

The OmniCopper™ Vi27000 Series is a revolutionary data transmission solution that extends full-duplex High-Speed Ethernet and PoE over Single-Pair Wire infrastructures. The Vi27000 is a transmitter that operates in conjunction with 1-Port Vi27001 or 4-Port Vi27004 Receivers over virtually any 2 conductor wires reliably. The Vi2700X's unique transmission technology eliminates the potential for cross talk, resulting in the perfect solution for bundled cable runs that are used in many elevators and building communication systems.

Up to 36W power can be provided from a PoE source or a DC power supply at the Vi27001 (Rx) to the control side, eliminating the need for a local power supply at the camera location. The Vi27000 Series operates at the extended temperature range -30°C to +65°C.

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

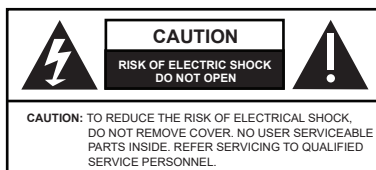
## Important Safety Warning

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Install in accordance with the manufacturer's instructions.
- This installation should be made by a qualified service person and should conform to all local codes.
- DO NOT bundle low-voltage signals in the same conduit as high-voltage wiring.
- To reduce the risk of fire or electrical shock, do not expose these products to rain, moisture, dripping or splashing.
- No objects filled with liquids, such as vases, shall be placed on Vigitron equipment.
- DO NOT install the unit in a place where the operating ambient temperature exceeds 65° C.
- Make sure that the external power supply output voltage is in the recommended range.
- Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including DVRs) that produce heat.
- Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power supply cord or plug is damaged, liquid has been spilled, or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The mains plug is used as the disconnect device and shall remain readily operable.

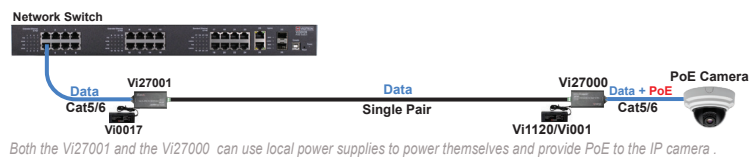
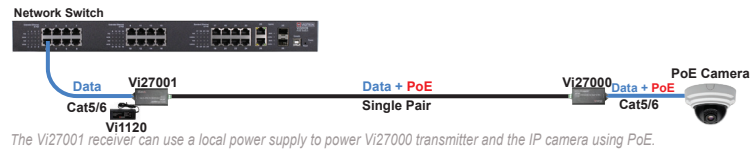
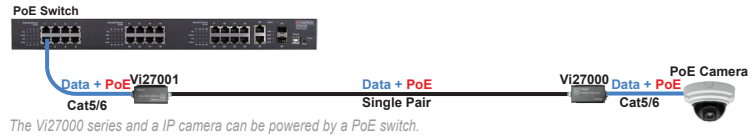
**⚠ WARNING!** - To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.

**⚠ WARNING!** - This apparatus is a Class I product. This product must be connected to a mains socket outlet thru an AC to DC Power supply.

**⚠ WARNING!** - The mains plug is used as the disconnect device and shall remain readily operable.



## Application Drawing



## IP Camera-end Installation

- Install the Vi27000 "Remote Unit" near the Camera end.
- Connect the IP camera RJ45 connector to the 10/100BaseT Ethernet Port of Vi27000 using a standard Cat5/6 cable of maximum 100 m .
- Connect one end of the long Single Pair Wire to the 2-pin Terminal block of Vi27000. Make sure the Single Pair Wire polarity matches on the Vi27001 End.

The link LED on the 10/100 connector should be "ON" to indicate proper connection between the camera and Vi27000.

The PoE LED on the 10/100 connector should be "ON" when PoE is used to power up the camera. The Status LED on the Single Pair Wire side should be "ON" and flashing to indicate proper connection.

## Ethernet Switch-end Installation

- Install the Vi27001 "Local Unit" near the network switch.
- Connect the RJ45 connector of the Ethernet switch to the 10/100BaseT Ethernet port of Vi27001 using a standard Cat5/6 cable of maximum 100 m.
- Connect one end of the long Single Pair Wire to the to the 2-pin Terminal block of Vi27001. Make sure the Single Pair Wire polarity matches on the Vi27000 End.

The link LED on the 10/100 Ethernet connector should be "ON" to indicate proper connection between the switch and Vi27001. Also the Status LED on the Single Pair Wire side should be "ON" and flashing to indicate proper connection.

-If the Vi27001 receives power using PoE, make certain the power adaptor is not connected. The Vi27000 and camera will receive power from the PSE source.

-If a PSE source such as a PoE network switch is not available, external power must be provided to the Vi27001.

### CAUTION:

If an external power supply adaptor is plugged into Vi27000 or Vi27001, the unit will not use or pass thru PoE power from the PoE switch. It will use the power from the plugged in DC power supply.

