

Vi27000

Ethernet & PoE Transmitter over Single-Pair Wires

Features

- Transmits Data and PoE Power up to 3,000 feet (914 m) over Single-Pair Wires
- Compatible with UTP, STP and untwisted pairs
- Provides Network speeds up to 100Mbps
- Compact design for easy installation in tight spaces
- Requires no switch setting or network programming
- Mega-Pixel Certified (MPC™) High data rate, ideal for high bandwidth requirements of Mega-pixel cameras and multiple IP cameras systems
- Type tested to RFC-2544 TCP/IP network bandwidth packet transmission standards
- Operates at wide temperature range -30°C to +65° conforming to NEMA-TS2 testing standards
- Operates with Single and 4-port model receivers
- 4-port receiver models can be placed on rackmount shelf to make four to sixteen port configuration



Applications

- Elevator traveler cable, CCTV, and emergency phone
- Utilizing virtually any existing building wiring for deploying IP cameras
- Retrofitting UTP analog CCTV installations into Digital systems

Vigitron's OmniCopper™ Vi27000 Ethernet and PoE transmitter brings new performance standards to the growing need for high speed transmission of full bandwidth Ethernet and PoE power over extended distances of Single-Pair Wires. It operates in conjunction with single port Vi27001 or 4-port Vi27004 receivers over virtually any 2 conductor wires reliably. The Vi27000's unique transmission technology eliminates the potential for cross talk resulting in the perfect solution for bundled cable runs used in many elevator and building communication systems. Its PoE performance confirms to IEEE 802.3af/at standards.

Power can be provided from a PoE source or a DC power supply to the Vi27001 receiver at the control site to eliminate the need for local power supply at the camera location and increase system reliability.

The Vi27000 can provide or pass through PoE power, up to 36W compliant to IEEE802.3.at. Its PoE capability eliminates the need for additional local power supply at the camera site and provide power to both remote extender and the camera. It is type tested under NEMA-TS2 environmental standards for extended temperature operation between -30°C to +65°C. The Vi27000 series is the perfect solution for extended distance data and power transmission for elevators, warehouses, parking lots, campuses, casinos, and many more.

OmniCopper Vi27000 series is compact and can easily fit inside most cameras housings and junction boxes. Best of all, it is MegaPixel Certified (MPC™), type tested to network packet performance standards, and major camera brand compatibility tested to assure you error free and reliable operations.

Installation cost savings, tested and proven design and performance go into making the Vi27000 series the perfect solution for building CCTV wiring.



The Smart Choice for Transmission Solutions

www.vigitron.com

Technical Specification*

Electrical

| | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet Interface | Standard 10/100BaseT |
| Data Rate | Auto select 10/100 Mbps |
| Cable Type** | Single Pair 24/2 to 16/2 : Up to 3,000 feet (914m) |
| Power Source | PoE Input, 36W Max. or Local Power Supply, 48-57VDC |
| PoE Output | 36W Max. |
| Power Consumption | 3.5W using Local power supply or PoE |
| Status LEDs | Power On : Green LED Status : Blue LED PoE : Green LED Standard Ethernet Traffic, Link,: Orange LED |
| Connectors | Standard Ethernet : RJ-45 Connector Single Pair Cable : Detachable 2-pin Terminal Block Power: Barrel type DC005, 5.5 x 2.1mm |
| RFC | 2544 TCP/IP Packet Transmission 768 UDP, 2068 HTTP, 793 TCP 791 IP, 1783 TFTP, 894 IP over Ethernet |
| PoE Compatibility | IEEE 802.3af, IEEE 802.3at |

Regulatory

| | |
|---------------|----------------------------------|
| FCC | Part 15, Subpart B, Class B 2010 |
| Safety | CE |
| Environmental | RoHS, WEEE |

Environmental

| | |
|-------------|---------------------------------------------------------------------------|
| Humidity | 0 to 95%, non-condensing |
| Temperature | Operating: -30°C to +65°C per NEMA-TS2 testing Storage: -40°C to +85°C |

Mechanical

| | |
|------------|--------------------------------------------|
| Dimensions | 0.98x1.76x3.46 in., 2.5x4.5x8.8 cm (HxWxL) |
| Weight | 0.225 lb, 102 g |
| Material | Extruded Aluminum |

* Specifications subject to change without notice.

**Caution must be taken not to exceed the current capacity of the installed wire.
Actual performance will depend on type and quality of cables. Cables must be direct runs as splices and jumpers will result in lower performance.

