

# Vi27001

## OmniiCopper™ 1-Port Ethernet & PoE Receiver over Single-Pair Wires

### Features

- Receives Data, Video 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
- Type tested for -30°C to +65°C temperature range under conforming to NEMA-TS2 testing standards
- Single and 4-port models designed Four channel to sixteen rack carry design
- USA designed and manufactured
- Limited Life Time Warranty.



### 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

Vigtron's OmniiCopper™ Vi27001 Ethernet and PoE Receiver 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 the Vi27000 Transmitter over virtually any 2 conductor wires reliably. The Vi27001'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 single PoE source or a DC power supply to the Vi27001 (Rx) at the control site to eliminate the need for local power supply at the camera location and increase system reliability.

The Vi27004 is a Four-Port Receiver. Up to four Vi27004s can be placed within Vigtron's Vi5000R Rack Mount Tray to create a 4, 8, 12 or 16-Port rack mount receiver solution.

The Vi27001 can provide or pass through PoE power up to 36W compliant to IEEE802.3at to power the connected IP 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.

The OmniiCopper™ Vi27000 Series 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.



# 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 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*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

## Accessories

Vi0017 48VDC or Vi1120 57VDC wall-mount power supplies (optional)

\* Specifications subject to change without notice.

\*\*Caution must be taken not to exceed the current capacity of the installed wire.

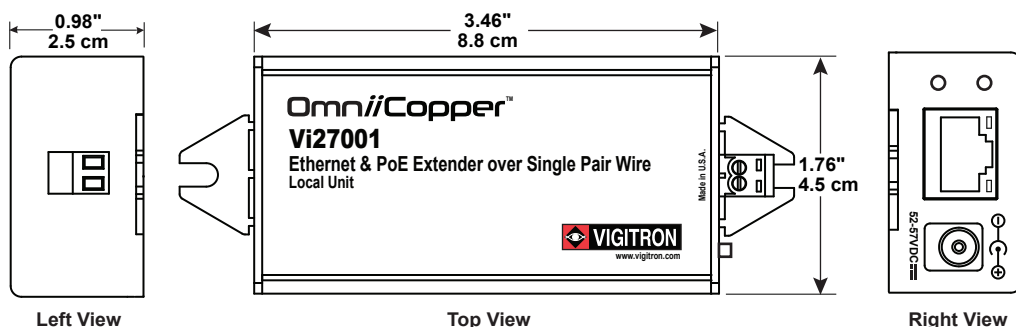
Actual performance will depend on type and quality of cables. Cables must be direct runs as splices and

## Ordering Information

### Part No. Description

<b>Vi27000</b>	<b>Single-Pair Ethernet &amp; PoE Transmitter</b>
<b>Vi27001</b>	<b>1-Port Single-Pair Ethernet &amp; PoE Receiver</b>
<b>Vi27004</b>	<b>4-Port Single-Pair Ethernet &amp; PoE Receiver</b>
<b>Vi5000R</b>	<b>Rack Mount Tray, Holds 4 x Vi27004s</b>
<b>Vi5000B</b>	<b>Blank Panel for Vi5000B</b>

