8-PORT Hi-POE EXTENDER

LONGSPAN®
BASE 8

EXTEND X 8

Application | LONGSPAN Base 8™ is the foundation of large-scale long-range POE systems for IP cameras.

Delivers the power and bandwidth for multiple IP cameras at exceptional distances

LONGSPAN Base 8™ integrates eight high power POE long-distance links with a gigabit network switch

| Eight-channel LONGSPAN Base™ rack-mountable unit (32ch in 1U)

| Four x 70W ports plus four x 30W ports

| Long-range 100-BaseTX Ethernet with POE to 820 metres

| Integrated network switch saves on main switch ports

| Gigabit uplink port plus SFP socket for fibre option

| Compatible with LONGSPAN® and LONGSPAN Max™ Camera units

| Fully automatic, simple to install and maintenance-free

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LONGSPAN® is an attractive alternative to fibre as it delivers data AND power over the same cable at long distances

LONGSPAN Base 8™ integrates 8 LONGSPAN® links with a gigabit switch, requiring only one main network switch port per eight channels, saving on overall costs.

Unrivalled range and bandwidth

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

LONGSPAN® products are designed to connect IP cameras at ranges of up to 820 metres (with Cat6 cable), supporting the 200Mbps aggregate bandwidth required for full-duplex 100Base-TX Ethernet. LONGSPAN devices therefore ensure perfect image quality at all times, even at the longest cable ranges.
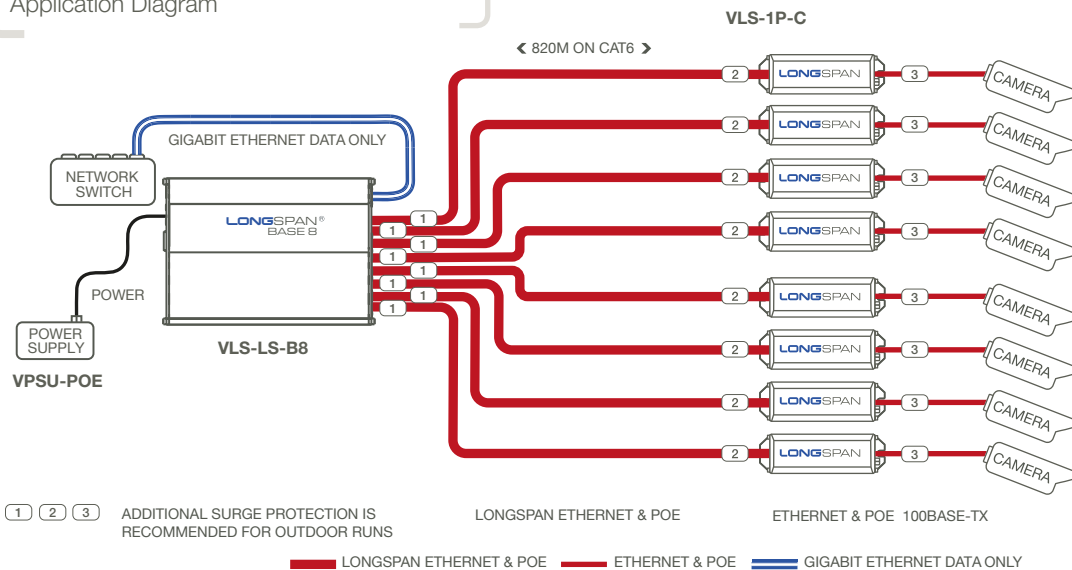
Multi channel integration

The Base 8 variant of the LONGSPAN range integrates eight long-range LONGSPAN links with a gigabit Ethernet switch for scalable, high-density, multi-channel installations. Each rack-mountable unit requires only one main network switch port per eight LONGSPAN channels, saving on overall costs. An SFP (Small Form-factor Pluggable) socket is provided for an optional fibre uplink connection for maximum flexibility. Up to four Base 8 units can be mounted in 1U, with an optional

rear-mounted 1U power supply, delivering an impressive channel density of 32 per U. A 1U faceplate with four Base slots and rack mounting tray are available as optional accessories.

High power POE

LONGSPAN Base 8 offers four 30W POE channels (802.3at) and four 70W POE channels (802.3bt). This allows significant flexibility in overall system design and power budgets for IP cameras. The four 30W links have the same POE range

Multi-channel Extended Ethernet & POE
Application Diagram

VLS-1P-C

◄ 820M ON CAT6 ►

GIGABIT ETHERNET DATA ONLY

NETWORK SWITCH

POWER

POWER SUPPLY

VPSU-POE

LONGSPAN® BASE 8

VLS-LS-B8

CAMERA

1 2 3 — ADDITIONAL SURGE PROTECTION IS RECOMMENDED FOR OUTDOOR RUNS

LONGSPAN ETHERNET & POE

ETHERNET & POE 100BASE-TX

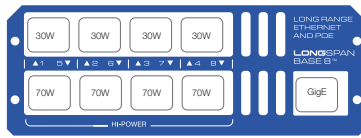━━ LONGSPAN ETHERNET & POE   ━━ ETHERNET & POE   ━━ GIGABIT ETHERNET DATA ONLY

*The diagram shows one of many possible configurations for a LONGSPAN Base 8 installation. In this example all channels are linked to standard LONGSPAN Camera units. LONGSPAN Max units would be required for higher-power POE delivery from the 70W ports. Any of these links could use a LONGSPAN Max Quad to provide additional channels at the camera end.*

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LONGSPAN Base 8™ Connector Layout

The front panel has four standard power LONGSPAN POE links on the top row and four high power POE links on the bottom row. LONGSPAN Base 8 can deliver up to 400W total POE output power. The gigabit Ethernet uplink port is also located at the front as shown.
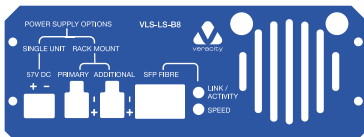
The rear panel has three DC power connectors. The first is used with a PSU for lower power POE applications. The second and third connectors are used together with a rackmount PSU for maximum power POE applications. The SFP uplink socket and status LEDs are also located at the rear.

as standard LONGSPAN devices (see LONGSPAN datasheet). The four 70W links have POE ranges for typical POE classes as indicated in the Base 8 High Power Range Table below.