Ordering Information

Part No. Description

| | |
|----------------|----------------------------------------|
| Vi27000 | Single-pair Ethernet & PoE Transmitter |
|----------------|----------------------------------------|

Related Products

Part No. Description

| | |
|----------------|--------------------------------------------|
| Vi27001 | 1-port Single-pair Ethernet & PoE Receiver |
| Vi27004 | 4-port Single-pair Ethernet & PoE Receiver |
| Vi5000R | Rackmount tray, Holds 4 x Vi27004s |
| Vi5000B | Blank panel for Vi5000B |
| Vi0017 | 48VDC Wall-mount Power Supply |
| Vi1120 | 48VDC Desktop Power Supply |



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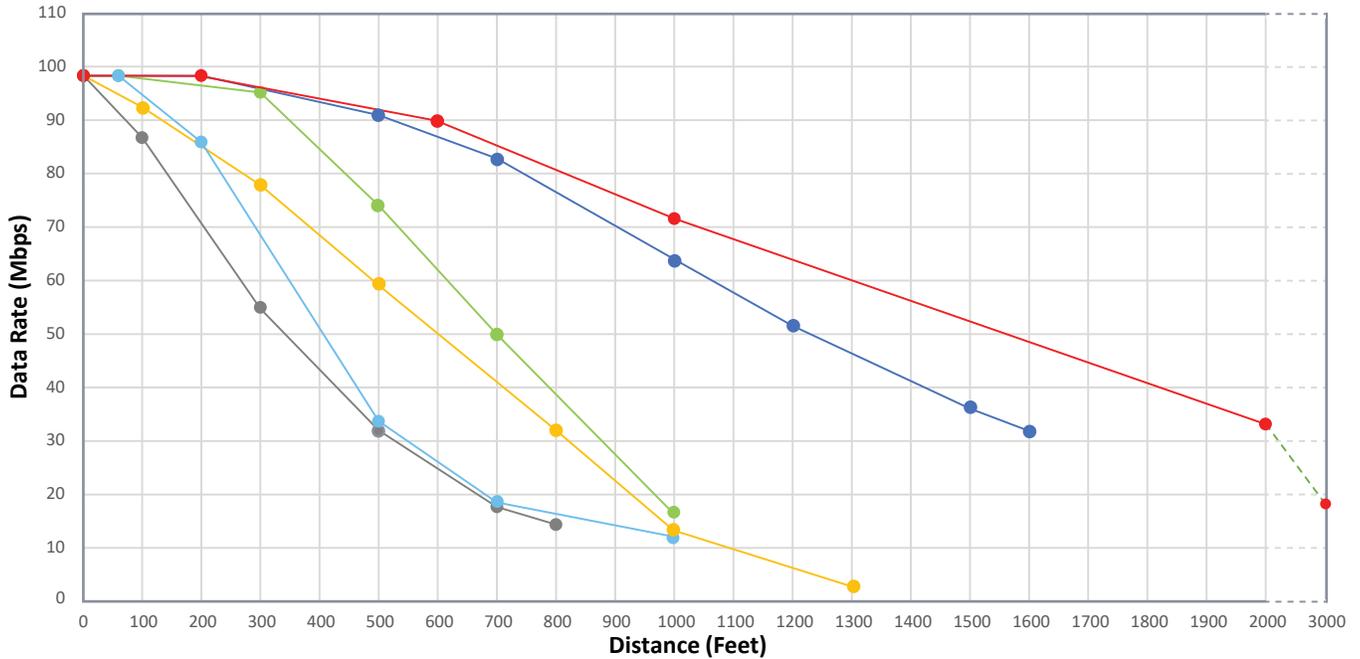
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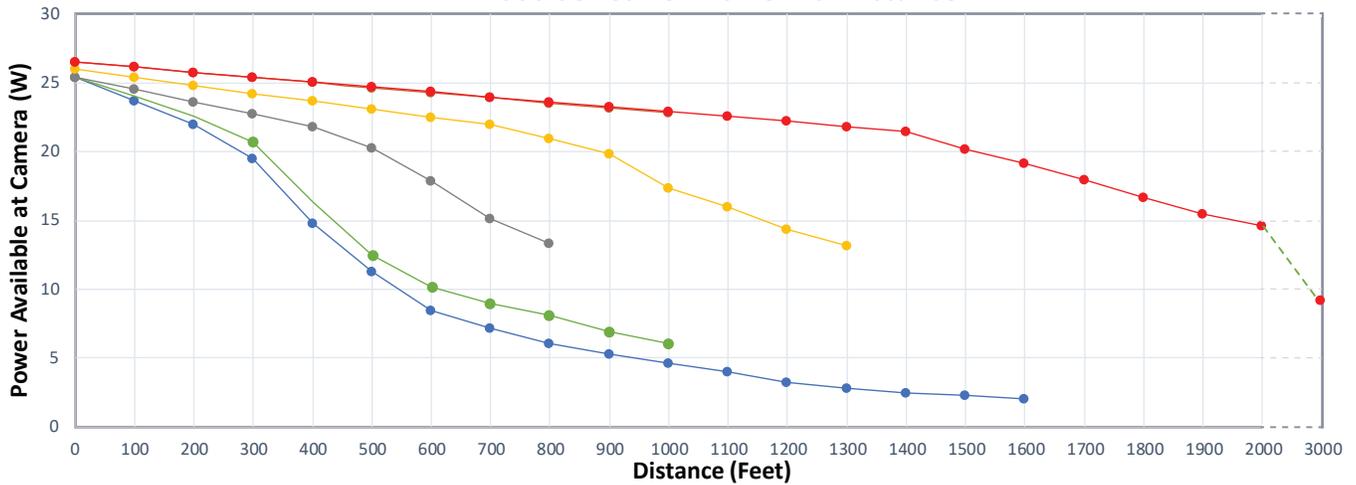
Technical Specification*