## Mechanical Drawings



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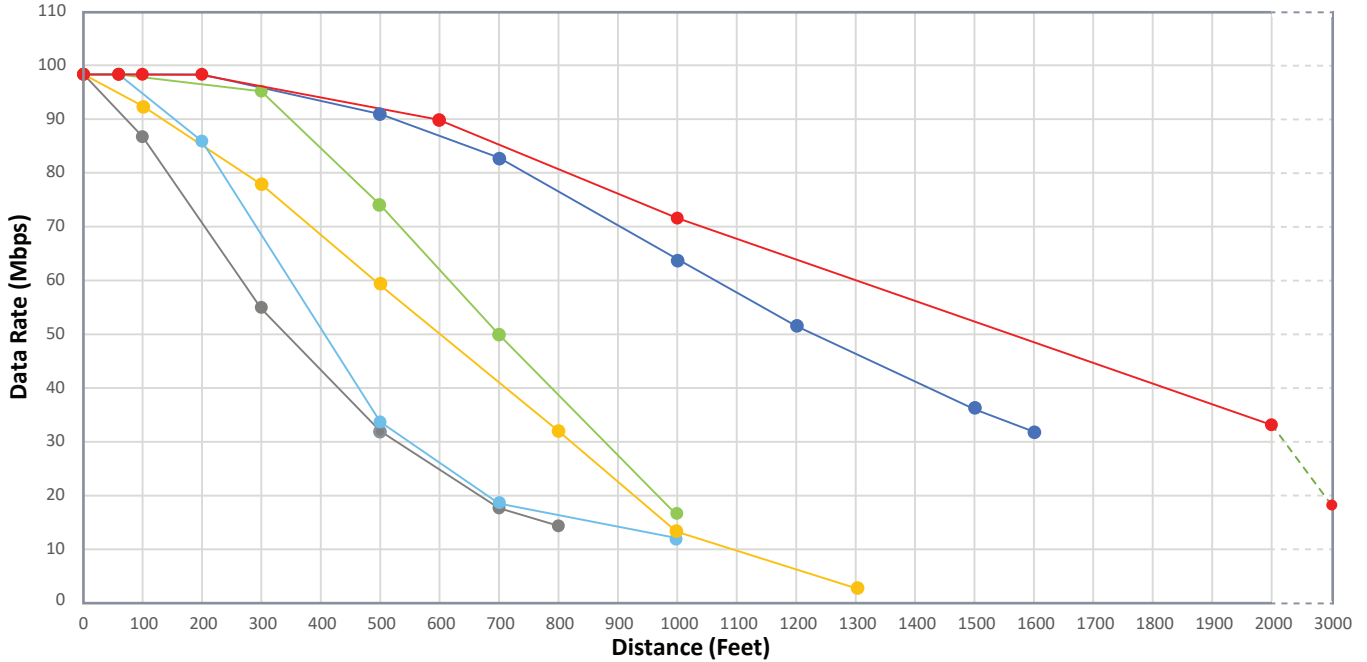
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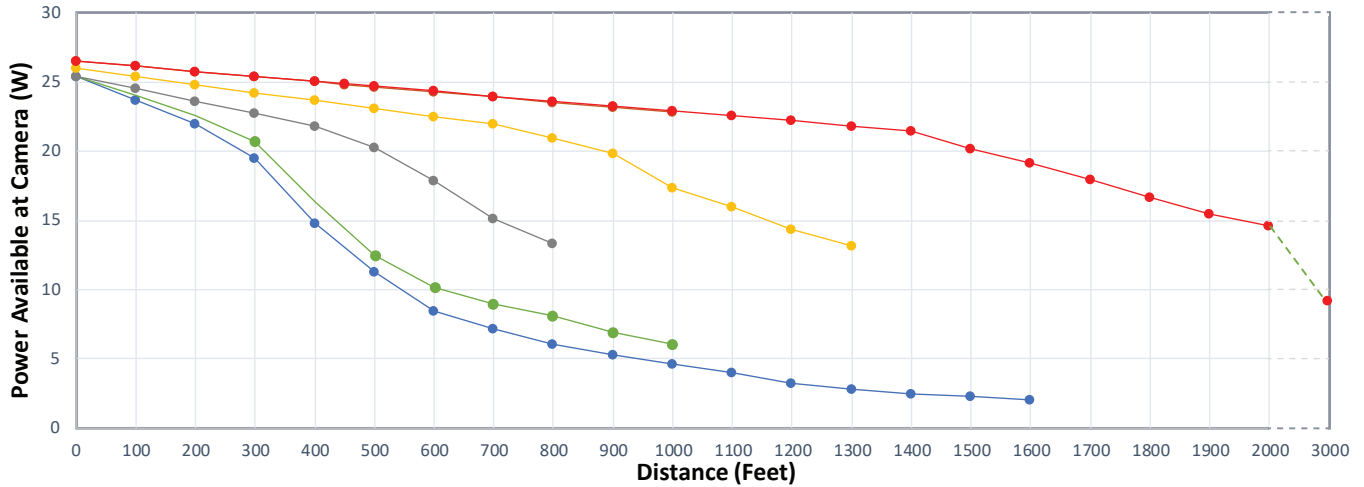
# Technical Specification\*

