

Industrial Unmanaged Ethernet Switch

US10GT8GX2
US10GT8GX2POEH

User's Manual



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Getting to Know Your Switch

1.1 About the US10GT8GX2 Unmanaged Switch

The Meridian US10GT8GX2 is unmanaged Gigabit Ethernet switch with 8x10/100/1000Base-TX and 2x1000Base-X Ports.

The US10GT8GX2POEH is the P.S.E. version of the switch and supports Power over Ethernet, ability to transmit electrical power with data to remote devices over standard twisted-pair cable. The US10GT8GX2POEH has eight 1000Base-T(X) 30Watts P.S.E. (Power Sourcing Equipment) ports and two 1000Base-X ports, which are fully compliant with IEEE 802.3at, IEEE802.3 af standard.

The switch is designed to work in wide temperature range from -40°C to 75°C, to make it completely suitable for harsh environments.

1.2 Hardware Features

- IEEE 802.3af/at PoE compliant 8x10/100/1000Base-T(X) and 2x100/1000Base-X SFP ports
- Support for IPv4 and IPv6
- Advanced routing with 1588 ptpv2, Sync-E
- Ethernet Ring Protection with STP/RSTP/MSTP/ITU-TG.8032
- IGMP v1/v2/v3 and MLD v1/v2 Snooping for filtering multicast traffic
- IEEE802.1Q VLAN/MAC based VLAN/Protocol based VLAN/ IP subnet based VLAN/QinQ/GVRP/MVR is supported
- DHCP Server/Client/Relay/Snooping for IP security management
- Port-based IEEE802.1X/Single and multiple IEEE802.1X/ MAC-based authentication/VLAN Assignment/ IP source guard/ RADIUS/TACACS+/ACL/SSHv2/HTTPS
- DNS client/proxy is supported
- LACP/Link Aggregation Static for increases throughput
- Supports Port mirroring, port speed limits, broadcast, Storm control
- Two 2.5G fiber ports with backward 1G compatibility

- EMC industrial level 4

Hardware Installation

2.1 Installing Switch on DIN-Rail (not included)

Each switch has a DIN-Rail kit attached to the rear panel. The DIN-Rail kit is used to mount the unit on the DIN-Rail. It is easy to install the switch on the DIN-Rail using the instructions below.

2.1.1 Mount US10GT8GX2 on DIN-Rail

Step 1: Tilt the switch and mount the metal spring to DIN-Rail.



Step 2: Push the switch toward the DIN-Rail until you heard a “clicking” sound.



2.2 Wall Mounting Installation

The switch can also be mounted using the supplied wall mount bracket. The following steps illustrate how to mount the switch on the wall:

2.2.1 Mount US10GT8GX2 on the wall

Step 1: Remove DIN-Rail kit.



Step 2: Use 4 screws that can be found in the package to attach the wall mount panel to the switch as shown in the photo:



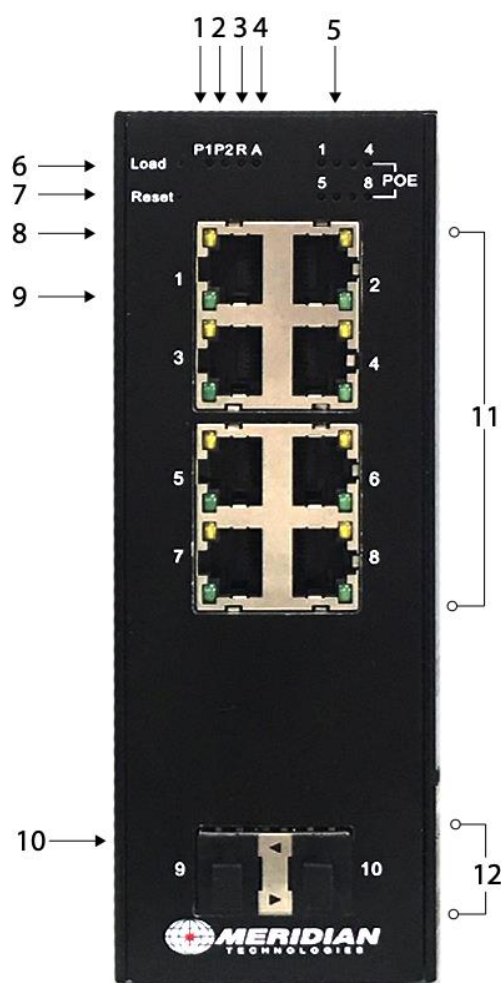
Hardware Overview

3.1 Front Panel

The front panel of US10GT8GX2POEH has following labels.

