Unique Feature Series

VIGITRON
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Auto Port Connection and PoE Restart

WHAT IS AUTO PORT RESTART?

- Auto Port Restart monitors the connection between a switch port and the connected device. If the link is lost, it automatically applies PoE to power the device and re-establish the connection.

HOW IS AUTO PORT RESTART A BENEFIT?

- In standard switch operations, if a link is lost, there's no built-in mechanism to restore both the PoE and the connection. Since PoE must be applied first to power the device before a connection can be re-established, the device often remains offline—creating potential security risks. The typical solution is a costly and time-consuming field service call. Auto Port Restart eliminates this need by automatically restoring power and connectivity, improving system uptime, enhancing security, and reducing maintenance costs..

WHICH VIGITRON PRODUCTS HAVE AUTO RESTART?

Vi30132

Desktop

- 24 -1G ports with PoE
- 4-1G/2.5G/10G Fiber ports
- L2+/L3 Lite Enterprise
- Network Switch

Vi30130

Desktop

- 20-1G UTP ports-With 24 Port PoE
- 4 combo 1G UTP/Fiber ports
- 2 independent 1G fiber ports
- L2+/L3 Lite Enterprise Network Switch

Vi30310U

Desktop

- 8 -1G UTP ports with PoE
- 2 -1G comb ports
- Fiber 1G/2.5G
- L2+/L3 Lite Enterprise Network Switch

Vi30208U

High Temperature

- 6 -1G UTP ports with PoE
- 2 fiber 1G/2.5G ports
- L2+/L3 INS Network switch

Vi30210U

High Temperature

- 8 -1G UTP ports with PoE
- 2 combo UTP/fiber 1G/2.5G ports
- L2+/L3 INS Network switch

VIGITRON'S AUTO PORT RESTART:

Auto Port Restart is available on all Vigitron managed network switches and midspans. For a complete list of compatible models, download the Product Catalog and IP Product Guide from the Vigitron website.

To use the feature, simply program the connected device's IP address to the switch port.

In addition to monitoring and automatic reconnection, supported models can also:

Log the event in the Syslog, Issue alerts.

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Extended UTP Test Link

WHAT IS EXTENDED UTP TEST LINK?

- Extended UTP Test Link is a unique feature in Vigitron UTP extenders that tests the connection between two extender points. It varies both link integrity and transmission speed.

HOW IS EXTENDED UTP TEST LINK A BENEFIT?

Vigitron UTP extenders can support video and PoE transmission over distances up to 3,000 feet. However, cable quality—including Coupler and splices—can significantly affect performance.

Vigitron's Vi23xxx series extenders include a built-in cable tester that evaluates the cable connection. This indicates reliable performance and helps avoid costly rework, saving both time and labor.

WHICH VIGITRON PRODUCTS HAVE EXTENDED TEST LINK?

Vi2300A

Vi2308A

Vi2508

Extended Midspan

Vi2301A

Vi2316A

Vi2516

Extended Midspan

VIGITRON'S COMPLETE UTP EXTENDER SERIES:

- To perform cable testing with Vigitron UTP extenders, both extenders must be powered. For single-channel units, the Vi0012 power supply can be used.
- If the cable is functional, the 10/100Mbps LED will illuminate, indicating a successful connection.
- This testing feature is supported across all Vigitron UTP extenders, including single-channel, multi-channel, and midspan extended models.
- Built-in cable testing helps verify link integrity before full installation, reducing setup time and increasing overall system reliability.

Unique Feature Series

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Single Pair 100Mbps Video Transmission

WHY IS 100MBPS IMPORTANT FOR SINGLE PAIR TRANSMISSION?

In security applications, a single wire pair is often used to transmit both video (data) and PoE. Traditional solutions are typically limited to 10Mbps, with achievable distances depending on wire gauge and whether the cable is twisted or not. This limitation can significantly affect performance and system design.

