WoMaster

Quick Installation Guide

Industrial 14G L3 Managed M12 PoE Switch

MP614 Series

www.womaster.eu

· Overview

The new exclusive MP614 Series is the first full Gigabit routing PoE switch designed for Layer 3 network on rail public transport. Equipped with 14 rugged Gigabit M12 ports, 8 of which supply intelligent PoE/PoE+ and 2 of which with embedded link bypass function guarantees sustainable connectivity in critical applications, even in case of device/power fault. The advanced Layer 3 routing protocols such as IP/VLAN routing, RIP, OSPF, VRRP are fully compatible with your backbone network. Full 14 Gigabit ports bring forward an ultra speed connectivity without any bottleneck. The comprehensive Cyber Security design safeguards the network from outside intrusion.

Model Name	Description
MP614-HV-A	Industrial 14G L3 Managed M12 A-code PoE Switch, 110V
MP614-HV-X	Industrial 14G L3 Managed M12 X-code PoE Switch, 110V
MP614-MV-A	Industrial 14G L3 Managed M12 A-code PoE Switch, 54V
MP614-MV-X	Industrial 14G L3 Managed M12 X-code PoE Switch, 54V
MP614-WV-A	Industrial 14G L3 Managed M12 A-code PoE Switch, 24-110V
MP614-WV-X	Industrial 14G L3 Managed M12 X-code PoE Switch, 24-110V

· Package Checklist

· 1 x Product Unit
· 1 x Wall Mount Kit (2 x Wall mount plate)
· 1 x Quick Installation Guide
*Optional Accessory for detailed information please refer to the Datasheet*
· M12 A-code 4Gb USB disk for device configuration, firmware update
· Console Cable DB9 Male to M12-A-code Male, 1Meter
· Field assembled M12 connector, 4-pin, A-code

· Installation

Wall mounting
Follow the steps to install the wall-mounting plate:
1. Install the wall-mounting plate onto the side panel of the switch.
2. Tightened all of the screws well.
3. Use the hook holes at the corners of the wall mounting plate to hang the switch on the wall.

Wall Mounting Screw on front side

Wall Mounting Screw on back side
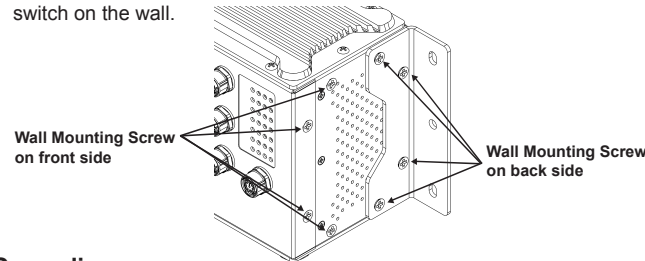
Grounding
There are two grounding screws on the device. One is located on the front side of the switch and the other one is located on the left side. For avoiding system damage by noise or electric shock, establish a direct connection between the device and earth ground. Please refer to Appearance Section.

Grounding Screw
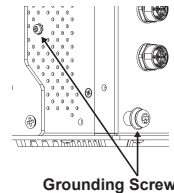
MP614 Series Connector
MP614 Series Switch uses several types of M12 connector for the power input, Gigabit ports and console port for management and system backup. The connector is different from the common connector in other switches. Below are some descriptions about the connector.

