

## OVERVIEW

VIA™ Gigabit Ethernet Switches are designed for live entertainment Ethernet systems, including audio, video and DMX-over-Ethernet networks. This guide covers models PWVIA RM P24 RJ45 SFPSLOT POE

VIA Ethernet Switches are intended specifically for signal routing between Pathport DMX-over-Ethernet gateways, or similar equipment, and Ethernet-aware lighting and audio control products, such as consoles and controllers and end equipment. A VIA is a routing device and is not a source of the control protocols or the data being passed. Switches only provide management control over the data path.

The PWVIA RM P24 family is easily configured and upgraded using the freely available software tool, **Pathscape**. They are also configurable using the Front Panel UI, which consists of the LCD and rotary pushbutton encoder.

## CONNECTIONS

### POWER

Connect the switch to an AC input between 100 and 240VAC, either 50 or 60 Hz, with included IEC power cable

### ETHERNET

All network wiring should follow standard Ethernet rules and be installed by a qualified person. As part of the installation, all wiring should be certified under the TIA/EIA-568 standard.

Pathway recommends the use of manufactured rather than hand-terminated cables.

### POWER-OVER-ETHERNET (PoE)

VIA models PWVIA RM P24 RJ45 SFPSLOT POE feature an integrated 170W PoE supply for powering compatible external devices compliant with 802.3af.

### SFP+ PORTS

Model PWVIA RM P24 RJ45 SFPSLOT POE have four SFP+ compatible ports on the front of the device. These require the user to provide an SFP(1G) or SFP+(10G) fiber transceiver to allow connection to fiber networks. Available Pathway Accessories are listed on page 3 of this document. For short distances, Direct Attach Copper (DAC) cables may also be used on these ports.



## STATUS INDICATORS

<b>PoE</b>	Solid green indicates PoE is active on the Port.
<b>Link/Act</b>	Amber. Intermittent blinking indicates valid link to other device. Off indicates link is down.
<b>Fiber Port LEDs</b>	Green. Intermittent blinking indicates valid link to other device. Solid red indicates incompatible fiber transceiver.
<b>LCD Backlight</b>	Will light up when using the front encoder knob. When set to Identify mode using Pathscape, the backlight will flash.

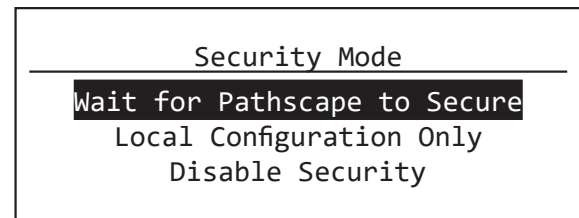
## INSTALLATION

Disconnect all power before proceeding with installation.

Securely mount device to rack unit, if applicable. Connect the AC input. The VIA will boot up, which may take 60 seconds.

Attach required network cables to RJ45 ports. Connect the fiber module(s), if used.

Choose the Security Mode from the front panel using the encoder knob.



If adding to a Security Domain in Pathscape, no input here is needed. Open **Pathscape** on a PC on the same network as the VIA and add the switch to a **Security Domain**.

If using the VIA from the front panel only, select **Local Configuration Only** mode. The device will only be configurable from the Front Panel, configuration from Pathscape is disabled although you may read properties in Pathscape (Read Only mode).

If opting out of Security features, select **Disable Security**. The device will be configurable using the front panel or using Pathscape on the network, even by unauthorized parties.

The system is now ready for configuration and testing.

## CONFIGURATION

For detailed instructions on operation of VIA switches, please see the VIA manual available at the Pathway website.

All field configuration of VIA switches is recommended to be done with **Pathscape** software.

Download the software from [www.pathwayconnect.com](http://www.pathwayconnect.com) and install.

