

LONG RANGE ETHERNET & POE  
**LONGSPAN™**

LONGSPAN is a robust network extender used in railway networks over extreme distances and is BS EN 50121-4 (rail + metro)

## Deliver the power and bandwidth your IP camera needs over exceptional distances

LONGSPAN delivers unprecedented power and bandwidth over extreme lengths of regular Cat 5e or Cat 6 network cable.

- | Long range point-to-point Ethernet over regular Cat 5 or 6 cable
- | Unrestricted 100Base-T with POE at over 800 metres
- | Delivers full POE Plus power at 600 metres
- | Ruggedised for high performance over extreme temperature range
- | Smart power and diagnostic display for reliable installation
- | Fully automatic, simple to install and maintenance-free

# Full speed, long-range, point-to-point Ethernet link with POE over Cat5e / Cat6

LONGSPAN delivers unrestricted 100Base-T with 802.3af and 802.3at POE at distances far beyond the normal Ethernet limits for problem free IP camera installation



## Unrivalled range and power

IP cameras can demand peak network bandwidth of several times their average data rate while transmitting high-activity or low-light scenes. LONGSPAN has been designed to run IP cameras over 820 metres (2600 feet) of normal network cable, supporting the full 200Mbps required for 100Base-T Ethernet. The full speed Ethernet provided by LONGSPAN ensures perfect image quality at critical moments, even at the longest cable ranges.

## Extreme distances

For even more extreme distances, LONGSPAN can automatically drop to 10Base-T operation, supporting a range of over 1000 metres (3280ft). POE-equipped models allow all of the power for the link to be sourced from a single POE switch or power supply, for simple installation and reliable UPS-backed power delivery. LONGSPAN's unique power transmission technology can deliver the full 25.5 watts required for POE Plus equipment at up to 600 metres

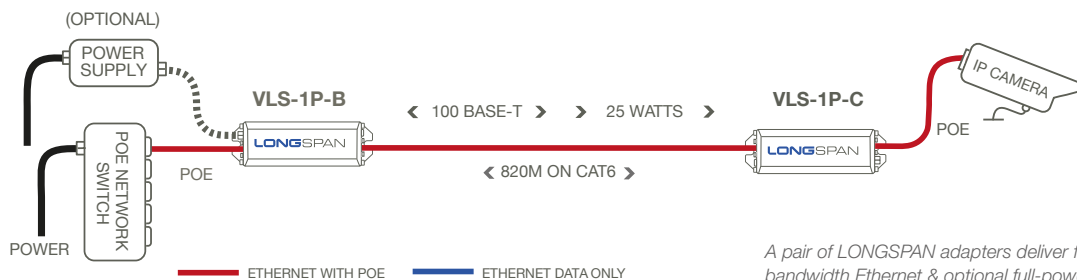
(2000 feet), or standard 15 watt POE up to 820 metres (2600 feet).

## Upgrade legacy UTP cable

LONGSPAN also supports 1-pair and 2-pair cable with extended range, so analogue cameras in UTP installations can now be upgraded to IP with no need to replace the installed cabling infrastructure.

Veracity LONGSPAN's unique technology automatically adapts to the number of pairs available,

## POE OVER CAT5e or Cat6 Application Diagram



A pair of LONGSPAN adapters deliver full bandwidth Ethernet & optional full-power POE over greatly extended distances of regular network cable or UTP.

Range is for typical 24AWG Cat5e or 23AWG Cat6, 4-pair UTP. For other cables types, or any installations over 600 metres length, consult Veracity for recommendations or test on site.

Distances may be increased by connecting multiple links in series. Data rate at full range stated: 100Base-T = 200Mbps, 10Base-T = 20Mbps



Up to 24 LONGSPAN units can be mounted in a 1U rack space. Ask for VLS-1U.

# SAFEVIEW™, smart LED display provides instant information and link status

A smart LED display utilising Veracity's SAFEVIEW™ technology provides instant confirmation of link status, power availability, and diagnostic information, from either end of the cable.



and delivers the same unrestricted 10 or 100Mbps full-duplex network connection, assuring predictable IP video quality each and every time.

### Designed for installers

LONGSPAN self-configures for the best performance every time it is connected. No user setup, no DIP switch settings, and no system pairings are required.

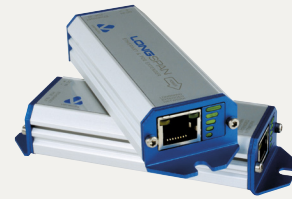
A smart LED display utilising Veracity's SAFEVIEW™ technology provides instant, visible confirmation of link

status, power availability, and useful diagnostic information, from either end of the cable.

