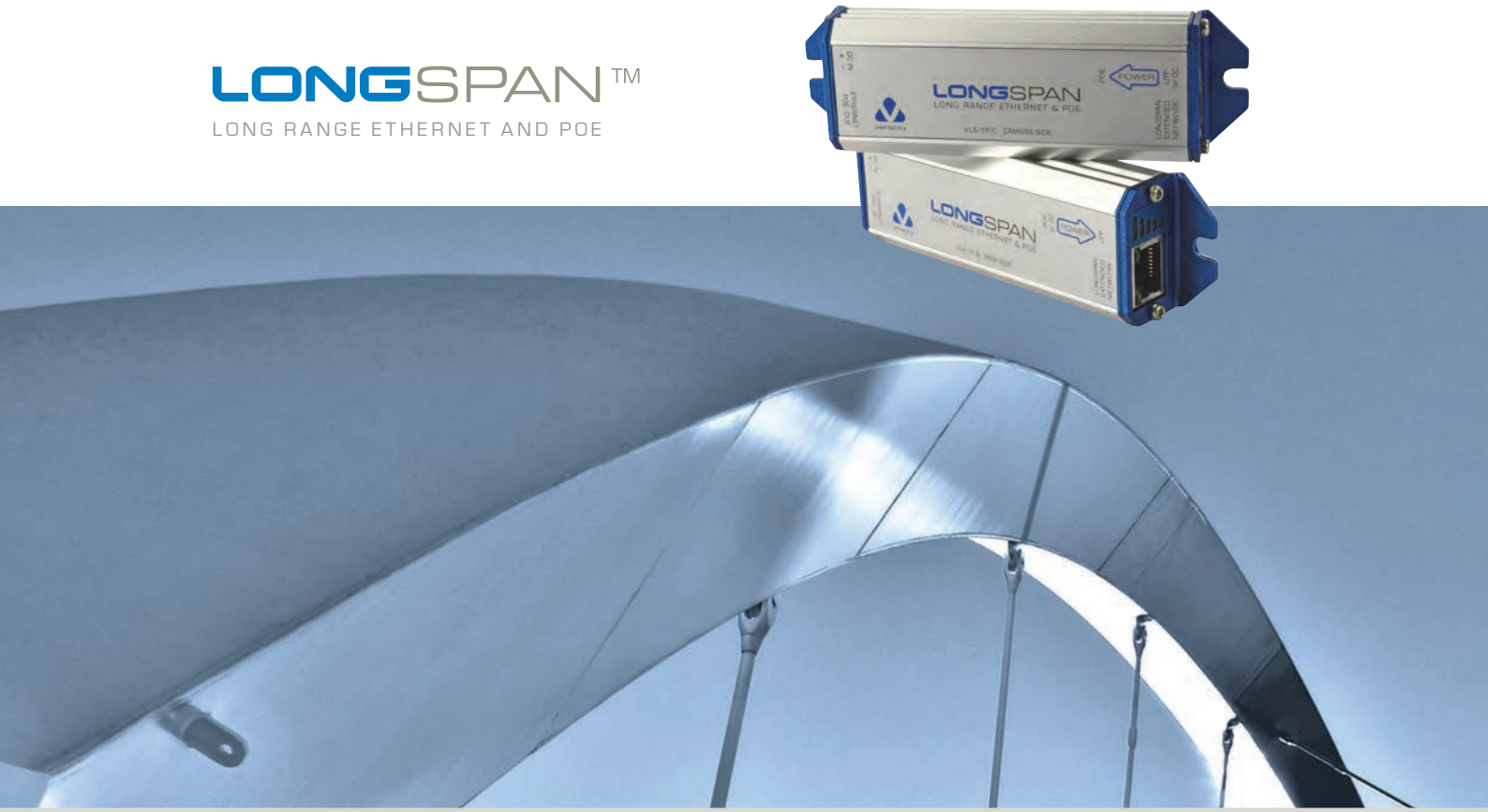
# LONGSPAN™

LONG RANGE ETHERNET AND POE




## 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 Cat 6 cable
- Unrestricted 100Base-T with POE at over 800 metres
- POE version 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

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# Full speed, long-range, point-to-point Ethernet link with POE over Cat 5e and Cat 6 cable

## LONGSPAN delivers unrestricted 100Base-T with 802.3af and 802.3at POE at distances way 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 800 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. 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, and delivers the same unrestricted 10 or 100Mbps full-duplex network connection, assuring predictable IP video quality each and every time.

