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CISCO

MS130R Datasheet

Overview

Cisco Meraki MS130R extends reliable and secure layer 2 connectivity to ruggedized environments. The MS130R provides up to 240W of PoE and IP30 protection, making it perfect for connecting outdoor access points, cameras, and devices in extreme temperatures (-40°C to 70°C or -40°F to 158°F) and tight spaces.

Designed for adapting to non-traditional environments, the diverse mounting and power options offer deployment flexibility. The powerful Meraki cloud-native platform enables seamless and remote deployment and management of entire Meraki product suite through one centralized dashboard.

Features

- Extended Operating Temperature Range
- Flexible Powering Options
- Rack, Wall, and DIN rail mounting options
- Managed via Cisco Meraki Dashboard
- Remote Packet Capture Tools via Meraki Dashboard
- Automatic Firmware upgrades
- SNMP/Syslog Integration

- IPv4/6 ACL support
- 802.1Q VLAN tagging
- DHCP Snooping
- 802.1X Authentication
- 10/100/1000 Mbps RJ45
- 802.3bt PoE up to 30W per port

Configuration

The basic initial configuration of the MS130R is just as simple as any other model of MS switch. The links below provide additional information and instructions relating to each step in getting the device setup and configured for the first time.

1. Claim the device to an Organization on the Meraki Dashboard
    a. If a Dashboard Organization does not yet exist, Create one

2. [Add the device to a Dashboard Network](#)
   a. If a Network does not yet exist, [Create one first](#)
3. Physically connect the device to the local network
   a. Connect one of the RJ45 or SFP ports to existing infrastructure to provide a temporary uplink
   b. Power on the device and let it check in to the Dashboard
   c. If necessary, configure a Static IP through the [Local Status Page](#) to allow it to communicate with the Meraki Dashboard.
4. Allow the device to complete check-in and perform any initial firmware upgrades
5. Finish configuring the device from the Meraki Dashboard
   a. [Manage local VLANs / Port configuration](#)

Technical Breakdown

Hardware Breakdown

MS130R Models

	MS130R-8P
1Gbe RJ45	8
1GbE SFP	2
Dedicated Mgmt Interface	-
PoE Type	802.3bt
PoE Port Budget	30W
PoE Switch Budget	240W
Power Input	50-54VDC, 5.6A
Power Load (idle/max)	12W/257W
Power Consumption	12W-257W
Operating Temperature	see [Thermal and PoE specifications section](#)
Storage and Transportation Temperature	-40°F - 185 °F -40°C - 85°C
Humidity	5% to 95%

Mounting	Desktop, Wall mount, DIN rail options
Switching Capacity	20Gbps
Power Supply	External AC Adapter or DIN rail AC power supply options
Fan Operation	Fanless
Dimensions (h x w x d)	1.75 x 6.18 x 6.69in (4.4 x 15.7 x 17cm)
Weight	2.12 lb (0.96 kg)

Thermal and PoE limitations

Operating temperature limitations

Installation Environment	Fan/blower equipped enclosure	Vented enclosure	Sealed enclosure	Desktop
Ventilation	200 LFM	40 LFM	0 LFM	40 LFM
Operating Temperature Limits	-40°F - 158°F -40°C to 70°C	-40°F - 149°F -40°C to 65°C	-40°F - 140°F -40°C to 60°C	Vertical -40°C to 60°C Horizontal -40°C to 55°C

> ⊙ Airflow around the switch must be unrestricted. To prevent the switch from overheating, you must have the following minimum clearances:
>
> - Top and bottom: 2.0 in. (50.8 mm)
> - Sides: 1.0 in. (25.4 mm)
> - Front: 2.0 in. (50.8 mm)
>
> **Caution:** When the switch is installed in an enclosure, the temperature within the enclosure is greater than normal room temperature outside the enclosure. For example the DIN rail power supply also generates heat which may raise the temperature on the switch. To reduce this increase ventilation or space between the power supply and the switch.

Power Supply De-rating

De-rating is the reduction of the output power depending on the ambient temperatures. When the ambient temperature rises above a certain threshold, the amount of power that the power supply can output decreases as the temperature rises, which limits the amount of power the switch can provide to connected PoE devices.

Power Supply	MA-PWR-300W-INDADP	PWR-IE240W-PCAC-L=	PWR-IE480W-PCAC-L=

| De-rating | 24W/5°C over 45°C | 30W/5°C over 50°C | 60W/5°C over 50°C |

What's In the Box

Model	Included
MS130R-8P	• MS130R switch • DIN rail mounting bracket • 19" rack mount brackets • Wall mount brackets

Power Supplies

MS130R can be powered via an external AC power supply adapter or DIN rail power supply*. Power supplies must be ordered separately and are not included in the box.