High-density installations are also supported with a neat configurable rack mounting system, which allows up to 24 channels to be installed in just 1U of rack space.

For network-only applications, a Lite (non-POE) version of LONGSPAN is available. For network and power delivery, Base and Camera POE units are used together. A POE switch or

separate POE injector may be used as the Base power source. Maximum power and range is achieved with the optional 57V Veracity PSU, enabling the LONGSPAN Base unit to become the POE injector for the link.



Smart LED display shows SAFEVIEW™ technology.

## LONGSPAN Data Range

RATE	CAT6	CAT5e	1 - PAIR (typical)
100 Base-T	820m (2690ft)	690m (2250ft)	300m (1000ft)
10 Base-T	1050m (3500ft)	950m (3100ft)	900m (3000ft)

## LONGSPAN POE Range

CAMERA POWER	802.3af POE Switch		802.3at POE Plus Switch		Veracity Power Supply	
	CAT6	CAT5e	CAT6	CAT5e	CAT6	CAT5e
5 WATTS	1050m	950m	1050m	950m	1050m	950m
10 WATTS	600m	450m	1050m	950m	1050m	950m
15 WATTS	n/a	n/a	700m	550m	1000m	800m
20 WATTS	n/a	n/a	500m	350m	750m	600m
25 WATTS	n/a	n/a	n/a	n/a	600m	450m

## TECHNICAL SPECIFICATION

LONGSPAN™

<b>POWER (POE models)</b>	Unit Power POE in (Base) POE out (Camera) DC power in (Base)	1.0 watt IEEE 802.3af (POE) or IEEE 802.3at (POE Plus), 2-event, power class 4 IEEE 802.3af (POE) or IEEE 802.3at (POE Plus) Detachable screw terminal for optional Veracity 57V supply
<b>LONGSPAN INTERFACE</b>	Connector Cable  Rate	RJ45 Cat6, Cat5e, Cat3, other 1/2/4-pair UTP Patch wiring recommended, other wiring auto-corrected 200Mbit/s up to 600 metres [2,000ft] (CAT6) 20Mbit/s up to 1000 metres [3300ft] (CAT6), auto-adapts
<b>ETHERNET INTERFACE</b>	Connector Cable Rate	RJ45 Patch or crossover, auto detected 100Base-TX or 10Base-T, full-duplex with auto-negotiation
<b>LED INDICATORS</b>	Ethernet LONGSPAN (POE models only)	Link/activity, power good Link/activity, rate Power available (5/10/15/20/25 watts) POE and link status (green/amber), diagnostic codes (red)
<b>PHYSICAL/ENVIRONMENTAL</b>	Dimensions Weight Operating temperature Relative humidity Compliance	L 120mm (inc. brackets), W 36mm H 23mm 100g [3.5oz] -40°C to 70°C [-40°F to 158°F] 85% non-condensing FCC, CE, RoHS, BS EN 50121-4 (rail + metro)
<b>PRODUCT CODES</b>	VLS-1P-B  VLS-1P-C  VLS-1N-L VPSU-12V-U VPSU-57V-800  VPSU-57V-1500  VPSU-57V-1U  VHW-RMPSU VPSU-TRAY-ASSY VLS-1U	<p><b>LONGSPAN</b> (Base) Single POE converter with POE in, extended POE out, and SAFEVIEW™ display, for base side (switch) installation</p> <p><b>LONGSPAN</b> (Camera) Single POE converter with POE out, extended POE in, and SAFEVIEW™ display, for camera side (remote device) installation</p> <p><b>LONGSPAN Lite</b> Single Non POE converter, 1 port, no POE. (2 required per link)</p> <p>12V power supply for non-POE models, universal AC input</p> <p>57V 800mA power supply for POE models (optional: for max power or as an alternative to POE input)</p> <p>57V 1500mA power supply for POE models (optional: for max power or as an alternative to POE input)</p> <p>57V Rack-mountable multi-channel power supply - optional dual-redundancy and status LEDs</p> <p>PSU (with linking cable) for 8 x VLS-1N-L LONGSPAN Lite units</p> <p>1U PSU tray (up to 5 x VPSU-57V-1500 or 5 x VPSU-57V-800 power supplies)</p> <p>1U panel for up to 24 LONGSPAN units</p> <p><i>LONGSPAN Duo and LONGSPAN Quad versions are also available for the camera side</i></p> <p><i>For a full range of solutions, power supplies and power configurations contact sales at Veracity</i></p>

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**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.



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