Note that to exploit POE levels above 25W, LONGSPAN Max devices must be used at the camera end. LONGSPAN Base 8 is equipped with a cooling fan which automatically switches on at higher power loads. See POE reference tables below for power and distance information.

Non POE application

For network-only non-POE applications, any LONGSPAN Base 8 link can be connected to a "Lite" version of LONGSPAN, which is designed for long-distance data transmission only.

Longer range

For even more extreme distances, LONGSPAN links can automatically drop to 10Base-T operation to support a range of up to 1,050 metres (3,450ft), and still deliver sufficient POE (over Cat6) to power a 13W IP camera.

Designed for installers

All 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.

POE system design

Power budget calculations can be complex for larger POE transmission systems. Please refer to the LONGSPAN Application Notes or contact our Veracity support team for further information.

LONGSPAN Base 8™ High Power Range Table

Range for High Power LONGSPAN® Links (Lower 4 ports)

POWERED DEVICE	Cat6	Cat5e
13W	800m (2,625ft)	690m (2,265ft)
25W	500m (1,640ft)	400m (1,310ft)
40W	350m (1,150ft)	275m (900ft)
51W	245m (805ft)	190m (625ft)

LONGSPAN Base 8 Data Range Table

CABLE TYPE	Cat6	Cat5e
Data Range (100Base-TX)	820m (2,690ft)	690m (2,250ft)

POE Reference Table

POE CLASS	IEEE STANDARD	POE POWER AT PSE	POE POWER AT PD
0	802.3af	15.4W	12.95W
1	802.3af	4W	3.84W
2	802.3af	7W	6.49W
3	802.3af	15.4W	12.95W
4	802.3at	30W	25.5W
5	802.3bt	45W	40W
6	802.3bt	60W	51W
7	802.3bt	75W	62W
8	802.3bt	90W	71.3W

PSE = Power Sourcing Equipment   PD = Powered Device

TECHNICAL **SPECIFICATION**

LONGSPAN®
BASE 8

POWER INPUT

Input voltage	57V DC, Veracity PSU recommended
Power input 1	Single power input (for up to 8 x 30W devices)
Power input 2	Primary rack-mount power input (for up to 8 x 30W devices)
Power input 3	Additional rack-mount power input (for 4 x 30W plus 4 x 70W devices)
	Inputs 2 and 3 used in parallel for maximum power delivery
Maximum input current	Input 1: 6A, Input 2: 5A, Input 3: 5A
Unit power consumption	8W (idle); 20W (Maximum load)

LONGSPAN INTERFACE

Connectors	8 x RJ45
Cable	Cat6, Cat5e, Cat3, other 1/2/4-pair UTP
	Patch wiring recommended, other wiring auto-corrected
Rate	200Mbps aggregate (100Mbps full duplex) up to 820m (2,690ft) on Cat6
	20Mbps aggregate (10Mbps full duplex) up to 1,050m (3,450ft) on Cat6, auto adapts

POE OUTPUT

Output 1-4 (top row)	Maximum 30W per port (802.3at)
Output 5-8 (bottom row)	Maximum 70W per port (802.3bt)
Total POE output	Maximum 400W combined

ETHERNET INTERFACE

Connector/cable	RJ45 / Patch or crossover, auto-detect
Rate	1000Base-TX (Gigabit Ethernet)
SFP Interface	Gigabit-capable SFP adaptor interface (fibre option)

LED INDICATORS

Ethernet RJ45	Yellow: Link / Activity, Green: Power good
LONGSPAN link RJ45 x 8	Yellow: Link / Activity, Green: 10/100Mbps
SFP socket LED	Top Green: On - Power on, fibre detected; Blinking - Link / Activity
	Bottom Green: On - 1000Mbps; Red: On - 10/100Mbps

PHYSICAL/ENVIRONMENTAL

Dimensions	L 154mm x W 110mm x H 40mm [6.0in x 4.3in x 1.6in]
Weight	456g [16.08oz]
Operating temperature	0ºC to +40ºC [32ºF to +104ºF]
Storage temperature	-20ºC to +70ºC [-4ºF to +158ºF]
Relative humidity	85% non-condensing
Compliance	CE, FCC, ROHS and BS EN 50121-4 (rail and metro)

PRODUCT CODES

VLS-LS-B8	**LONGSPAN Base 8 device with 8 integrated LONGSPAN base channels**
VLS-LSM-C4	LONGSPAN Max Quad Camera device, with high power POE
VLS-LSM-B	LONGSPAN Max Base device, with high power POE
VLS-LSM-C	LONGSPAN Max Camera device, with high power POE
VLS-1P-B	LONGSPAN Base device with POE for base side
VLS-1P-C	LONGSPAN Camera device with POE for camera side
VLS-1N-L	LONGSPAN Lite device without POE
VPSU-12V	12V DC power supply for LONGSPAN Lite device
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
VRM-TRAY-BASE	1U Rackmount tray and fascia for 4 x Base 8 Units

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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