



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 4-port Vi27004 receiver 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 used in many elevator and building communication systems.

Up to 36W power can be provided from a PoE source at each port to eliminate the need for a local power supply at the camera location. Vi27004 requires a 12VDC power supply to operate. The Vi27004 operates at extended temperature range -30°C to +50°C.

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

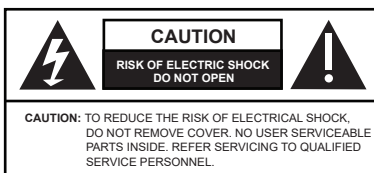
Important Safety Warning

- 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 50°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.

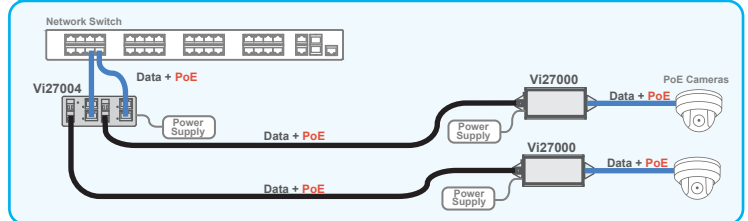
⚠ WARNING! - This apparatus is a Class I product. This product must be connected to a mains socket outlet thru an AC to DC Power supply.

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



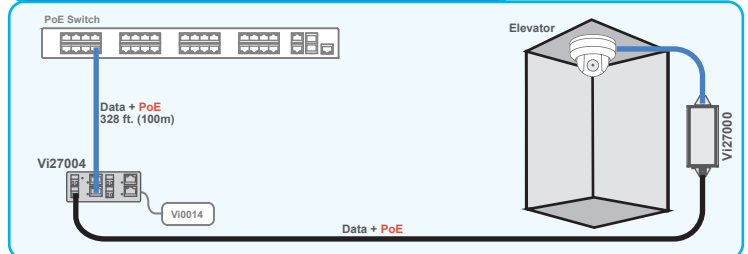
Application Drawing

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



Both the Vi27004 and the Vi27000 can use local power supplies to power themselves and provide PoE to the IP camera.

Connecting PoE Cameras over Single Pair Wires in Elevators



The Vi27000 series enables transmitting Ethernet and PoE over a wide variety of single pair wires and is ideal for Elevator Applications.

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 Vi27004 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 Vi27004 "Local Unit" near the network switch.
- Power up the Vi27004 with 12VDC Power Supply.
- Connect the RJ45 connector of the Ethernet switch to the 10/100BaseT Ethernet ports of Vi27004 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 Vi27004. Make sure the Single-Pair Wire polarity matches to the Vi27000 End.

The link LED on the 10/100 Ethernet connector should be "ON" and flashing to indicate proper connection between the switch and Vi27004 port. Also the Status LED on the Single-Pair Wire side should be "ON" and flashing to indicate proper connection.

- The Vi27004 passes through PoE from PoE Switch to power the Vi27000 and camera.
- If a PSE source such as a PoE network switch is not available, external power must be provided to the Vi27000 by a local power supply.

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.

The Power LED on the Vi27004 only indicates that the Vi27004 is powered up, it does not indicate the PoE is outputting. To View PoE Status, view indication on the PoE switch on or PoE LED indicator on the Vi27000.

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)
PoE Output	36W Max. per port
Power Consumption	12VDC at 14W
Status LEDs	Power On: Green LED Status: 4 x Blue LED Standard Ethernet Traffic, Link,: 4 x Orange LED
Connectors	Standard Ethernet : 4 x RJ-45 Connector Single Pair Cable : 4 x 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	1.66 x 4.08 x 4 inch, 4.2 x 10.4 x 10.2 cm (HxWxL)
Weight	0.758 lb, 344 g
Material	Extruded Aluminum

Accessories

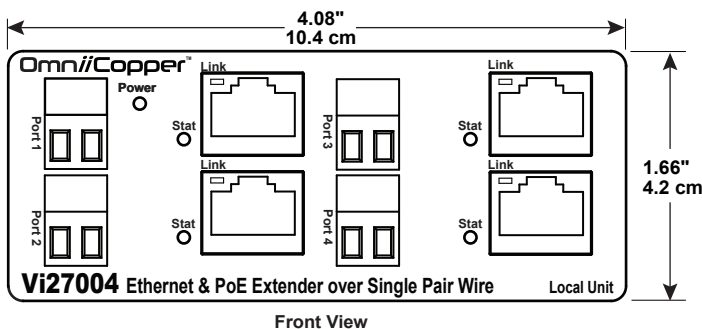
Vi0014 12VDC wall-mount power supplies (optional)

* 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 jumpers will result in lower performance.

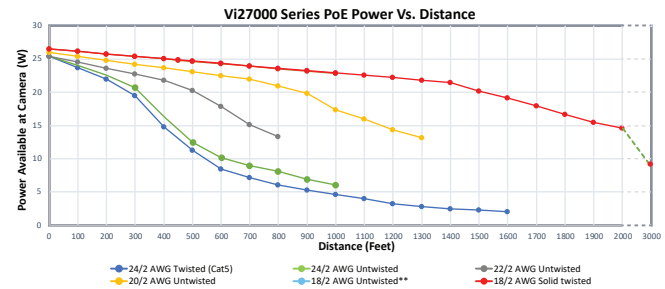
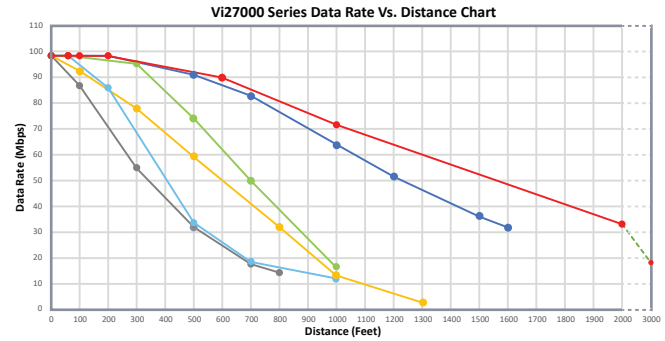
Drawings



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 Vi27004. Input PoE power and applied Voltage will affect PoE Distance performance.

Ordering Information

Part No. Description

Vi27004	4-port Single-pair Ethernet & PoE Receiver
----------------	--

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.