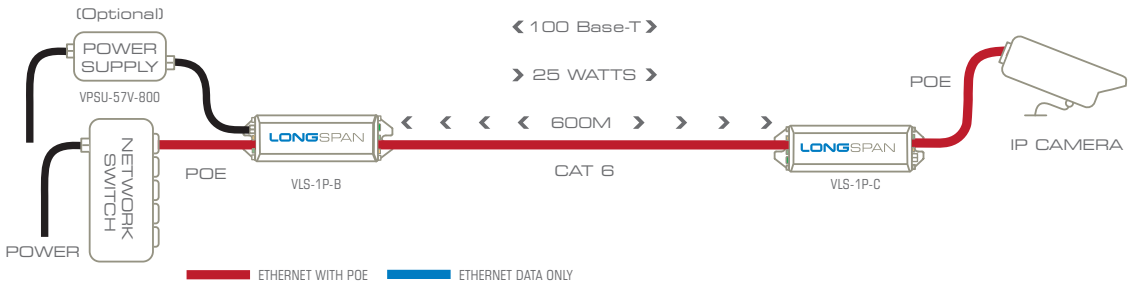


*Diagram 1. A pair of LONGSPAN converters deliver full-bandwidth Ethernet & optional full-power POE over greatly extended distances of regular network cable or UTP.*

Up to 24 LONGSPAN units can be mounted in a 1U rack space.

## 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.

On POE models, 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. High-density installations are 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, the same non-POE model is fitted at each end of the link. 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.

*Example 1. LONGSPAN BASE and CAMERA are sold separately.*

## LONGSPAN Data Range

| RATE | CAT 6 | CAT 5e | 1 - PAIR (typical) |
|---|---|---|---|
| 100 Base-T | 820m (2700ft) | 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 | |
|---|---|---|---|---|---|---|
| | CAT 6 | CAT 5e | CAT 6 | CAT 5e | CAT 6 | CAT 5e |
| 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 |

**NOTES:** Range is for typical 24AWG Cat 5e or 23AWG Cat 6, 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

Example 2. Smart LED display shows SafeView™ technology.

# TECHNICAL SPECIFICATION LONGSPAN™

| | |
|---|---|
| POWER (NON-POE MODELS) | |
| Unit power | 1.0 watts |
| DC Power input | Detachable screw terminal for class II isolated external supply<br>8-57 volts DC or 20-28 volts AC, max 100mA |
| POWER (POE MODELS) | |
| POE in (base) | IEEE 802.3af (POE) or IEEE 802.3at (POE Plus), 2-event, power class 4 |
| POE out (camera) | IEEE 802.3af (POE) or IEEE 802.3at (POE Plus) |
| DC power in (base) | Detachable screw terminal for optional Veracity 57V supply |
| LONGSPAN INTERFACE | |
| Connector | RJ45 |
| Cable | Cat 6, Cat 5e, Cat 3, other 1/2/4-pair UTP<br>Patch wiring recommended, other wiring auto-corrected |
| Rate | 200Mbit/s up to 600 metres (2,000ft) (CAT 6)<br>20Mbit/s up to 1000 metres (3300ft) (CAT 6), auto-adapts |
| ETHERNET INTERFACE | |
| Connector | RJ45 |
| Cable | Patch or crossover, auto detected |
| Rate | 100Base-TX or 10Base-T, full-duplex with auto-negotiation |
| LED INDICATORS | |
| Ethernet | Link/activity, power good |
| LONGSPAN | Link/activity, rate |
| Safeview™ | Power available (5/10/15/20/25 watts) |
| (POE models only) | POE and link status (green/amber), diagnostic codes (red) |
| PHYSICAL/ENVIRONMENTAL | |
| Dimensions | L 120mm (inc. brackets), W 36mm H 23mm |
| Weight | 100g (3.5oz) |
| Operating temperature | -40°C to 70°C (-40°F to 158°F) |
| Relative humidity | 85% non-condensing |
| Compliance | FCC, CE, RoHS |
| PRODUCT CODES | |
| VLS-1N-L LONGSPAN LITE | Single Non POE LONGSPAN converter, 1 port, no POE. (2 required per link) |
| VPSU-12V-U | 12V power supply for non-POE models, universal AC input. |
| VLS-1P-B LONGSPAN BASE | Single POE LONGSPAN converter with POE in, extended POE out, and SafeView™ display, for base side (switch) installation. |
| VLS-1P-C LONGSPAN CAMERA | Single POE LONGSPAN converter with POE out, extended POE in, and SafeView™ display, for camera side (remote device) installation. |
| VPSU-57V-800 | 57V power supply for POE models (optional: for maximum power or as an alternative to POE input). |
| VLS-1U | 1U panel for up to 24 LONGSPAN units. |
| VPSU-xx | Rack-mountable multi-channel power supplies - optional dual-redundancy and status LEDS: see rackmount accessory and power supply datasheet. |

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