# Vi3003W L2 Drop & Insert 1G 60W PoE 3-Port Switch User's Manual





The Vi3003W is a 3-port Layer 2 weatherproof Ethernet and PoE switch providing drop and insert capability for connecting several IP devices along a single cable run. The Vi3003W provides a cost effective method for increasing distances beyond the standard Ethernet limit of 328 feet (100m) for 10/100/1G Mbps Ethernet. Multiple units can be cascaded to provide up to nine IP cameras to be connected to a single network switch port over distances of up 3,000 feet (909m).

For small systems, the Vi3003W's Layer 2 network capability can eliminate the need for network switches saving costs and rack space. It also can significantly decrease network switch costs by increasing the capacity of a 24-port switch to handle up to 216 cameras and an 8-port switch up to 72 cameras. As a mini network switch, the Vi3003W avoids the potentials for transmission collisions by complying with IEEE standards. Its ability to automatically sense the data rate up to 1000Mbps (1Gbps) also makes it the perfect solution for cost effectively extending network to network communications or between network switches requiring high speeds transmission.

The Vi3003W can be powered from a single PoE source or a local power supply. Additional power up to 60W can be added at any point along the cable run where power outlets are available providing the ability to power IP cameras up to 60W.

# 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 tempera ture exceeds 75°C.
- Make sure that the external power supply output voltage is in the recom mended range.
- Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus 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 power plug and the PoE input cable are used as the disconnect device and shall remain readily



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 main socket outlet through an AC to DC Power supply.

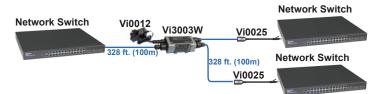
WARNING! - The main plug is used as the disconnect device and shall remain readily operable.



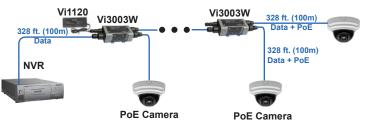
Vi3003W allows for the transmission of two cameras over a single camera run or adding a new camera close to an existing camera.

Vi2216A	Vi1120	Vi3003W		PoE Camera
	328 ft. (100m)		328 ft. (100m)	-
	Data		Data + PoE++	
			328 ft. (100m)	
Network Switch			Data + up to 30W	PoE
The second second				
		PoE	Camera	

Vi3003W can provide over 60W PoE on port 2 and 30W PoE on port 3 using Vi1120 external power supply.



Vi3003W enables extension of 1G connection between networks.



A total of 9 IP addresses can be accessed on a single cable run, eliminating the need for network switches.

## Installation (Vi3003W Powered by PoE)

#### a) Port-3 (Tap, PoE-Out)) Connection:

Use a standard Cat5/6 cable of maximum 100m in length to connect the camera to the Vi3003W.

Connect the RJ45 connector of the Cat5/6 cable IP camera's RJ45 connector
 Connect the other end of the Cat5/6 cable to the waterproof connector of Port3 of Vi3003W's. This port can provide up to 30W PoE power depending on the input PoE and the total load on the unit.

#### b) Port-2 (PoE-Out) Connection:

This port can be used to connect to another Vi3003W or a 60W camera.

If you want to daisy-chain this unit with another Vi3003W, connect waterproof connector of Port-2 of Vi3003W to the Port-1 of the next Vi3003W using a standard Cat5/6 cable of maximum 100m in length. Port-2 will provide 1G Ethernet.
If you want to connect this unit to a PoE++ camera, connect waterproof connector of Port-2 of Vi3003W to the RJ45 connector of the IP camera using a standard Cat5/6 cable of maximum 100m in length. This port can provide up to 60W PoE power depending on the input PoE and the total load on the unit.

#### Caution

Do not connect a non-PoE device to the Port-2 of the Vi3003W. Doing so may damage the non-PoE device.

If it is necessary to connect a non-PoE device to Port-2, use a Vi0025 between Port-2 and RJ45 connector of the non-PoE device.

#### c) Port-1 (PoE-In) Connection:

- Connect waterproof connector of Port-1 of Vi3003W to the PoE switch or a high power PoE source using a standard Cat5/6 cable of maximum 100m in length. This port can receive up to 74W PoE and 1Gbps Ethernet data.