Power supply type	Part number
External AC adapter	MA-PWR-300W-INDADP
DIN rail power supply	• PWR-IE240W-PCAC-L= • PWR-IE480W-PCAC-L=

ⓘ *The DIN Rail power supplies are Cisco branded devices. For more information regarding the DIN rail power supplies, see the Cisco datasheet here

Accessories

Region-specific power cords are not included in the box*. Order the appropriate power cord separately:

- MA-PWR-CORD-US
- MA-PWR-CORD-EU
- MA-PWR-CORD-UK
- MA-PWR-CORD-CN
- MA-PWR-CORD-IN
- MA-PWR-CORD-BR
- MA-PWR-CORD-TW
- MA-PWR-CORD-AU
- MA-PWR-CORD-AR

> ⓘ Rack-mount screws are not included in the box, but can be ordered separately. Meraki recommends sourcing rack-mount screws and nuts made for your specific rack.

SFP Modules

The following SFP/Fiber transceivers are supported

MS130R-8P
- MA-SFP-1GB-TX
- MA-SFP-1GB-LX10
- MA-SFP-1GB-TX
- GLC-SX-MM-RGD*
- GLC-LX-SM-RGD*
- GLC-ZX-SM-RGD*
- GLC-T-RGD*

> ⓘ *These GLC modules are Cisco branded devices. For more information regarding these modules, see the following Cisco datasheets:
>
> - [SFP and Stacking Accessories](#)
> - [Cisco SFP Modules for Gigabit Ethernet Applications Data Sheet](#)

Certifications

Description	Specification
Safety Certifications	UL 60950-1 / UL 62368-1 3rd Edition
	CAN/CSA C22.2 No. 60950-1 / No. 62368-1
	EN 60950-1 / EN 62368-1
	IEC 60950-1 / IEC 62368-1 2nd & 3rd Edition
	NOM-019-SCFI-1998
	CNS 15598-1

EMC Emissions and Immunity Compliance	FCC 47 CFR Part 15 Class A
	ICES 003 Class A
	EN 55032/ 55035 Class A
	AS/NZS CISPR 32 Class A
	VCCI Class A
	CNS 15936
	EN 300 386
	IEC/EN 61000-4-9
	IEC/EN 61000-4-29
International Standards	EN 50581 (RoHS)
	China RoHS
	CE Marking
	RCM Marking (Australia/New Zealand)
	Japan VCCI & JATE
	Taiwan BSMI
	Korea KC
	Brazil ANATEL
	China NAL
	Mexico IFETEL
	EU WEEE
	NEMA TS-2
	IP30
	IEC 60068 -2-3 / -2-30

Troubleshooting

The MS uses LEDs to inform the user of the device's status. Functions are described below, from left to right. For fixed Ethernet ports, the status LED is on the

top left or bottom right depending on port orientation. There is also a traffic LED which flashes orange as traffic is sent/received through that port.

Function	LED Status	Meaning
Power	Solid orange	Switch is unable to connect to the Meraki cloud
	Flashing white	Firmware upgrade in process
	Solid white	Switch is fully operational and connected to the Meraki cloud
	Off	Switch does not have power
Switch Ports	Off	Port is operating at less than full speed. For example: • 10/100M on a 1GE port • 100M/1GE on 2.5GE ports • 1G on SFP+ ports
	Solid green	Port is operating at full speed • 1GE on 1GE ports • 2.5GE on 2.5GE ports • 10GE on SFP+

Common Troubleshooting

My device is connected to the network but not checking in to the Meraki cloud or shows a solid Orange LED.

Confirm that the device is powered on and has a valid IP address that is able to access the Internet. Use the Local Status Page to get more information about the connectivity status of the device such as if it can successfully reach the Local Gateway, Internet, and/or Meraki Cloud servers. If necessary, contact Meraki Support for additional assistance.

My Status LED is blinking WHITE

A blinking WHITE Status LED indicates that the device is in contact with the Dashboard Cloud servers and is performing a firmware update. This can sometimes take 20-45 minutes or more to complete depending on hardware and other factors.

My Status LED is blinking ORANGE

The device is not able to successfully communicate with the Dashboard Cloud servers or there may be a hardware issue with the device. Check the Local Status Page of the device to confirm the status and reach out to Meraki Support for further troubleshooting.

Event Log

The most common Event Log messages and their meaning are listed below.

Port STP change

Indicates the STP state of the port has changed, lists the relevant port number, previous, and new states. Typically accompanied by a 'Port status change' event.

Port status change

Indicates the link state of the port has changed, lists the relevant port number, old, and new state. Always accompanied by a 'Port STP change' event.

SFP module inserted/removed

Indicates that an SFP module was either inserted or removed, includes SFP module information for inserted events and always lists the relevant port number.