

LONG RANGE ETHERNET AND POE
LONGSPAN™
DUO



LONGSPAN Duo is a robust network two port adaptor for harsh environments like subways and bridges.

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

LONGSPAN Duo delivers POE to two devices
over a single regular network cable at
long distances.

- | Long range point-to-point Ethernet over normal network cable
- | Full-performance 100Base-T with POE at over 820 metres
- | Provides two POE ports to connect two 12W 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



LONGSPAN Duo is a point-to-point Ethernet extender - ideal for spanning long distances or cable runs.

LONGSPAN Duo connections provide full-speed, long-range Ethernet with POE

LONGSPAN devices deliver unrestricted 100Base-T with 802.3af and 802.3at POE at up to eight times the distance of normal Ethernet connections - ideal for external IP camera installations.



Unrivalled Range and Power

IP cameras can demand peak bandwidth several times their average data rate, especially in low-light or with high scene activity.

LONGSPAN Duo is designed to work with any LONGSPAN base unit to provide high-speed connections (with POE) for two 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-T Ethernet.

Flexible Power Options

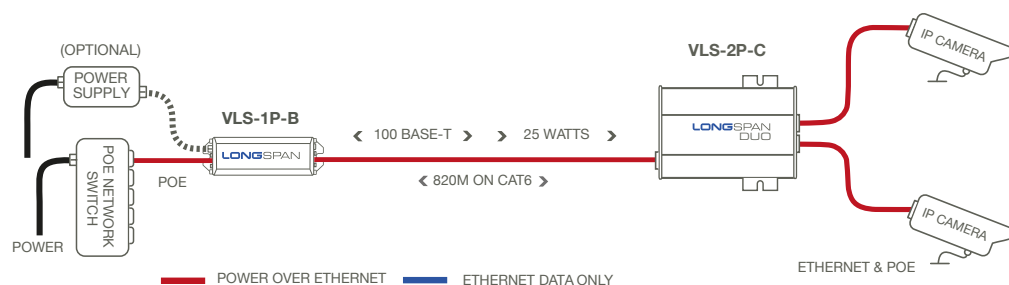
LONGSPAN Duo is compatible with any other LONGSPAN device and would normally be used with a LONGSPAN Base unit. This supplies POE over the network cable, providing a total LONGSPAN Duo POE output budget of up to 25W at 600m and 15W at 800m. Optionally, a LONGSPAN Lite (no POE) can be used at the base end and a local PSU can power the Duo unit for a maximum POE output budget of 50W (25W per port).

Upgrade Legacy UTP Cable

LONGSPAN and LONGSPAN Duo 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, so no need to replace the legacy cabling.

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

POE OVER Cat5e or Cat6 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.

Distances may be increased by connecting multiple links in series. Data rate at full range stated:

100Base-T = 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.

SAFEVIEW™ a 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.

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 system pairings are required.

Veracity's SAFEVIEW™ technology provides instant visible confirmation of LONGSPAN Duo'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 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 Cat5e and Cat6 cables. The quoted power available is the total power budget across both LONGSPAN Duo ports.

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

LONGSPAN Data Range

RATE	CAT6	CAT5e	1 - PAIR (typical)
100Base-T	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 Duo may be powered by a local Veracity 57V DC power supply

TECHNICAL SPECIFICATION

LONGSPAN™
DUO

POWER

Power consumption
POE in and out
Optional DC power in
VPSU-57V-800
VPSU-57V-1500

0.9W - 1.8W depending on POE load
IEEE 802.3af (POE) or IEEE 802.3at (POE Plus)
Detachable screw terminal for optional local Veracity 57V power supply
40W total power budget (max 25W per output port)
78W total power budget (max 25W per output port)

LONGSPAN INTERFACE

Connector
Cable

RJ45
Cat6, Cat5e, Cat3, other 1/2/4-pair UTP
Patch wiring recommended, other wiring auto-corrected
200Mbps up to 600 metres [2,000ft] (Cat6)
20Mbps up to 1000 metres [3,300ft] (Cat6), auto-adapts

Rate

ETHERNET INTERFACE

Connectors
Cable
Rate

RJ45 x 2
Patch or crossover, auto detected
100Base-TX or 10Base-T, full-duplex with auto-negotiation

LED INDICATORS

Ethernet
LONGSPAN interface
POE

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

PHYSICAL/ENVIRONMENTAL

Dimensions
Weight
Operating temperature
Relative humidity
Compliance

L 103mm W 75mm H 22mm
141g [5oz], Clips 4g [0.14oz]
-10°C to 50°C [-40°F to 158°F]
85% non-condensing
FCC, CE, RoHS, BS EN 50121-4 (rail + metro)

PRODUCT CODES

VLS-2P-C
VLS-4P-C
VLS-1P-B
VLS-1N-L

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

LONGSPAN Duo, (Camera) two-port, long range Ethernet and POE adaptor
LONGSPAN Quad, (Camera) four-port, long range Ethernet and POE adaptor
LONGSPAN Base, single-port, long range Ethernet and POE adaptor
LONGSPAN Lite, single-port, long range Ethernet adaptor (no POE)
(2 required per link)

57V DC 800mA power supply for POE models
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 Quad is available as a four port POE adaptor with POE out, extended POE in, and LED SAFEVIEW™ display, for camera side (remote device) installation.

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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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