100/1000Base-T, M12 8 pin A/X-Code Female

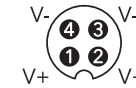| 100/1000Base-T	Pin	MP614-HV/MV/WV-A	MP614-HV/MV/WV-X
	1	D3-	D1+/PoE V+
	2	D4+	D1-/PoE V+
	3	D4-	D2+/PoE V-
	4	D1-/PoE V+	D2-/PoE V-
	5	D2+/PoE V-	D4+
	6	D1+/PoE V+	D4-
	7	D3+	D3-
	8	D2-/PoE V-	D3+
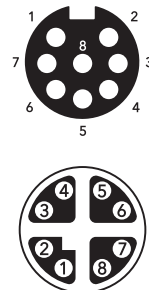
Wiring the Power Inputs
For DC power inputs **(MP614-HV: 110VDC (77~137.5VDC) / MP614-MV: 54VDC (46~57VDC) / MP614-WV: 24/48/110VDC (16.8~137.5VDC))**
1. Insert positive and negative wires into V+ and V- contacts respectively of the M12 connector (Plug-side).
2. Tighten the nuts to prevent the loosening of the M12 connectors.
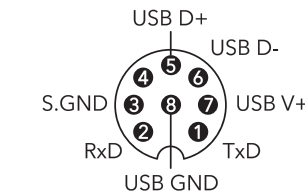3. Power input supports power redundancy and polarity-reverse protection functions.
The Power Supply is not included, please prepare one yourself.

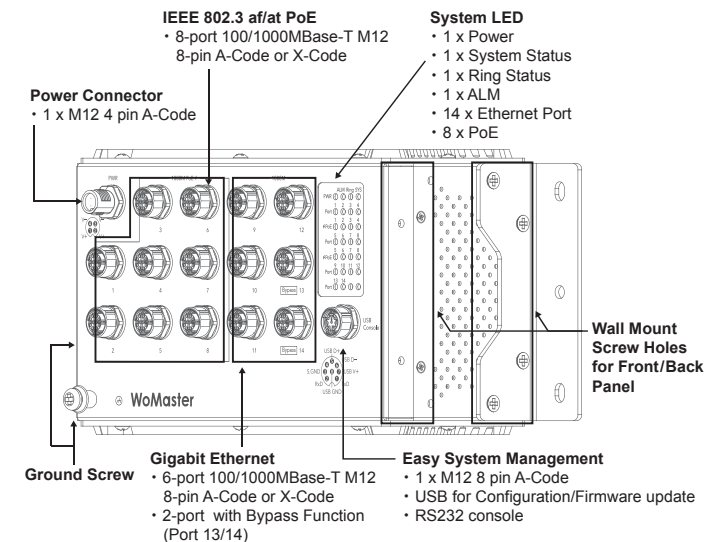| Power Connector	Pin	Description
	1	V+
V- ④③ V-	2	V+
V+ ①② V+	3	V-
	4	V-

Console/ USB Port – M12 8 pin A-Code Female

Power Connector	Pin	Description
	1	TX
USB D+	2	RX
USB D-	3	Signal Ground
④⑤⑥	4	N/A
S.GND ③⑧⑦ USB V+	5	USB Data+
②①①	6	USB Data-
RxD TxD	7	USB Power 5V
USB GND	8	USB GND

· Appearance

IEEE 802.3 af/at PoE
· 8-port 100/1000MBase-T M12 8-pin A-Code or X-Code

System LED
· 1 x Power
· 1 x System Status
· 1 x Ring Status
· 1 x ALM
· 14 x Ethernet Port
· 8 x PoE

Power Connector
· 1 x M12 4 pin A-Code

Wall Mount Screw Holes for Front/Back Panel

Ground Screw

Gigabit Ethernet
· 6-port 100/1000MBase-T M12 8-pin A-Code or X-Code
· 2-port with Bypass Function (Port 13/14)

Easy System Management
· 1 x M12 8 pin A-Code
· USB for Configuration/Firmware update
· RS232 console

・ LED Indication

ALM Ring SYS
PWR ○ ○ ○ ○
                1   2   3   4
Port ○ ○ ○ ○
                1   2   3   4
PoE ○ ○ ○ ○
                5   6   7   8
Port ○ ○ ○ ○
                5   6   7   8
PoE ○ ○ ○ ○
                9   10   11   12
Port ○ ○ ○ ○
               13   14
Port ○ ○