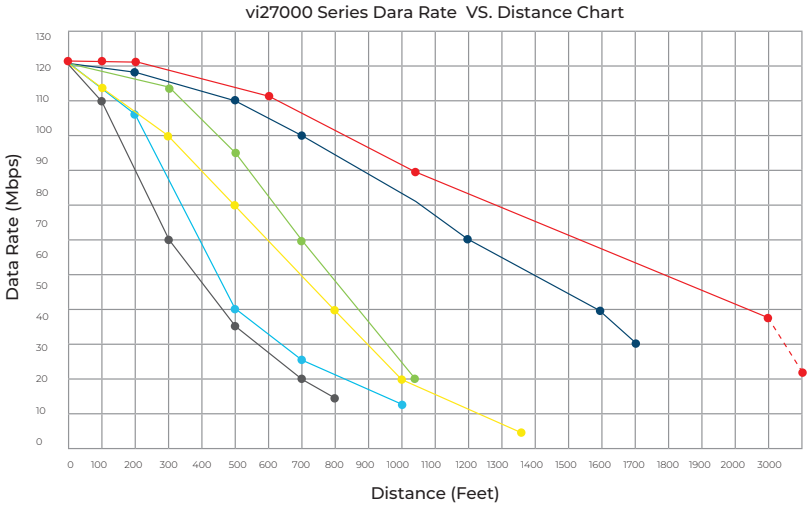
HOW IS VIGITRON'S ABILITY TO HANDLE 100MBPS ON SINGLE PAIR AND ADVANTAGE?

Vigitron's ability to transmit up to 100Mbps over a single wire pair offers three major advantages:

Higher Bandwidth: The 100Mbps provides 10x more bandwidth than traditional 10Mbps systems. Even at 3,000 feet, a stable 10Mbps link can be maintained — sufficient for an average single camera.

Multi-Camera Support: At distances up to 1,800 feet, Vigitron solutions can deliver up to 40Mbps, enabling the transmission of up to four IP cameras over a single pair from one switch.

Superior Noise Rejection: Higher bandwidth allows for improved signal integrity. The Vi27000 Series automatically adjusts bandwidth in response to noise, ensuring a stable connection — especially important in noisy environments or when using bundled cabling.



- The Vi27000 series contains two unique technologies that reject noise and help to cancel out noise at both ends of the cable regardless of cable being twisted or non- twisted.

What Vigitron products use this technology?

Vi27000

Transmitter

Vi27001

Vi27004

4 channel receiver

VIGITRON'S SINGLE PAIR EXTENDER SERIES:

- Supports bandwidths up to 100Mbps over a single pair wire.
- Tested and approved for twisted and untwisted cables, from 24/2 to 16/2 gauge wires.
- Transmits both data and PoE with high immunity to electrical noise.

Backing up and Increasing PoE

WHAT IS THE BEST METHOD TO PROVIDE REDUNDANT POE POWER?

PoE requires stable, regulated power — both in voltage and wattage. PoE powered devices, for reliable operation require: 37–57V for 802.3af devices, 42.5–57V for 802.3at / 802.3bt devices. Power supplies delivering less than the required voltage or power will not support PoE functions reliably.

The ideal redundant setup involves: Two independent power supplies, each connected to separate AC mains and have Load sharing between their outputs.

This allows seamless failover in the event of a power supply failure and Increase reliability.

HOW CAN I INCREASE POE?

Higher PoE power is increasingly required for demanding devices such as PTZ cameras, IR/LED illuminators, and environmental heaters. As these power demands grow, larger power supplies become necessary—resulting in increased heat generation and greater stress on system components.

Vigitron's DIN Rail power supplies support current sharing, enabling delivery of up to 960W of total power while maintaining a hardened operating temperature range of –25°C to +70°C.

What Vigitron products use this technology?

Vi10120

Vi10240

Vi10480

- Vigitron's DIN Rail power supplies support multiple power configuration options to meet a range of system requirements.
- They can be configured for both redundant and additive power-ensuring maximum reliability and scalable power delivery.

