

LONG RANGE ETHERNET
LONGSPAN™
 LITE



Application | LONGSPAN Lite is a robust network extender used in railways and airports over extreme distances.



Locate IP devices at
 exceptional distances
 with high bandwidth

LONGSPAN Lite delivers high bandwidth
 over extreme lengths of regular Cat5e or
 Cat6 network cable

- | Long range point-to-point Ethernet over Cat5e or Cat6 cable
- | Unrestricted 100Base-TX at up to 820 metres
- | Ruggedised, high performance over a wide temperature range
- | Designed to connect locally-powered IP devices *
- | Compatible with all LONGSPAN model variants
- | Fully automatic, simple to install and maintenance-free

* POE versions of LONGSPAN are also available.



LONGSPAN delivers unrestricted 100Base-TX at distances far beyond normal Ethernet limits

Full speed, long-range, point-to-point Ethernet link over Cat5e and Cat6, designed for reliable, problem-free, IP camera installation.

Unrivalled range

IP cameras can demand peak network bandwidth of several times their average data rate while transmitting high-activity or low-light scenes.

LONGSPAN Lite has been designed to run IP data connections over 820 metres (2,690 feet) of normal network cable, supporting the aggregated 200Mbps required for full-duplex 100Base-TX Ethernet.

The full speed Ethernet provided by LONGSPAN Lite 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 1,000 metres (3,280ft). Alternatively, two or three pairs of LONGSPANS may be connected in series to double or triple the total transmission distance.

Non-POE Connection

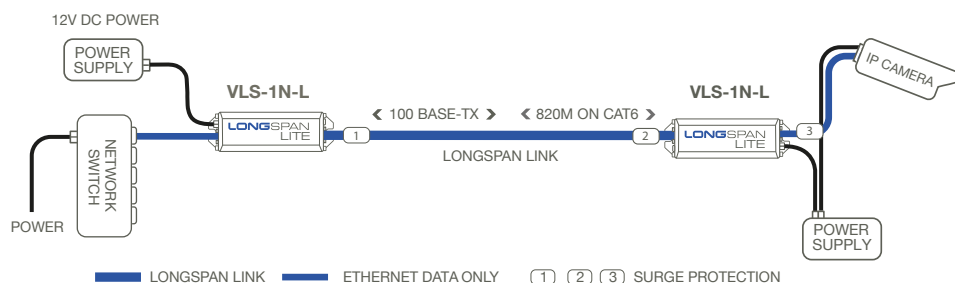
LONGSPAN Lite is designed for long

distance data connections without POE. A simple example would be a bridge connection between two distant network switches, or connecting devices which have local power, are battery-powered or are solar-powered. (See diagram below).

Upgrade legacy UTP cable

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

100Base-TX Up to 820m Application Diagram



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

Aggregated data rate at full range stated: 100Base-TX = 200Mbps, 10Base-T = 20Mbps

A pair of LONGSPAN Lite extenders deliver full bandwidth Ethernet over greatly extended distances of regular network cable or UTP.

Distances may be increased by connecting multiple links in series.



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

LONGSPAN Lite self-configures for optimum performance across 4-pair, 2-pair or 1-pair links

A key application of LONGSPAN Lite is to provide a data-only link to LONGSPAN POE devices at the camera end which are locally powered.

Designed for installers

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

LONGSPAN Lite and POE devices

All LONGSPAN devices are data compatible and interchangeable for data transmission. Therefore LONGSPAN Lite may be used for long-distance links to LONGSPAN devices with POE capability, including locally-powered LONGSPAN Camera,

LONGSPAN Max Camera or LONGSPAN Max Camera Quad devices. (See Diagram below).

If power is available at the camera end in this way, it provides the maximum possible POE output to the POE powered device from each type of LONGSPAN Camera device.

High density base installations

At the base end, high density installations are supported with a neat, configurable rack mounting system which allows up to 24 LONGSPAN

Lite devices to be installed in a 1U rack plate, with rear mounting tray for power supplies.

Non-POE LONGSPAN Lite and POE-capable LONGSPAN Base devices can be mixed in the rack as required.