## Installation (Vi3003W Powered by Local Power Supply)

#### a) Port-3 (Tap) Connection:

- As "a" in previous section.

### b) Port-2 (PoE-Out) Connection:

- As "b" in previous section.

## c) Port-1 (PoE-In) Connection:

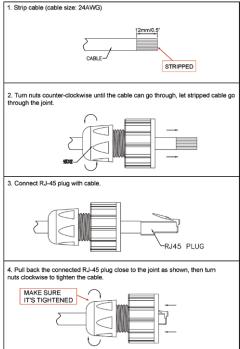
- Connect waterproof power connector the of Port-1 of Vi3003W to the network switch using a standard Cat5/6 cable of maximum 100m in length.

## d) Power Connection:

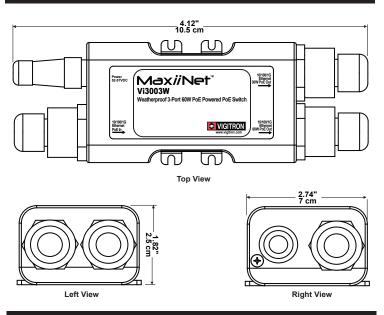
- Connect waterproof power connector to Vi1120, 120W desktop power supply for using full PoE capacity of Vi3003W. If the unit connected to Port-1 does not require PoE, a Vi0014 can be used for just powering the Vi3003W.

# **RJ-45 Installation Instruction**

Installing cable and connector is critical for maintaining the IP 67 performance of this product. Please follow instructions carefully.



## Drawings



# **Ordering Information**

PART No.	Description
Vi3003W	Drop and Insert 10/100/1000Mbps 60W PoE 3-Port Switch/Repeater
Vi1120	Desktop power supply 56VDC @120W
Vi0017	Desktop power supply 48VDC @40W
Vi0012	Wall-mount power supply 12VDC @12W
Vi0025	PoE Blocker for connecting non-PoE devices



# **Technical Specifications\***

(3) RJ-45 IEC 60603-7

328ft (100m) per link

Auto Configuring Port 1: 10/100/1000Base-TX Port 2: 10/100/1000Base-TX

Port 3 (Tap): 10/100/1000Base-TX

RFC 1783 TFTP, RFC 894 IP over Ethernet RFC 2544 TCP/IP Packet Transmission

802.3ab, 802.3z, 802.3af, 802.3at, 802.1p, 802.1Q, 802.1D, 802.1s, 802.3u, 802.3x,

RFC 768 UDP, RFC 2068 HTTP

RFC 793 TCP, RFC 791 IP

IEEE802.3af, 8IEEE02.3at

IPv4 Type of Service (TOS) and

0 to 95%, non-condensing

Storage: -40°C to +85°C

Cat 5/5e/6

3W

Port 1 (PoE In): 60W Port 2 (PoE Out): 60W Port 3 (Tap, PoE Out): 802.3af (15.4W), 802.3at (30W)

## Electrical

PoE Rating

Network Connection
Wiring Support
Power Consumption
Supported Distance
Data Rate

Data Interfaces and Compliances

**IEEE** Compliances

Service Compliance

VLAN Support Jumbo Frame

4.096 Addresses Up to 10,000 bytes

Differentiated Services (Diff-Serv) IPv6 Traffic Class

802.3w

## Mechanical

Dimensions Weight Material

1.82x2.74x8.75 in., 2.5x7x26.6 cm (HxWxL) 1.32 lb, 599 g ABS Plastic

Operating: -40°C to +75°C per NEMA-TS2 testing

# Environmental

Humidity Temperature

Regulatory

Safety

CE, FCC RoHS, WEEE Environmental

# Accessories (Optional)

Vi1120 Desktop power supply 56VDC @120W for 60W PoE operation

Vi0017 Desktop power supply, 802.3at 40W for 30W PoE operation

Vi0012 Wall-mount power supply 12VDC @12W non-PoE operation

Vi0025 Connects non-PoE devices to the 60W PoE Out port

\*Specifications subject to change without notice.

# Limited Lifetime Warranty

Vigitron, Inc. warrants that all Vigitron 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, Vigitron 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 Vigitron dealer.

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