Unique Feature Series

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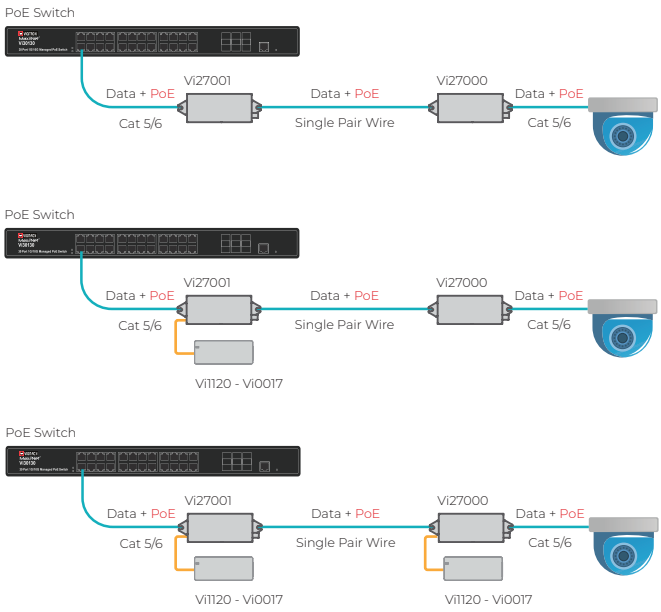
SINGLE PAIR 100MBPS POE

WHY IS POE FLEXIBILITY IMPORTANT FOR SINGLE PAIR?

Unlike standard Ethernet cabling, single-pair transmission is usually has a lower power capacity. As distance increases, power loss rises, especially when smaller-gauge wire is used. This often means that 802.3at devices, which require 25.5W at 100m, may not receive sufficient power beyond short distances—making flexible Pot delivery methods essential.

HOW IS VIGITRON'S ABILITY TO HANDLE POE ON SINGLE PAIR AN ADVANTAGE?

- Vigitron's Vi27000 series overcomes the limitations of single-pair PoE capability by supporting three flexible power configurations:



Switch-Based PoE Input: PoE is supplied from the PoE port of a network switch to the Vi27000Tx.

Midspan Power Injection (Single-End Power): Power is injected at the Vi27001Rx using the Vi1120 power supply, delivering power to the Vi27000Tx and the camera from one centralized location.

Dual-End Power for Maximum Output: When using a Vi1120 or Vi0017 power supply at both ends, up to 36W of PoE can be delivered over 328 feet. Beyond that, the cable can still transmit data-only (video) up to 3,000 feet, bypassing power limitations.

This level of flexibility ensures optimal power delivery across a wide range of installation scenarios, even when dealing with cable distance and gauge constraints.

What Vigitron products use this technology?

Vi27000

Transmitter

Vi27001

Vi27004

4 channel receiver

VIGITRON'S SINGLE PAIR EXTENDER SERIES:

- Supports data transmission speeds up to 100Mbps
- Tested and certified for twisted and untwisted cable gauges ranging from 24/2 to 16/2.
- Delivers both data and PoE with high immunity to electrical noise, ensuring reliable performance even in interference-prone environments.

Unique Feature Series

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TIMEZONE

WHAT IS TIMEZONE?

- TimeZone is a unique Vigitron feature that synchronizes the time and date across all switches within a network—without requiring external equipment or introducing additional security risks.

WHY IS TIMEZONE IMPORTANT?

Accurate time synchronization is critical for troubleshooting and event correlation in networked systems. By aligning time and date across all switches and connected devices, TimeZone helps:

Pinpoint the timing and cause of system events, Simplify event logging and diagnostics Ensure consistent time-stamping across cameras, switches, and other network devices

Vigitron's Enterprise and INS series managed switches support event logging and communication with other networked devices, making TimeZone an essential feature for coordinated system monitoring.

HOW DOES TIMEZONE SAVE MONEY AND INCREASE SECURITY?

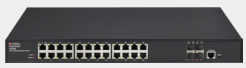
Before TimeZone, accurate time and date synchronization required either:

- A dedicated external NTP server, adding hardware and cost, or
- Accessing a public NTP server over the Internet, which introduced security risks

Even then, time synchronization was often limited to the core switch, leaving other devices unsynced. TimeZone eliminates these issues by allowing all Vigitron-compatible switches in the network to reference a local PC or server—commonly already present for video recording or system management. This removes the need for additional equipment and avoids exposure to external networks.

With built-in UTC offset support, TimeZone ensures accurate time and date stamping across all connected devices and locations, regardless of regional time zones-enhancing both operational accuracy and system-wide security.

