

Vi2301A Ethernet Extender over UTP Installation Manual

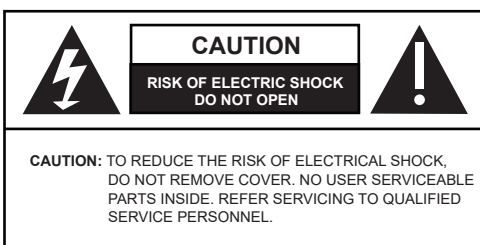
The MaxiiCopper Model Vi2301A is a revolutionary data transmission device that extends full-duplex High-Speed Ethernet over existing UTP infrastructures. It extends 10BaseT signals up to 3,000 feet (914 m) and 100BaseT up to 2,100 feet (640m). It employs *MaxiiCopper* innovative and unique Ethernet extension technology that is designed to take full advantage of high-bandwidth networking cables and maintain a full-duplex 10 or 100 Mb/s Ethernet connection up to the maximum range with minimum transmission error and latency.

The Vi2301A can connect multiple remote network devices such as Mega-pixel IP cameras or VoIP to a central LAN switching fabric with ease. Its dual-rate capability feature provides an easy way to balance the best possible network throughput and long-reach distance design.

The Vi2301A is a transceiver device and it needs to be deployed on both ends of the UTP cable. It is equipped with LEDs to provide link status and data rate. No IP setting or configurations are required and it is completely transparent to the corporate IP network and higher layer protocols. The UTP cable needs to be point to point without any branches. Multiple segments can be joined together using UTP couplers.

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 UTP or Coax 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 75° 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.



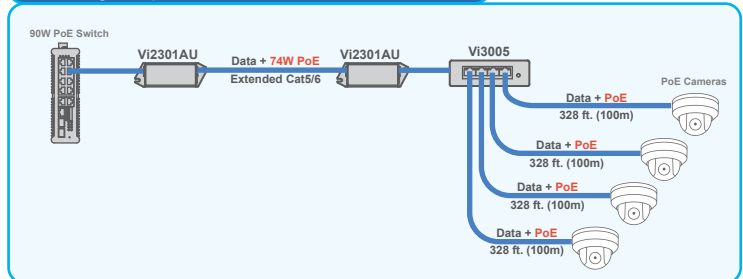
⚠ WARNING! - To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.

⚠ 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

Connecting Multiple PoE Cameras at Extended Distances



The Vi2301As and Vi3005 can be used to connect multiple PoE cameras at extended distances.

IP Camera-end Installation

- If you like to power the unit using a local power supply connect the 12VDC power supply to the power connector of the Vi2301A. A power adapter connector is provided to simplify connection.
- If no power supply is plugged in the unit will use PoE. When using PoE the camera has to be powered by PoE also.
- Connect the IP camera RJ45 connector to the "10/100BaseT Ethernet" port of Vi2301A using a standard Cat5/6 cable of maximum 100 m in length.
- Connect one end of the long UTP cable to the "Extended Ethernet" RJ45 connector of Vi2301A.

The link LED on the 10/100 connector should be "ON" to indicate proper connection between the camera and Vi2301A.

Ethernet Switch/NVR-end Installation

- If you like to power the unit using a local power supply connect the 12VDC power supply to the power connector of the Vi2301A. A power adapter connector is provided to simplify connection.
- If no power supply is plugged in the unit will use PoE. When using PoE the camera has to be powered by PoE also.
- Connect the RJ45 connector of the Ethernet switch to the 10/100BaseT Ethernet port of Vi2301A using a standard Cat5/6 cable of maximum 328 feet (100 m) in length.
- Connect one end of the long UTP cable to the "Extended Ethernet" RJ45 connector of Vi2301A.

The link LED on the 10/100 Ethernet connector should be "ON" to indicate proper connection between the switch and Vi2301A. While the Link LED, Orange for 100BaseT and Green for 10BaseT, in a steady state will indicate confirmed connection between extenders.

