

8-PORT HI-POE EXTENDER
LONGSPAN®
 BASE 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® rackmountable 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

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

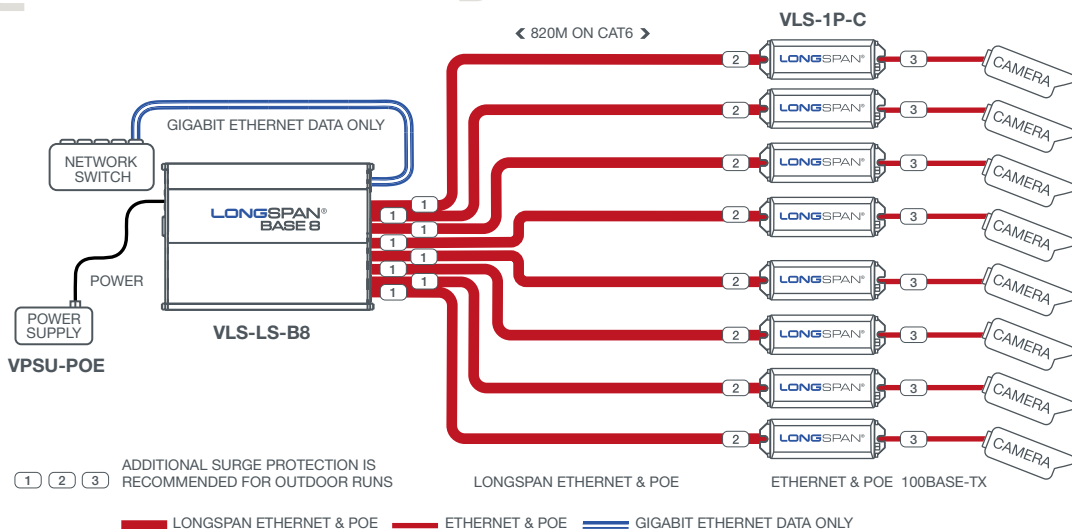
The Base 8 variant of the LONGSPAN range integrates eight long-range LONGSPAN links with a gigabit Ethernet switch for scalable, high-density, multi-channel installations. Each rack-mountable unit requires only one main network switch port per eight LONGSPAN channels, saving on overall costs. An SFP (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

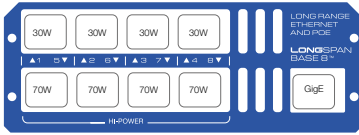


The diagram shows one of many possible configurations for a LONGSPAN Base 8 installation. In this example all channels are

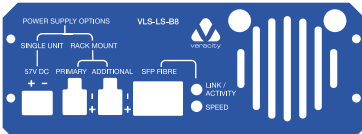
linked to standard LONGSPAN Camera units. LONGSPAN Max units would be required for higher-power POE delivery from

the 70W ports. Any of these links could use a LONGSPAN Max Quad to provide additional channels at the camera end.

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) |

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 |

LONGSPAN Base 8 Data Range Table

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

PSE = Power Sourcing Equipment PD = Powered Device

TECHNICAL SPECIFICATION

LONGSPAN®
BASE 8

| | | |
|-------------------------------|---|---|
| POWER INPUT | <p>Input voltage Power input 1 Power input 2 Power input 3</p> <p>Maximum input current Device power consumption</p> | <p>57V DC, Veracity PSU recommended Single power input (for up to 8 x 30W devices) Primary rackmount power input (for up to 8 x 30W devices) Additional rackmount power input (for 4 x 30W plus 4 x 70W devices) Inputs 2 and 3 used in parallel for maximum power delivery Input 1: 6A, Input 2: 5A, Input 3: 5A 8W (idle); 20W (Maximum load)</p> |
| LONGSPAN INTERFACE | <p>Connectors Cable</p> <p>Rate</p> | <p>8 x RJ45 Cat6, Cat5e, Cat3, other 1/2/4-pair UTP Patch wiring recommended, other wiring auto-corrected 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</p> |
| POE OUTPUT | <p>Output 1-4 (top row) Output 5-8 (bottom row) Total POE output</p> | <p>Maximum 30W per port (802.3at) Maximum 70W per port (802.3bt) Maximum 400W combined</p> |
| ETHERNET INTERFACE | <p>Connector/cable Rate SFP Interface</p> | <p>RJ45 / Patch or crossover, auto-detect 1000Base-TX (Gigabit Ethernet) Gigabit-capable SFP adaptor interface (fibre option)</p> |
| LED INDICATORS | <p>Ethernet RJ45 LONGSPAN link RJ45 x 8 SFP socket LED</p> | <p>Yellow: Link / Activity, Green: Power good Yellow: Link / Activity, Green: 10/100Mbps Top Green: On - Power on, fibre detected; Blinking - Link / Activity Bottom Green: On - 1000Mbps; Red: On - 10/100Mbps</p> |
| PHYSICAL/ENVIRONMENTAL | <p>Dimensions Weight Operating temperature Storage temperature Relative humidity Compliance</p> | <p>L 154mm x W 110mm x H 40mm [6.0in x 4.3in x 1.6in] 456g [16.08oz] 0°C to +40°C [32°F to +104°F] -20°C to +70°C [-4°F to +158°F] 85% non-condensing CE, FCC, UKCA, ROHS and BS EN 50121-4 (rail and metro)</p> |
| PRODUCT CODES | <p>VLS-LS-B8 VLS-LSM-C4 VLS-LSM-B VLS-LSM-C VLS-1P-B VLS-1P-C VLS-1N-L VPSU-12V VPSU-POE-100-UK/EU/US VPSU-POE-240-UK/EU/US VPSU-1U-57V-UK/EU/US VRM-TRAY-BASE</p> | <p>LONGSPAN Base 8 device with 8 integrated LONGSPAN base channels LONGSPAN Max Quad Camera device with high power POE LONGSPAN Max Base device with high power POE LONGSPAN Max Camera device with high power POE LONGSPAN Base device with POE for base side LONGSPAN Camera device with POE for camera side LONGSPAN Lite device without POE 12V DC power supply for LONGSPAN Lite device 100W 57V DC power supply with power cable for UK, EU or US 240W 56V DC power supply with power cable for UK, EU or US 1U rear-mounted 400W PSU for multi-channel installations & cable for UK, EU or US 1U Rackmount tray and fascia for 4 x Base 8 Devices</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.



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