Label	Description
Gigabit RJ-45 ports	8 10/100/1000Base-T(X) Gigabit ports
SFP ports	2 100/1000Base-X on SFP port
P.O.E. Ports	Port 1 ~ 8 contain P.S.E. function compliant with IEEE802.3af, IEEE802.3at P.O.E. specifications.
Console	Micro USB connector. Use RS-232 to Micro USB connector to manage switch. (Managed switch models only)
Reset	Reboot the device
Load	Load Factory Defaults

US10GT8GX2



1. PWR1 LED: Green LED: On - Power is On, Off - Power is Off.
2. PWR2 LED: Green LED: On - Power is On, Off - Power is Off.
3. System Run. Slow flash: system run
4. Alarm LED: Green LED on – Alarm ON, Green LED off - Alarm OFF.
5. POE LED: Green LED on – POE ON, Green LED off – POE OFF.
6. Load Button: Reset to Factory Defaults
7. Reset Button: Reboot the device
8. Link Up LED: data is transmitted
9. LED for the port works at 1000Mbps.
10. Link/Act LED for SFP Ports: Link Down – ON, Data Transmitted – Blinking, Link Down - OFF
11. 8X1000Base-T(X) P.S.E. (Power Sourcing Equipment) ports
12. 2X1000Base-F(X) ports

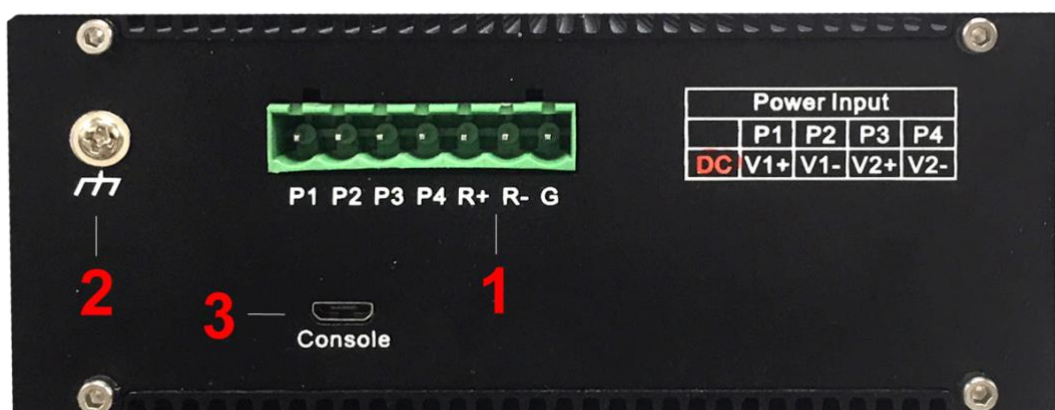
3.2 Front Panel LEDs

LED	Color	Status	Description
P1	Green	On	DC power input 1 activated.
P2	Green	On	DC power input 2 activated.
POE	Green	On	POE function work
A	Green	On	Alarm activated
R	Green	On	Slow flash: system run
Gigabit Ethernet ports			
LNK / ACT	Green	On	Port link up.
		Blinking	Data transmitted.
Speed	Yellow	On	Port working on 1000Mbps
Gigabit SFP ports			
LNK / ACT	Green	On	Port link up.
		Blinking	Data transmitted.

3.3 Top view Panel

The top panel of MS10GT8GX2 shown below:

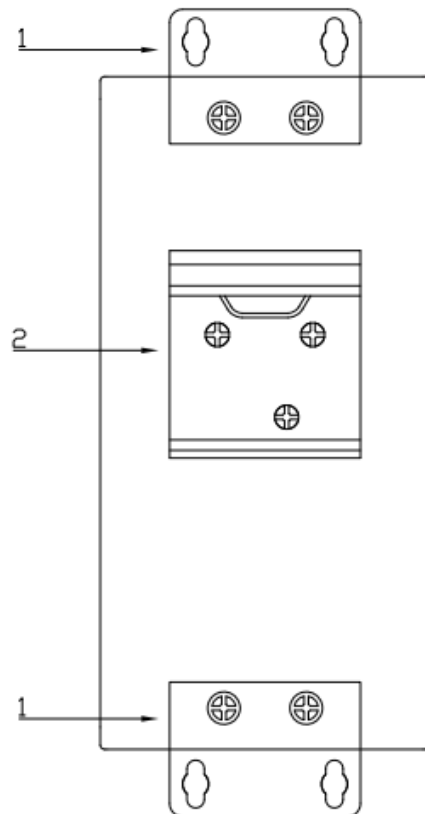
1. Terminal block includes: P1 P2 P3 P4 (48V DC), R+ R- (Alarm), G (Ground)
2. Ground wire
3. Console port (Micro USB connector)



3.4 Rear Panel

The components on the rear of US10GT8GX2 are shown below:

1. Wall mount kit
2. DIN-Rail kit



Cables

4.1 Ethernet Cables

The US10GT8GX2 switch has standard 10/100/1000 Ethernet ports. According to the link type, the switches use CAT 3, 4, 5, or 5e UTP cables to connect to any other network device (PCs, servers, switches, routers, or hubs). Please refer to the following table for cable specifications.