Technical Specifications*

Electrical

Ethernet Interface	Standard 10/100BaseT
Ethernet Rate	Auto selectable 10/100 Mb/s
UTP**	100 Ohm, 3000 feet (914 m) at 10BaseT 2,100 feet (640 m) at 100BaseT
Power Supply	12 VDC, 150 mA maximum
Connectors	Ethernet Interface: RJ-45 Connector Extended Interface: RJ-45 Connector Power: IEC380-8 inlet

Environmental

Humidity	0 to 95%, non-condensing
Temperature	Operating: -40°C to +75°C Storage: -40°C to +80°C

Mechanical

Dimensions	1.15x1.6x3.15 in., 3.0x4.0x8.0 cm (HxWxL)
Weight	0.212 lb, 96 g
Material	Extruded Aluminum

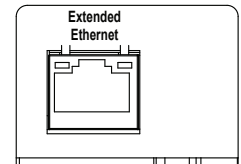
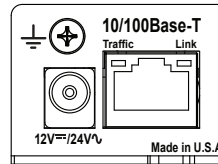
Accessories

12 VDC wall-mount power supply (optional)

*Specifications subject to change without notice.

**Distance figures are obtained using in house testing mirroring installations. Factors such as cabling, connections, use of power and environmental conditions may affect actual distances and should be taken into consideration.

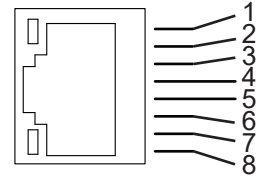
Status LEDs



LED Name	Color	Status	Function
Power	RED	OFF	Power is OFF
		ON	Power is ON
Traffic (Extended Side)	YELLOW	OFF	No Traffic
		FLASHING	Traffic
10/100 BaseT (Extended Side)	GREEN	ON	Connection is OK, 10BaseT Mode
	ORANGE	ON	Connection is OK, 100BaseT Mode
Traffic (Standard Side)	GREEN	OFF	No connection
		FLASHING	Connection is OK with Traffic
Link (Standard Side)	YELLOW	OFF	No connection
		ON	Connection is OK

RG45 Connector Information

In "One Pair Wire" operation only Pin-1 and Pin-2 are used.



Ordering Information

PART No.

Description

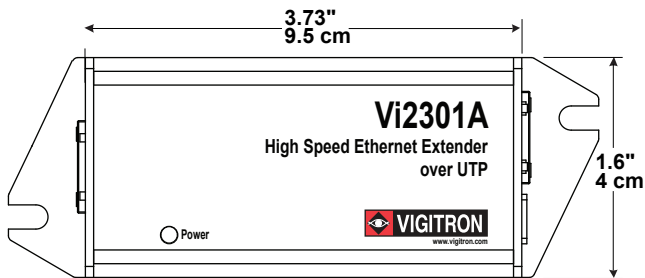
Vi2301A	Single port UTP Ethernet Extender
Vi2304A	4-port UTP Ethernet Extender
Vi2308A	8-port UTP Ethernet Extender, 19", 1U
Vi2316A	16-port UTP Ethernet Extender, 19", 1U

Limited Lifetime Warranty

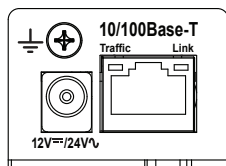
Vigtron, Inc. warrants that all Vigtron products ("Product"), if used in accordance with these instructions, will be free of defects in material and workmanship for lifetime defined as the duration period of time until product end of life is announced. After which Vigtron will continue to provide warranty 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 Vigtron dealer.

Warranty will only be provided for as long as the original end user purchaser owns the product. Warranty is not transferrable. At Vigtron'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 Vigtron, 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 Vigtron, Inc. or an approved agent will void this warranty. Vigtron, 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 Vigtron, Inc. under this warranty is limited to the original purchase price of the Product only.

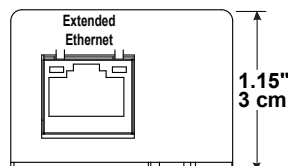
Drawings



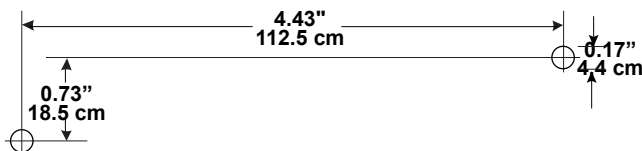
Top View



Right View



Left View



Mounting Pattern



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