LONG RANGE ETHERNET AND POE

LONGSPAN™
QUAD

FOUR PORT

LONGSPAN Quad is a robust 4 port network adaptor for harsh environments like airports, railways and perimeters.

Connect and power four IP cameras at high bandwidth and long distances over Cat6

LONGSPAN Quad delivers POE to four devices over a single regular network cable at very long distances.

| Long range point-to-point Ethernet over normal network cable

| Full-performance 100Base-TX with POE at over 820 metres

| Provides four POE ports to connect four IP devices over one cable

| Optional local PSU can deliver 25W per port at device end

| Ruggedised for high performance over wide temperature range

| Compatible with LONGSPAN Base units

| Fully automatic, simple to install and maintenance-free

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LONGSPAN Quad is a four-port, point-to-point long range Ethernet device. It can be used to power 4 POE devices in airport concourses or airside buildings or fences.

LONGSPAN Quad enables four IP POE devices to be connected at long distances

With LONGSPAN, IP cameras and other network devices can be connected and powered at distances of up to 820m, allowing total flexibility in camera siting and positioning.

Unrivalled Range and Power

Such high speed connections are essential as LONGSPAN Quad is designed to work with any LONGSPAN Base unit to provide high-speed connections (with POE) for four IP cameras at up to 820 metres (2,690 feet) over a single network cable, supporting the full 200Mbps required (100Mbps up plus 100Mbps down) for 100Base-TX Ethernet.
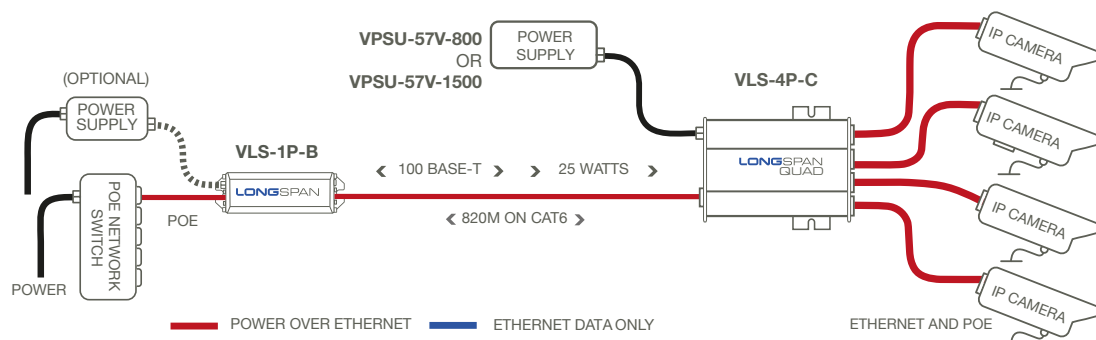
Flexible Power Options

LONGSPAN Quad is compatible with any other LONGSPAN device and would normally be used with a LONGSPAN Base unit. This supplies POE over the network cable, providing a total LONGSPAN Quad POE output budget of up to 25W at 600 metres and 15W at 800 metres. Optionally, a LONGSPAN Lite (no POE) can be used at the base end and a local PSU can power the Quad unit for a maximum POE output of 25W per port.

Upgrade Legacy UTP Cable

LONGSPAN and LONGSPAN Quad combinations also support 1-pair and 2-pair connections at even longer distances with reduced 10Base-T bandwidth. This allows analogue camera installations using UTP cable to be replaced with IP cameras, without the need to replace legacy cabling.

LONGSPAN automatically adapts to the cable pairs available, and delivers the same unrestricted 10 or 100Mbps full duplex network connection to full distance, assuring predictable IP video quality.

POE OVER Cat6 or Cat5e
Application Diagram

VPSU-57V-800
OR
VPSU-57V-1500

POWER SUPPLY

VLS-4P-C

(OPTIONAL)
POWER SUPPLY

VLS-1P-B

POE NETWORK SWITCH

POE

POWER

LONGSPAN QUAD

IP CAMERA
IP CAMERA
IP CAMERA
IP CAMERA

‹ 100 BASE-T ›   ‹ › 25 WATTS ‹ ›
‹ 820M ON CAT6 ›

━━━ POWER OVER ETHERNET   ━━━ ETHERNET DATA ONLY

ETHERNET AND POE

Range is for typical 24AWG Cat5e or 23AWG Cat6, 4-pair UTP.

For other cables types, or any installations over 600 metres in length, consult Veracity for recommendations or test on site.

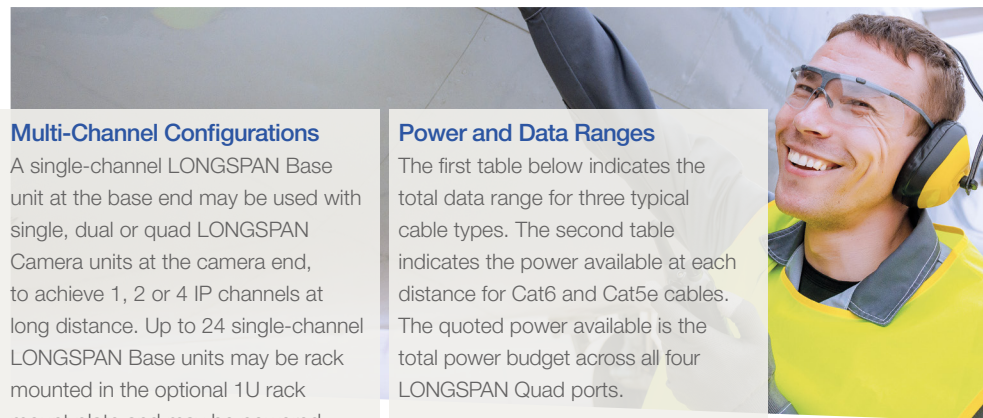*Distances may be increased by connecting multiple links in series.*
Data rate at full range stated:
100Base-TX = 200Mbps
(100Mbps up plus 100Mbps down)
10Base-T = 20Mbps

LONGSPAN adaptors deliver full-bandwidth Ethernet and optional full-power POE over greatly extended distances of regular network cable or UTP.