Cable Types and Specifications

Cable	Type	Max. Length	Connector
10BASE-T	Cat.3, 4, 5 100-ohm	UTP 100 m (328 ft)	RJ-45
100BASE-TX	Cat.5 100-ohm UTP	UTP 100 m (328 ft)	RJ-45
1000BASE-TX	Cat.5/Cat.5e 100-ohm UTP	UTP 100 m (328ft)	RJ-45

4.1.1 1000BASE-TX /100BASE-TX/10BASE-T Pin Assignments

With 100BASE-TX/10BASE-T cable, pins 1 and 2 are used for transmitting data, and pins 3 and 6 are used for receiving data.

10/100 P.S.E. Base-TX RJ-45 Pin Assignments

Pin Number	Assignment
1	P.O.E Power input +
2	P.O.E Power input +
3	P.O.E Power input -
4	Not used
5	Not used
6	P.O.E Power input -
7	Not used
8	Not used

1000 Base-TRJ-45 Pin Assignments

Pin Number	Assignment
1	BI_DA+
2	BI_DA-
3	BI_DB+
4	BI_DC+
5	BI_DC-
6	BI_DB-
7	BI_DD+
8	BI_DD-

The US10GT8GX2 switch also supports auto MDI/MDI-X operation. As such, you can use a straight-through cable to connect a standard computer to the switch using the computer's RJ45 Ethernet port. The tables below show the 10BASE-T/ 100/1000BASE-TX MDI and MDI-X port pin outs.

10/100 Base-TX MDI/MDI-X pins assignment

Pin Number	MDI port	MDI-X port
1	TD+(transmit)	RD+(receive)
2	TD-(transmit)	RD-(receive)
3	RD+(receive)	TD+(transmit)
4	Not used	Not used
5	Not used	Not used
6	RD-(receive)	TD-(transmit)
7	Not used	Not used
8	Not used	Not used

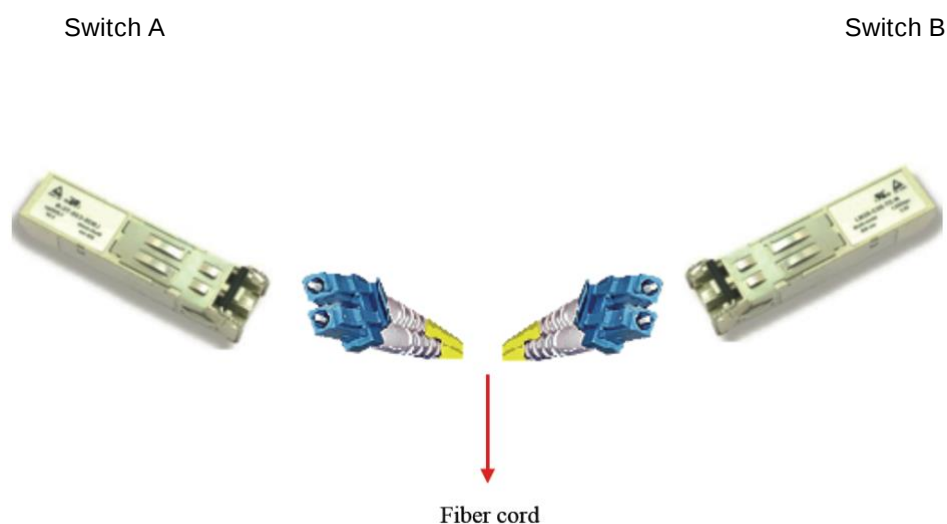
1000 Base-T MDI/MDI-X pins assignment

Pin Number	MDI port	MDI-X port
1	BI_DA+	BI_DB+
2	BI_DA-	BI_DB-
3	BI_DB+	BI_DA+
4	BI_DC+	BI_DD+
5	BI_DC-	BI_DD-
6	BI_DB-	BI_DA-
7	BI_DD+	BI_DC+
8	BI_DD-	BI_DC-

Note: "+" and "-" signs represent the polarity of the wires that make up each wire pair.

4.2 SFP

This switch is also equipped with two SFP fiber optic ports. These are available in a variety of configurations including single-mode, multimode, one fiber, two fibers, long reach & short reach. Please consult the SFP data sheet for a complete listing of the available SFP devices.



Notes:



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