Before configuring and using the VIA, you must select a **Security Mode** as described above. To use Pathscape software to configure your devices, they must be added to a Security Domain. Alternately, you can lock out remote changes by selecting Local Configuration Only; all changes must then be made physically from the front panel of the device.

You can also opt out completely of the security features by selecting Disable Security. **This mode of operation is not a recommended practice.** However, if the production is on a dark network with a known crew, risk assessment may be weighed against convenience. In this mode the switch will behave like a legacy device in Pathscape; **all properties are Read/Writable from any PC on the network, even unauthorized users.**

If using Pathscape to configure your network, you must decide on your networking scheme. Pathway devices ship from the factory with a unique IP address starting with 10.x.x.x with a subnet of 255.0.0.0. For new network systems, set your computer's wired IP address to 10.0.0.x where x is a free address, and a subnet mask of 255.0.0.0. Discovery will be automatic and the STATUS column will show a green dot and report "Online" for each device discovered.

If you're bringing your computer to an existing network, you will see all devices, but with a STATUS showing "Limited Connectivity" and a yellow dot. You can still configure most properties, including the devices' IP setup to match the rest of the network. For full functionality, including firmware updates, you should set your computer and all devices to the same subnet mask and IP range.

Refer to the VIA and Pathscape manuals for description of configuration options.

## DEFAULT SETTINGS

IP Address	Static, set at 10.x.x.x (where x is a number between 0 and 254)
Subnet Mask	255.0.0.0
Default Gateway	10.0.0.1
VLANs	Disabled (all ports run as untagged on VLAN ID #1)
Mgmt VLAN	VLAN ID#1
Port PoE	Enabled - Default Max allocation per port is 15.4 W

QoS	Off
Port Link	Auto-negotiate
DHCP	Disabled
IGMP	Disabled
Art-Net Trap & Convert	Disabled
Art-Net Alternate Mapping	Enabled (only applies when above feature is enabled)
RSTP	Disabled
EAPS	Disabled

## ELECTRICAL INFORMATION

### PWVIA RM P24 RJ45 SFPSLOT POE:

- Power input: 100-240VAC, 50/60Hz
- 195W maximum power consumption (25W for switch, 170W distributed to connected PoE devices)
- Integrated PoE supply: 170W; Class 3 PoE (15.4W maximum per port) to a maximum of 170W

# VIA Ethernet Switches PWVIA RM P24

# Installation Guide

## STANDARDS COMPLIANCE

- ANSI E1.31 sACN - Streaming ACN
- IEEE 802.3 Ethernet
- IEEE 802.3af Power-over-Ethernet (PoE-enabled models)
- IEEE 802.1AB Link Layer Discovery Protocol
- IEEE 802.1Q VLAN Support
- IEEE 802.1w Rapid Spanning Tree Protocol (RSTP)
- IETF EAPS - Ethernet Automatic Protection Switching
- IETF IGMPv2 - Internet Group Management Protocol
- Dante QoS - Quality of Service
- California Title 1.81.26, Security of Connected Devices
- CE
- ETL
- RoHS 2011/65/EU + A1 2015/863

## PHYSICAL

### PWVIA RM P12 RJ45EC POE

- Weight: 6.9 lbs (3.2 kg)
- Dimensions: 17"W x 1.7"H x 10"D (432mm x 43mm x 178mm)
- Operating Conditions: 32°F-113°F (0°C to 45°C); 0-90% non-condensing

## WARNING

The AC socket outlet shall be installed near the equipment and shall be easily accessible.

This equipment relies on building installation primary overcurrent protection.

Except for the IEC chassis plug marked for AC input, all ports on VIA switches are to receive low voltages only.

Attaching anything other than low voltage sources to the data ports may result in severe equipment damage, and personal injury or death.

## ACCESSORIES

PWACC SFPP	SFP+ 850nm 10GB Ethernet Optical Transceiver
PWACC SFP	SFP 850nm 1GB Ethernet Optical Transceiver

## APPLICATION EXAMPLE