Distance and PoE Charts**

Vi27000 Series Data Rate Vs. Distance Chart



Vi27000 Series PoE Power Vs. Distance

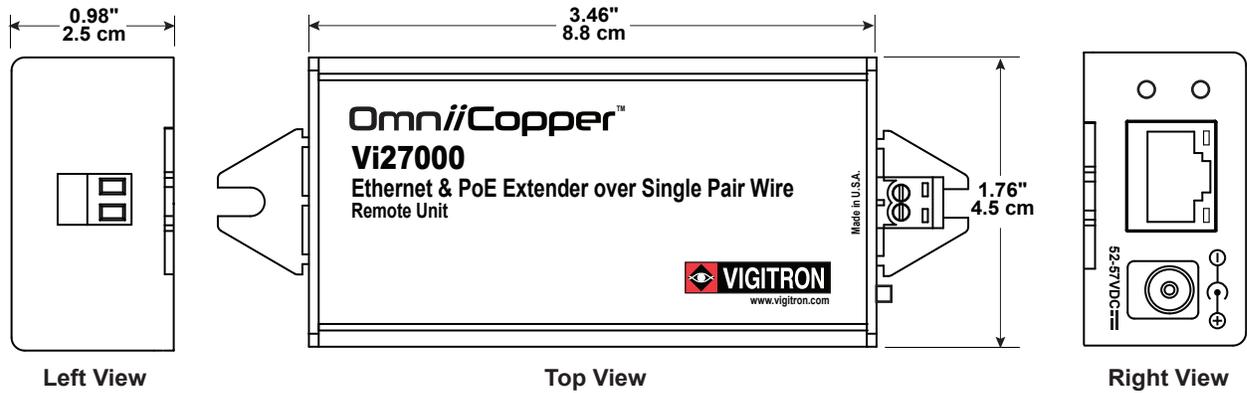


- 24/2 AWG Twisted (Cat5)
- 24/2 AWG Untwisted
- 22/2 AWG Untwisted
- 20/2 AWG Untwisted
- 18/2 AWG Untwisted**
- 18/2 AWG Solid twisted

** The 18/2 AWG Untwisted and 18/2 AWG Solid twisted overlap on PoE chart.
 For distance testing, a Vigitron 36W PoE Midspan with 57VDC output is used as PoE source for the Vi27001.
 Input PoE power and applied Voltage will affect PoE Distance performance. For long distance PoE applications power supplies with 57VDC output are recommended.



