



The MaxiiCopper™ Vi2304A is a revolutionary data transmission device that extends full-duplex High-Speed Ethernet over existing or new UTP infrastructures. It extends 10BaseT signals up to 3,000 ft. (909M) and 100BaseT up to 2,100 ft. (640m). It employs MaxiiCopper, an innovative and unique Ethernet extension technology, that is designed to take full advantage of high-bandwidth UTP cables and maintain a full-duplex 10 or 100 Mb/s Ethernet connection up to the maximum range - with minimum transmission error and latency. Its dual-rate capability provides an easy way to balance the best possible network throughput and long-reach distance design. The Vi2304A offers 4 extended ports. 1 pair of UTP can be used for both 10BaseT and 100BaseT signals. 4 Pair is restricted to 100BaseT use.

The Vi2304A needs to be deployed along with single port Vi23xxA on the remote end of each UTP cable. It is equipped with LEDs to provide link status and configured data rate for each port. It is completely transparent to the corporate IP network and higher layer protocols and requires no IP programming or other configurations.

The Vi2304A is offered in a compact enclosure design. It is an ideal for medium to large scale IT networking or digital CCTV projects.

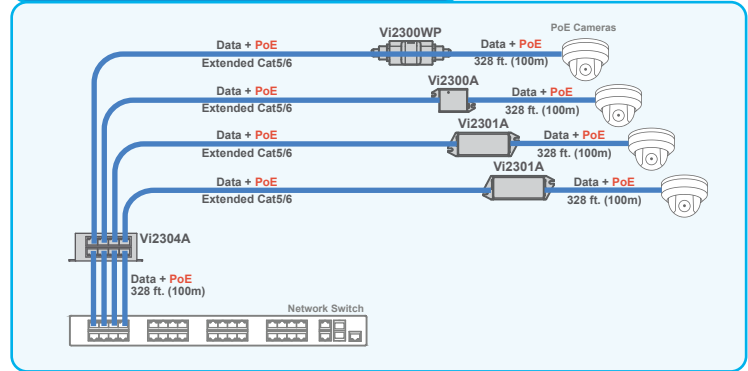
⚠ WARNING! - To reduce the risk of fire or electric shock, do not expose this apparatus to rain or moisture. This apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus.

⚠ 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

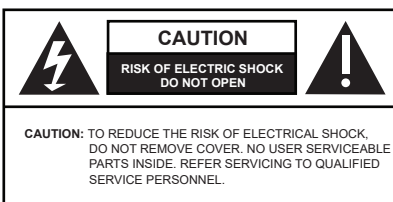
Connecting Multiple PoE Cameras over Extended UTP



The Vi2304A and Vi230XXs can be used to connect multiple PoE cameras at extended distances.

Important Safety Warning

- Read and 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 UTP 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 and NVRs) that produce heat.
- Protect the power cord from being walked on or pinched particularly at power source, 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 when a power supply cord or plug is damaged, liquid has been spilled, objects have fallen inside the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- The main plug is used as the disconnect device and shall remain readily operable.



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 Vi2300A/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 Vi2300A/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 Vi2300A/Vi2301A .

The link LED on the 10/100 connector should be "ON" to indicate proper connection between the camera and Vi2300A/Vi2301A .

Ethernet Switch/NVR-end Installation

- Connect the chassis ground screw to a solid earth ground.
- Connect the RJ45 connector of the Ethernet switch to the 10/100BaseT Ethernet port of Vi2304A using a standard Cat5/6 cable of maximum 100 m in length.
- Connect long UTP cables to the RJ45 connectors of the Vi2304A.
- Connect the 12V power supply to the power connector of the extender hub.

The link LED on the 10/100 Ethernet connectors should be "ON" to indicate proper connection between the switch and Ethernet ports of Vi2304A. While the Link LED, Orange for 100BaseT and Green for 10BaseT, on the extended side, in a steady state will indicate confirmed connection between extenders.

Technical Specifications*

Electrical

| | |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ethernet Interface | Standard 10/100BaseT, Full duplex only |
| Ethernet Rate | Auto select 10/100 Mb/s Full speed / full duplex at maximum rated distance |
| UTP** | 100 Ohm, 3,000 ft (909 m) at 10BaseT 802.3 af 800 ft. (242m) at 100BaseT 802.3 at |
| Power Supply | 12 VDC, 2.5 A |
| Status LEDs | Extended Ethernet: Green/Orange LED, 10/100BaseT Yellow LED, Activity Standard Ethernet: Green LED, Activity Yellow LED, Link Power On: Red LED |
| 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 | 1.15x3.6x3.3 in., 4.2x9.2x8.4 cm (HxWxL) |
| Weight | 0.584 lb, 265 g |
| Material | Aluminum |

Accessories

Rack mount brackets

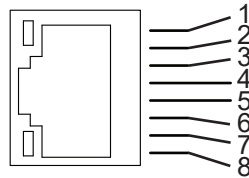
*Specifications subject to change without notice.

**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.

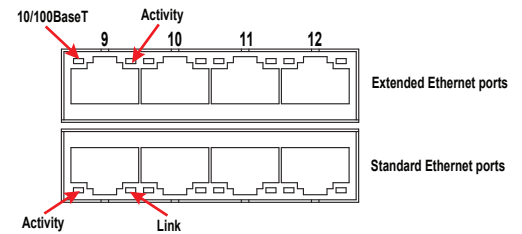


RG45 Connector Information

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



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 |

Ordering Information

| PART No. | Description |
|----------------|-----------------------------------------------|
| Vi2301A | Single port UTP Ethernet Extender |
| Vi2304A | 4-port UTP Ethernet Extender |
| Vi2304A | 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 announcement. 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