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LONGSPAN is an attractive alternative to fibre as it delivers power and data over the same cable at distance

Whilst fibre can be a good solution for very long distances, LONGSPAN is ideal for typical external IP camera distances of 200-800m with the key advantage of power delivery.

Designed for Installers

LONGSPAN devices self-configure for the best performance every time they are connected. No user setup, no DIP switch settings, and no device pairings are required.

Veracity's SAFEVIEW™ technology provides instant visible confirmation of LONGSPAN Quad's status, power and diagnostics. This information is also available at the base end, when delivering POE from LONGSPAN Base units.

Multi-Channel Configurations

A single-channel LONGSPAN Base unit at the base end may be used with single, dual or quad LONGSPAN Camera units at the camera end, to achieve 1, 2 or 4 IP channels at long distance. Up to 24 single-channel LONGSPAN Base units may be rack mounted in the optional 1U rack mount plate and may be powered by any of the Veracity 57V DC power supply options, including 1U PSU solutions which fit behind the LONGSPANs in the same 1U rack space for maximum channel density.

Power and Data Ranges

The first table below indicates the total data range for three typical cable types. The second table indicates the power available at each distance for Cat6 and Cat5e cables. The quoted power available is the total power budget across all four LONGSPAN Quad ports.

Maximum 25W POE output per port can be achieved by using a local Veracity power supply for the LONGSPAN Quad and a non-POE LONGSPAN Lite at the base end.

LONGSPAN Data Range

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

LONGSPAN POE Range

LONGSPAN Base | Power Source (At Base End)						LONGSPAN Duo
802.3af POE Switch		802.3at POE Plus Switch		Veracity Power Supply		Total POE Power
CAT6	CAT5e	CAT6	CAT5e	CAT6	CAT5e	(At Device End)
1050m	950m	1050m	950m	1050m	950m	5 watts
600m	450m	1050m	950m	1050m	950m	10 watts
n/a	n/a	700m	550m	1000m	800m	15 watts
n/a	n/a	500m	350m	750m	600m	20 watts
n/a	n/a	n/a	n/a	600m	450m	25 watts

For maximum POE power output, LONGSPAN Quad may be powered by a local Veracity 57V DC power supply

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TECHNICAL **SPECIFICATION**

LONGSPAN™ QUAD

POWER

Power consumption	0.9W (idle), 2.7W (all four ports active)
POE in and out	IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)
Optional DC power in	Detachable screw terminal for optional local Veracity 57V power supply
VPSU-57V-800	40W total power budget (max 25W per output port)
VPSU-57V-1500	78W total power budget (max 25W per output port)

LONGSPAN INTERFACE

Connector	RJ45
Cable	Cat6, Cat5e, Cat3, other 1/2/4-pair UTP
	Patch wiring recommended, other wiring auto-corrected
Rate	200Mbps up to 600m [2,000ft] (Cat6)
	20Mbps up to 1050m [3500ft] (Cat6), auto-adapts

ETHERNET INTERFACE

Connectors	RJ45 x 4
Cable	Patch or crossover, auto detected
Rate	100Base-TX or 10Base-T, full-duplex with auto-negotiation

LED INDICATORS

Ethernet link	Link/activity, power good
LONGSPAN Interface	Link/activity, rate
SAFEVIEW Display	Power available (5/10/15/20/25/30/40/50 watts)
	POE and link status (green/amber), diagnostic codes (red)

PHYSICAL/ENVIRONMENTAL

Dimensions	L 103mm W 75mm H 22mm
Weight	147g [5.1 oz] Clips 4g (0.14 oz)
Operating Temperature	-10°C to 50°C [14°F to 122°F]
Relative Humidity	85% non-condensing
Compliance	FCC, CE, RoHS, BS EN 50121-4 (rail + metro)

PRODUCT CODES

VLS-4P-C	**LONGSPAN Quad,** (camera) four-port, long range Ethernet and POE adaptor
VLS-2P-C	**LONGSPAN Duo,** (camera) two-port, long range Ethernet and POE adaptor
VLS-1P-B	**LONGSPAN Base,** single-port, long range Ethernet and POE adaptor
VLS-1N-L	**LONGSPAN Lite**, single-port, long range Ethernet adaptor (no POE)
	(2 required per link)
VPSU-12V-U	12V DC power supply (for LONGSPAN Lite)
VPSU-57V-800	57V DC 800mA power supply for POE models
VPSU-57V-1500	57V DC 1500mA power supply for POE models
	Cables for power supplies are required with Country specification -UK/EU/US
	For a full range of solutions, power supplies and power configurations find out more from the sales team at Veracity.

LONGSPAN Duo (camera) is available as a two port POE adaptor with POE out, extended POE in, and LED SAFEVIEW™ display, for camera side (remote device) installation.

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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