 75ohm cable, HIGHWIRE Longstar will operate over 50ohm cable with full performance and only a slight reduction in the maximum distance attainable.

## POE - Simple Reliability

POE-equipped models allow all of the power for the link to be sourced from a POE switch, POE injector or power supply, for simple installation and optional UPS backed power delivery for high resilience against grid power failures.

## POE OVER COAX Application Diagram



POE Models of HIGHWIRE Longstar enable both network data and power to be carried over extended length of new or existing coaxial cable.

## Longstar is a rugged and low-cost alternative to fibre, also with power delivery

HIGHWIRE Longstar is also suited to new coax installations, due to the low levels of signal distortion through long runs of RG6 or RG11 cabling

### Simple Rackmount Option

Up to 24 HIGHWIRE Longstar Base units can be rack-mounted using the simple 1U space-saving bracket.

Although HIGHWIRE Longstar POE models can be powered from POE switches or injectors, several Veracity 57V DC power supply options are available (see part codes) to provide the maximum power and range performance.

### Veracity Power Supply Options

Rack-mounted HIGHWIRE Longstar units can be powered by the Veracity 57V DC 1U rackmount power supply. This 8.8A power supply can provide enough power for up to 24 HIGHWIRE

Longstar units with POE output. The power unit can be fitted behind the rack-mounted HIGHWIRE Longstars in the same 1U space, thus saving rack space.

For a full range of solutions, power supplies and power configurations contact sales at Veracity.

### NOTES

*HIGHWIRE Longstar units must be used in pairs and, due to the special technology used for very long-range performance, are not compatible with the rest of Veracity's HIGHWIRE and HIGHWIRE Powerstar product range.*



HIGHWIRE Longstar Coax and status LEDs



HIGHWIRE Longstar Ethernet and DC input

### HIGHWIRE LONGSTAR POE over COAX Range

| POWER SOURCE       | No POE | POE Switch |       |       | POE Plus Switch |     | Veracity Power Supply |       |       |       |       |       |
|--------------------|--------|------------|-------|-------|-----------------|-----|-----------------------|-------|-------|-------|-------|-------|
| Camera Power watts | 0      | 5          | 10    | 15    | 20              | 25  | 0                     | 5     | 10    | 15    | 20    | 25    |
| RG-59 (22AWG CCS)  | 540m   | 200m       | 130m  | 100m  | 60m             | N/A | 540m                  | 400m  | 240m  | 140m  | 100m  | 60m   |
| RG-59 (20AWG core) | 690m   | 690m       | 600m  | 500m  | 350m            | N/A | 690m                  | 690m  | 690m  | 690m  | 640m  | 360m  |
| RG-6 (18AWG core)  | 950m   | 950m       | 800m  | 700m  | 470m            | N/A | 950m                  | 950m  | 950m  | 950m  | 900m  | 500m  |
| RG-11 (14AWG core) | 1400m  | 1400m      | 1400m | 1400m | 1200m           | N/A | 1400m                 | 1400m | 1400m | 1400m | 1400m | 1300m |

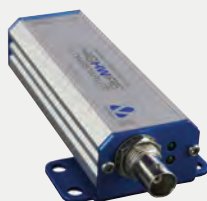
These are typical limits for 100Base-T connections. For non-POE installations ie. Ethernet only, use the "0" Zero figures in the table above.

The data range at 10 Base-T is approximately 3 times further.

## TECHNICAL SPECIFICATION

HIGHWIRE™  
LONGSTAR

|                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>POWER (Non-POE models)</b><br>Unit power<br>DC Power input                                                                                                             | 1.0 watts<br>Detachable screw terminal for class II isolated external supply<br>8-57 volts DC or 20-28 volts AC, max 100mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>POWER (POE models)</b><br>Unit Power<br>POE in (Base)<br>POE out (Camera)<br>DC power in (Base)                                                                        | 1.0 watts<br>IEEE 802.3af (POE) or IEEE 802.3at (POE Plus), 2-event, power class 4<br>IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)<br>Detachable screw terminal for optional Veracity 57V supply                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>LONGSTAR INTERFACE</b><br>Connector<br>Cable<br><br>Rate                                                                                                               | BNC<br>75ohm Coaxial, RG59, RG6 or RG11 or equivalent<br>Note: also compatible with 50 ohm cable types<br>200Mbit/s up to 690 metres [2263ft] (RG59 20AWG)<br>200Mbit/s up to 1400 metres [4593ft] (RG11)<br>20Mbit/s up to 4.2km [2.6miles] RG11, auto -adapts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ETHERNET INTERFACE</b><br>Connector<br>Cable<br>Rate                                                                                                                   | RJ45<br>Patch or crossover, auto detected<br>100Base-TX or 10Base-T, full-duplex with auto-negotiation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>LED INDICATORS</b><br>Ethernet<br>LONGSTAR<br>(POE models only)                                                                                                        | Link/activity, power good<br>Link/activity, rate<br>POE and link status (green/amber), diagnostic codes (red)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>PHYSICAL/Environmental</b><br>Dimensions<br>Weight<br>Operating temperature<br>Relative humidity<br>Compliance                                                         | L 115mm, W 55mm H 27mm, inc removable bracket<br>112g [3.95oz]<br>-40°C to 70°C [-40°F to 158°F]<br>85% non-condensing<br>FCC, CE, RoHS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>PRODUCT CODES</b><br>VLS-1P-BC<br>VLS-1P-CC<br>VPSU-57V-800<br>VPSU-57V-1500<br>VPSU-57V-1U<br><br>VLS-1N-LC<br><br>VPSU-12V-U<br>VHW-RMPSU<br>VPS-TRAY-ASSY<br>VLS-1U | HIGHWIRE Longstar (Base). Single POE converter with POE in, extended POE out.<br>HIGHWIRE Longstar (Camera). Single POE converter with POE out, extended POE in.<br>57V power supply for POE models (optional: for max power/or an alternative to POE).<br>57V power supply for POE models (optional: for max power/or an alternative to POE).<br>Rack-mountable multi channel power supply - optional dual redundancy/status LEDs.<br><br>HIGHWIRE Longstar Lite. Single non POE LONGSTAR converter, 1 port, no POE.<br>(2 required per link)<br>12V power supply for non POE models, universal AC input. Single unit.<br>PSU (with linking cable) for 8 x VLS-1N-LC units.<br>1U PSU tray (up to 5 x VPSU-57V-1500 or 5 x VPSU-57V-800 power supplies)<br>1U panel for up to 24 HIGHWIRE LONGSTAR units or 24 LONGSPAN units.<br><br>For a full range of solutions, power supplies and power configurations contact sales at Veracity. |



HIGHWIRE Longstar is also available in a non POE version HIGHWIRE Longstar Lite.



**Americas Sales**  
Veracity USA Inc.  
Tel: 1-800-679-1590  
Fax: 1-800-679-0714  
www.veracityglobal.com  
sales@veracityusa.com

**EMEA Sales**  
Veracity UK Ltd  
Prestwick International Aerospace Park  
4 Dow Road  
Prestwick  
KA9 2TU  
UK  
Tel +44 (0) 1292 264967  
Fax +44 (0) 845 528 1081  
www.veracityglobal.com  
sales@veracityuk.com