Surge Protection

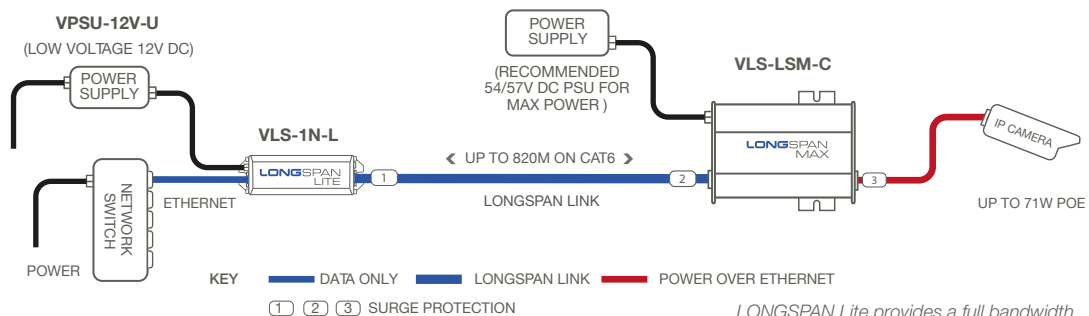
The latest LONGSPAN devices have enhanced in-built surge protection, but for long external cable runs the use of appropriate surge protection devices is strongly recommended to protect all devices on the links.

LONGSPAN Data Range

RATE	Cat6	Cat5e	1 - PAIR (typical)
100Base-TX	820m (2,690ft)	690m (2,250ft)	300m (1,000ft)
10Base-T	1,050m (3,450ft)	950m (3,100ft)	900m (3,000ft)

LONGSPAN Lite Data Only Connection

Application Diagram



LONGSPAN Lite provides a full bandwidth link to a LONGSPAN Max Camera, locally powered for maximum POE output to the IP camera.

TECHNICAL SPECIFICATION

LONGSPAN™
LITE

POWER	
Unit Power	1.0 watt
DC power in	Detachable screw terminal for 12V DC supply
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 600 metres [2,000ft] (Cat6) 20Mbps up to 1,000 metres [3,300ft] (Cat6), 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 RJ45	Yellow : Link/activity, Green: power good
LONGSPAN link RJ45	Yellow : Link/activity, Green: 10/100Mbps
PHYSICAL/ENVIRONMENTAL	
Dimensions	L 120mm (inc. brackets), W 36mm H 23mm, [L 4.7in, W 1.4in, H 0.9in]
Weight	100g [3.5oz]
Operating temperature	-40°C to 70°C [-40°F to 158°F]
Relative humidity	85% non-condensing
Compliance	FCC, CE, UL, RoHS, BS EN 50121-4 (rail + metro)
PRODUCT CODES	
VLS-1N-L	LONGSPAN Lite device without POE
VPSU-12V	12V DC power supply for LONGSPAN Lite
VLS-1P-B	LONGSPAN Base device with POE for base side
VLS-1P-C	LONGSPAN Camera device with POE for camera side
VLS-LSM-B	LONGSPAN Max Base device, with high-power POE
VLS-LS-B8	LONGSPAN Base 8 device with 8 integrated LONGSPAN base channels
VLS-LSM-C	LONGSPAN Max Camera device, with high-power POE
VLS-LSM-C4	LONGSPAN Max Quad Camera device, with high-power POE
VPSU-57V-800	57V DC 800mA power supply
VPSU-57V-1500	57V DC 1500mA power supply
VPSU-POE-100-UK/EU/US	100W 57V DC power supply with power cable for UK, EU or US
VPSU-POE-240-UK/EU/US	240W 56V DC power supply with power cable for UK, EU or US
VPSU-1U-57V-UK/EU/US	1U rear-mounted 400W PSU for multi-channel installations & cable for UK, EU or US
VLS-1U	1U front panel for mounting 24 LONGSPAN devices
VPSU-TRAY-ASSY	1U tray for mounting power supplies and for use with VLS 1U
<p><i>A high-power LONGSPAN Quad is also available for the camera side. 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.



Veracity HQ
 Prestwick International Aerospace Park
 4 Dow Road
 Prestwick
 UK
 KA9 2TU
 Tel +44 (0) 1292 264967
 www.veracityglobal.com
 sales@veracityglobal.com

See www.veracityglobal.com website for country and region specific contacts.