## Distance and PoE Charts\*\*

### Vi27000 Series Data Rate Vs. Distance Chart



### Vi27000 Series PoE Power Vs. Distance

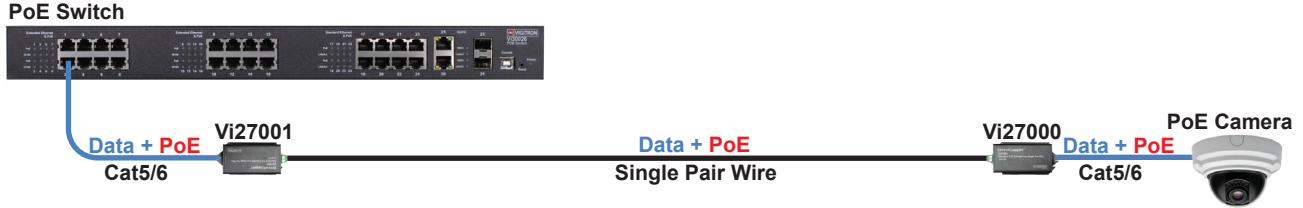


- 24/2 AWG Twisted Unshielded (Cat5)
- 24/2 AWG Untwisted Unshielded
- 22/2 AWG Untwisted Unshielded
- 20/2 AWG Untwisted Unshielded
- 18/2 AWG Untwisted Unshielded\*\*
- 18/2 AWG Solid Twisted Unshielded

\*\* 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.



# Application Diagrams



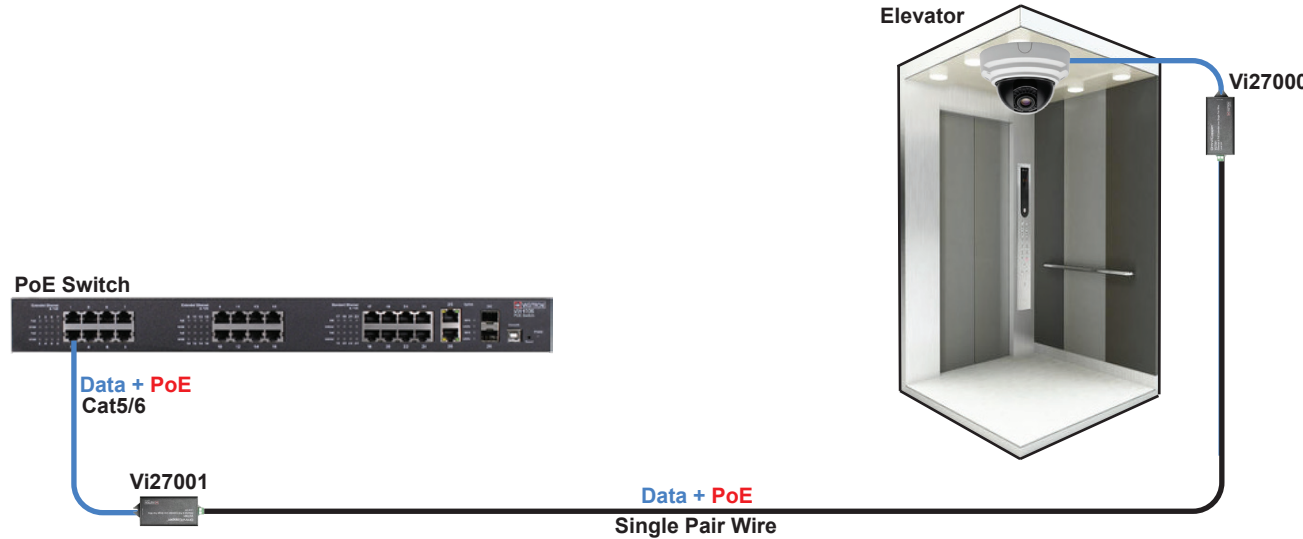
The Vi27000 series and a IP camera can be powered by a PoE switch.



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



Both the Vi27001 and the Vi27000 can use local power supplies to power themselves and provide PoE to the IP camera.



The Vi27000 series enables transmitting Ethernet and PoE over a wide variety of single pair wires.