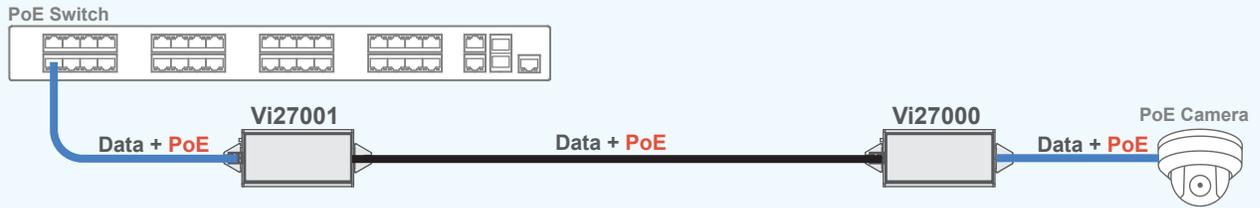
Mechanical Drawings



Application Drawings

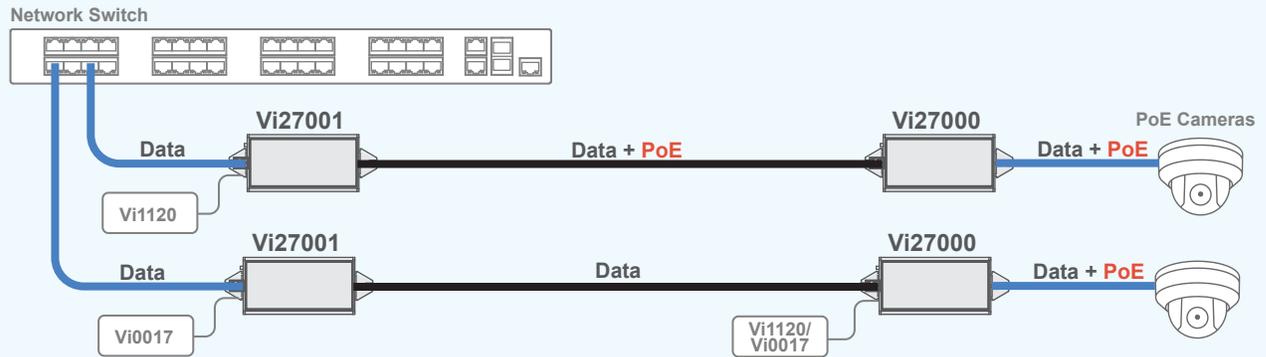


Transmitting Ethernet and PoE over Single Pair Wires



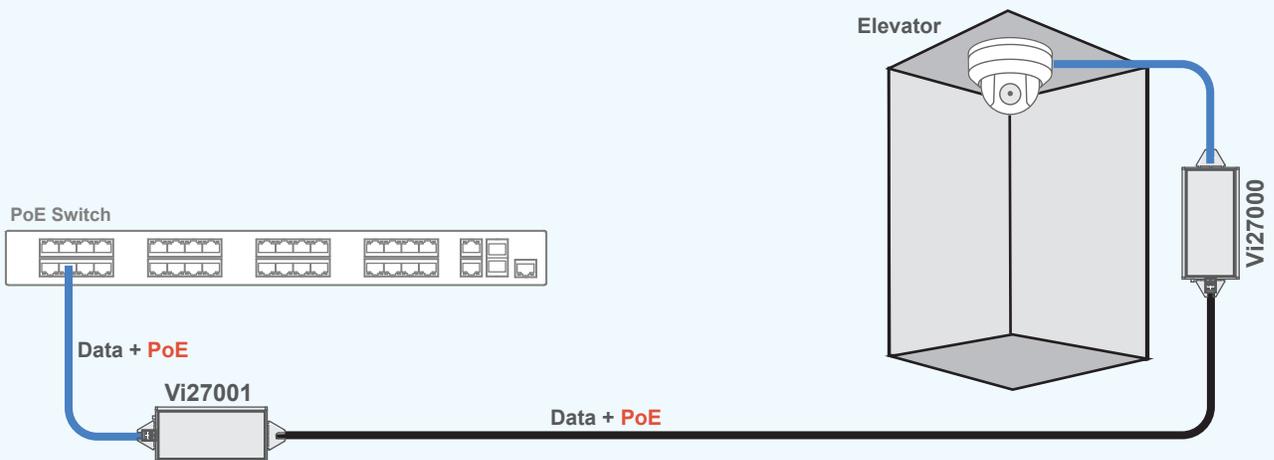
The Vi27000 series and a IP camera can be powered by a PoE switch.

Transmitting Ethernet and PoE over Single Pair Wires using local power supplies



Both the Vi27001 and the Vi27000 can use local power supplies to power themselves and provide PoE to the IP camera. The Vi27001 receiver can use a local power supply to power Vi27000 transmitter and the IP camera using PoE.

Connecting PoE Cameras over Single Pair Wires in Elevators



The Vi27000 series can transmit Ethernet and PoE over a wide variety of single pair wires.