LED	Status	Description
PWR	Green On	DC-IN Power is On
	Off	No Power in DC-IN
System LED	Green On	Ready
	Green Blinking	Firmware Updating
	Off	Not Ready
Ring LED	Green On	Ring Normal (Not RPL Owner)
	Green Blinking	Ring Normal (RPL Owner)
	Amber On	Ring Abnormal
	Amber Blinking	Ring Port Fail
	Off	Ring Disabled
Alarm	Red On	Any failures in port link, ping, ring, DO and power by SW control
	Off	No failure occurs
PoE LED (Port 1-8)	Amber On	PoE is delivered
	Off	PoE is Disabled
Ethernet LNK/ACT (Port1-14)	Green On	Links established
	Green Blinking	Packets transmitting/receiving
	Off	Link is inactive

・ Safety Precautions

· Turn off DC power input source before connecting the DC Power supply module to the terminal block connectors. Do not turn-on the source of DC power module and make sure all connections were well established, then power on the DC source to powering the Switch device.
· Do make sure that models connect to the corresponding supply voltage. The device is to be supplied by Limited Power Supply.
· The switch must be installed at Restricted Access Locations. The switch is designed for Railway/Train on-board application.
· **Do not touch the surface of the switch while it is performing PoE function!**

・ Management

This device supports both in-band and out-of-band network management. The user can either configure the device through the user friendly Web/HTTPS management or remotely manage the device through the network by console management or Telnet/SSH.

1. Preparation for **Web management**: First of all, verify that device is properly installed in the network and that every PC of this network can access the switch through the web browser (Google Chrome, Internet Explorer or Mozilla Firefox).

· Type **http://IP_address** in your browser (the default IP address is **http://192.168.10.1/**)
· Key in the user name and password in login screen. The default user name and password is **admin**.
· After you click OK, the Welcome page of the web-based management interface will appear.
· On the left side you can see the list of software features, on the right side – available settings.

◦ To link with the device, please make sure that the IP Address of the PC is located in the same subnet (**192.168.10.x**).

2. Preparation for **Telnet/SSH management:** You can connect to the device by Telnet and the command lines are the same as what you see by console management. Below are the steps to open Telnet connection to the switch.

· Start -> Open Command prompt ->Enter
· Type the Telnet 192.168.10.1 (or the IP address of the switch). And then press Enter.

SSH (Secure Shell)
The device also supports SSH console. You can remotely connect to the switch to access command line interface. The SSH connection can secure all the configuration commands you sent to the switch.
SSH is a client/server architecture while the Switch is the SSH server. When you want to make SSH connection with the switch, you should download the SSH client tool first.

SSH Client
There are many free, sharewares, trials or charged SSH clients you can find on the internet.

◦ **For further feature configurations, please refer to User Manual.**

・ Support

・ Warranty

5-year Global warranties are available for WoMaster products assuring our customers that the products shall remain free from defects in workmanship or materials and conform in all material respects to WoMaster specifications, or Purchaser's supplied and accepted specifications. The warranty is limited to the repair and/or replacement, at WoMaster sole discretion, of the defective product during its warranty period. The customer must obtain a **Return Merchandise Authorization (RMA)** approval code prior to returning the defective Product to WoMaster for service. The customer agrees to prepay shipping charges, to use the original shipping container or equivalent, and to insure the Product or assume the risk of loss or damage in transit. Repaired or replaced products are warranted for ninety (90) days from the date of repair or replacement, or for the remainder of the original product's warranty period, whichever is longer.

・ Disclaimer

WoMaster reserves the right to make changes to this QIG or to the product hardware at any time without notice. It is the user's responsibility to determine whether there have been any such updates or amendments herein.
Defects, malfunctions, or failures of the warranted Product(s) caused by damage resulting from unforeseeable incidents (such as lightings, floods, fire, etc.), environmental and atmospheric disturbances, other external forces such as power line disturbances and surge, host computer malfunction and virus, incorrect power input, or incorrect cabling, incorrect grounding and damages caused by misuse, abuse and unauthorized alteration or repair are not warranted.

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