Vi30132



Vi30130

Vi30310U

Vi30152

V30208U

Vi30210U

Vi35136

VIGITRON'S SINGLE PAIR EXTENDER SERIES:

- Automatically synchronizes time and date across all network devices.
- Requires no additional hardware or licensing costs.
- Maintains network security by avoiding external NTP server access.
- Ensures accurate time/date stamping for Syslog and SNMP messaging.
- Enables faster troubleshooting by correlating events across the network

PoE Meters- Why Voltage Monitor is Important

WHY SHOULD A POE METER ALSO HAVE VOLTAGE MONITORING?

PoE (Power over Ethernet) is the delivery of power from a source to a connected device. While it's typically discussed in terms of wattage, power is calculated as: Power (Watts) = Voltage × Current (Amps)

Most people focus on total power but overlook the importance of voltage, which is fundamental to the PoE process.

The PoE process begins with voltage pulse. Once a valid Ethernet connection is established between a PoE source and a powered device (PD), the source sends a "detection pulse"— a low voltage signal typically between 10-12-VDC to confirm that the load is a valid Pot device.

Once detection is successful, the source sends Classification puls to inquire the required power level. To deliver the required power, For PoE Classes 0-3 (IEEE 802.3af/at): the voltage must fall within 48-57VDC and for PoE Class 4 and higher (IEEE 802.3bt): 50-57VDC.

Delivering power outside of these voltage ranges can result in device failure or unstable operation.

WHY SHOULD A POE METER BE IN LINE:

PoE is transmitted from a source providing PoE to a connected device powered by PoE. Accurate monitoring requires the meter be placed in line between the source and connected device.

- If a connected device does not power up when connected there probably was not enough power provided by the source. It is possible the detection pulse generate from the PoE source never reached the connected device.
- If the voltage reading is at the lower end of the class range, 44 or 48VDC, than if the connected device needs to draw power for functions such as Day/Night or turning on LEDs than when these occur PoE has to the potential to shut down.

Knowing this information helps you to troubleshoot your networks returning it to operational status in the quickest possible time.

It helps to avoid mistaking identifying properly operating equipment as the source of the problem.

Which Vigitron PoE Meters have voltage and power readings

Vi00021

Vi00022

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PoE Meters/Wire: Know Your Wire PoE Capacity

WHY IS KNOWING YOUR EXISTING WIRE CAPACITY IMPORTANT?

Wiring plays a critical role in the performance and reliability of a security network — especially when transmitting Power over Ethernet (PoE). The ability of a cable to support PoE depends on several key factors:

Cable Type & Quality: While Cat5, Cat5e, Cat6, and Cat6a are all classified as "category" cables, they differ in electrical resistance, which directly affects PoE performance.

Pre-existing Installations: Many security networks are installed over existing cabling, which may be too long, degraded, or poorly terminated to deliver consistent PoE.

Distance Limitations: PoE standards (e.g., IEEE 802.3af/at/bt) are defined for cable runs up to 328 feet (100 meters). Beyond that, voltage drop and power loss become significant concerns.

Knowing the condition and limitations of your cable before ordering equipment helps avoid costly mistakes such as:
Incompatible hardware, re-installation labor, Returns and re-orders

HOW CAN I KNOW CABLE POE CAPACITY?

HOW CAN I AVOID INSTALLATION PROBLEMS?

HOW CAN I TROUBLESHOT NETWORK POE PROBLEMS?

- There are four main differences between wire considerations when it comes to PoE wire performance.
  - » Can the wire transmit PoE?
  - » How many pairs are available to carry PoE. Does it match the source and connected device requirements?
  - » What is the type of cable?
  - » What is the actual cable length?

These may appear to be basic questions, but if the wire is not capable of transmitting PoE at all this is the first place to start.

SOLUTION ONE	SOLUTION TWO	SOLUTION THREE
Vi00023	**Vi00024**	**Vi00027**
		
The Vi0023 and Vi0023L are portable PoE test generators providing the ability to test cable for PoE transmission.	The Vi00024 measures Maximum available PoE, at any distance of wiring ac ross all IEEE PoE standards and some legacy nonstandard PoE versions.	The Vi00027 is a small low-cost solution which easily detects the PoE type and number of wire pairs carrying PoE.