# Technical Specifications\*

## 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*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

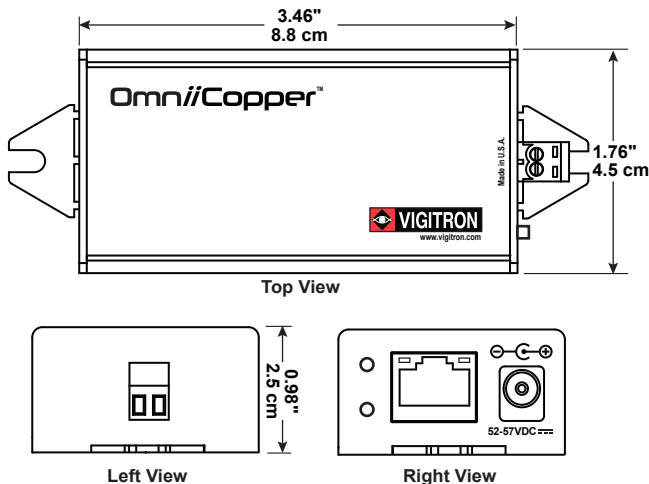
## Mechanical

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.



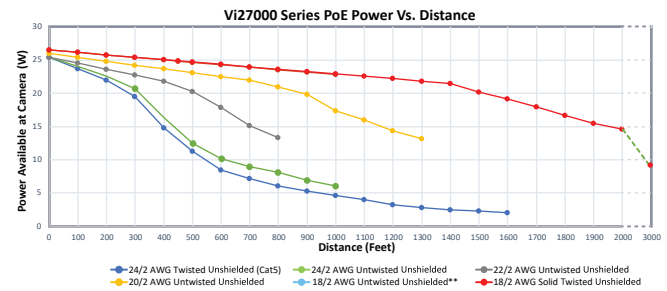
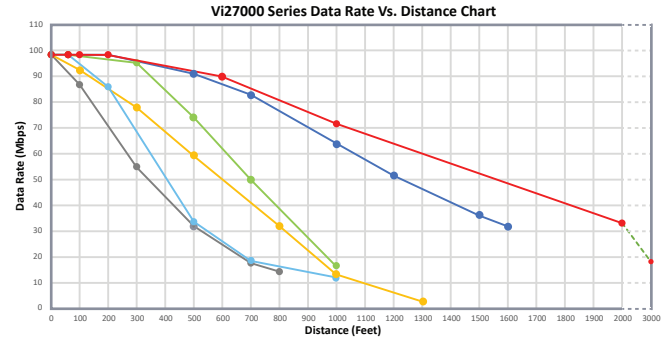
## Drawings



# Ethernet Status LEDs

LED Name	Color	Status	Function
Power	GREEN	OFF	Power is OFF
		ON	Power is ON
Status	BLUE	OFF	No Connection
		FLASHING	Connection OK
Link/Act	ORANGE	OFF	No connection
		FLASHING	Connection is OK with Traffic
PoE (Remote Side)	GREEN	OFF	No PoE
		ON	PoE is ON

## Data/PoE Distance\*\*\*



\*\* 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.

## Ordering Information

### Description

<b>Vi27000</b>	<b>1-Port Single-Pair Wire Ethernet &amp; PoE Extender, Remote Unit</b>
<b>Vi27001</b>	<b>1-Port Single-Pair Ethernet &amp; PoE Extender, Local Unit</b>
<b>Vi27004</b>	<b>4-Port Single-Pair Ethernet &amp; PoE Extender, Local Unit</b>

## Limited Lifetime Warranty

Vigatron, Inc. warrants that all Vigatron products ("Product"), if used in accordance with these instructions, will be free of defects in material and workmanship for lifetime defined as the duration period of time until product end of life is announcement. After which Vigatron will continue to provide warranty services for a period of 3 years. Period covering valid warranty will be determined by proof of purchase in the form of an invoice from an authorized Vigatron dealer.

Warranty will only be provided for as long as the original end user purchaser owns the product. Warranty is not transferrable. At Vigatron's option, defective product will be repaired, replaced or substituted with a product of equal value. This warranty does not apply if, in the judgment of Vigatron, Inc., the Product fails due to damage from shipment, handling, storage, accident, abuse or misuse, or if it has been used or maintained not conforming to Product manual instructions, has been modified, or serial number removed or defaced. Repair by anyone other than Vigatron, Inc. or an approved agent will void this warranty. Vigatron, Inc. shall not under any circumstances be liable to any person for any incidental, indirect or consequential damages, including damages resulting from use or malfunction of the product, loss of profits or revenues or costs of replacement goods. The maximum liability of Vigatron, Inc. under this warranty is limited to the original purchase price of the Product only.



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