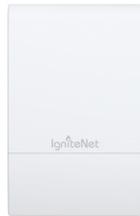


Quick Start Guide

MeshLinq Outdoor Switch

ML-S-4GE-1MGE

1. Unpack and Check Contents



MeshLinq Outdoor Switch
ML-S-4GE-1MGE



Power cord— Japan, US, Continental Europe, or UK



Passive PoE power injector



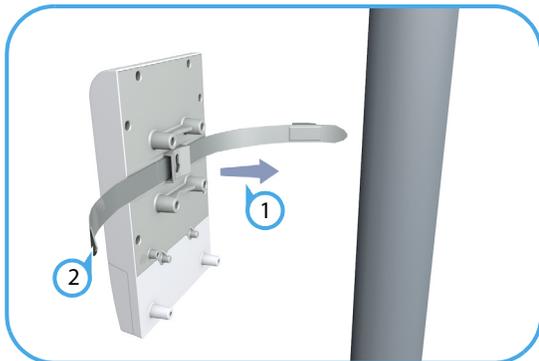
DC terminal plug



Grounding screw

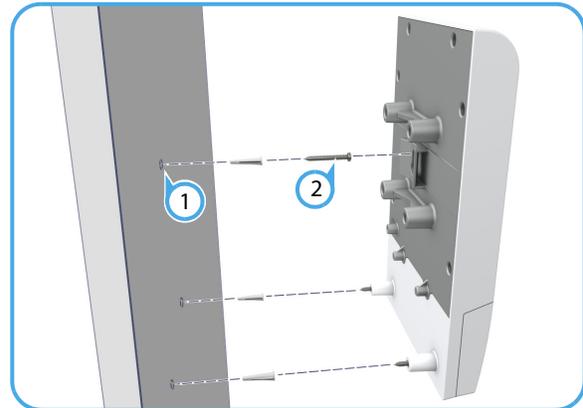
2. Mount the Switch

a. Mounting on a Pole



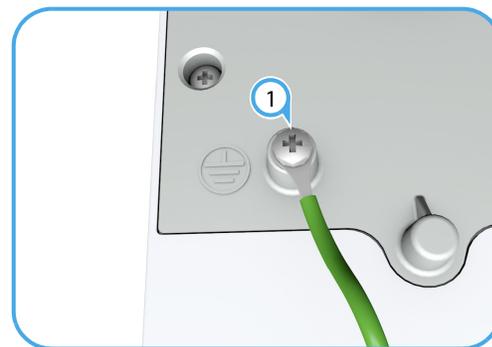
- 1 Place the unit against the pole (diameter 20-200 mm).
- 2 Use up to 12 mm (1/2 in) strapping to secure the unit to the pole.

b. Mounting on a Wall



- 1 In the required location, mark and drill three holes in the wall for M4 wall anchors (not included).
- Note:** For a wood wall, drilling holes and using wall anchors is not required.
- 2 Mount the unit on the wall and secure it in place using three M4 x20 tapping screws (not included).

3. Ground the Switch



- 1 Ensure the structure on which the unit is to be mounted is properly grounded and in compliance with ETSI ETS 300 253.
- 2 Verify that there is a good electrical connection to a grounding point (no paint or isolating surface treatment). Use the included (M4) screw to attach a grounding wire (not included) to the grounding point on the unit, and then to ground.

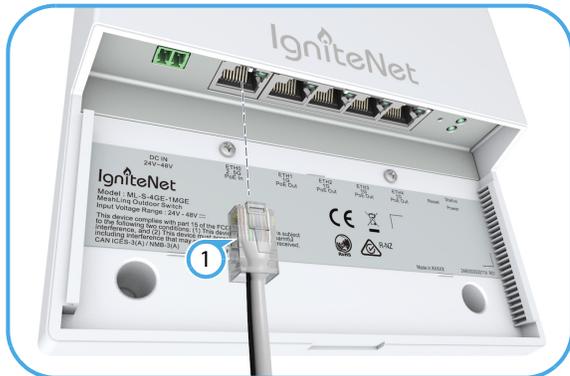


Caution: The earth connection must not be removed unless all supply connections have been disconnected.

4. Connect Power

The switch can be powered by a 24 to 48 VDC passive PoE injector or by connecting an external 24 to 48 VDC power source to its DC terminal block.

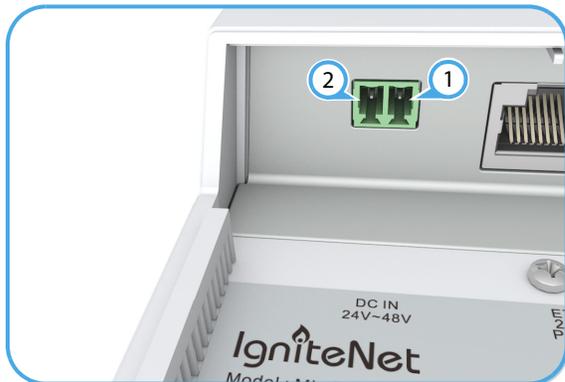
a. PoE Power



- 1 Connect Category 5e or better cable to the **PoE In** RJ-45 port.
Connecting Ethernet cable from the included passive PoE injector can power on the unit. (Does not require a DC power connection.)

Note: When powered from its DC terminal block, the RJ-45 ports **ETH1-ETH4** function as PoE PSE (power source) ports.

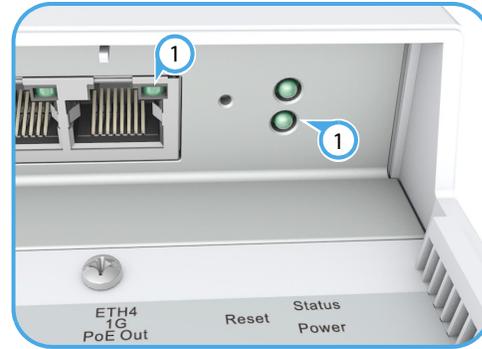
b. DC Power



Warning: Before wiring the DC block or connecting power to the device, ensure that power to the feed lines is turned off at the supply circuit breaker or disconnected from the power bus.

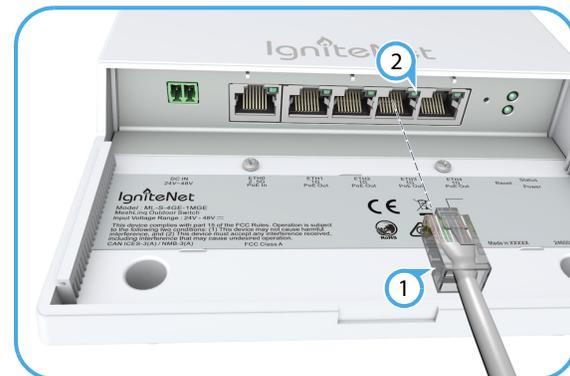
- 1 Connect the DC power feed wire to the DC block "+" pin.
- 2 Connect the ground/return wire to the DC block "-" pin.

5. Verify Switch Operation



- 1 Verify basic switch operation by checking the system LEDs. When operating normally, the Power LED should be on green, and connected LAN port LEDs should be on or blinking green.

6. Connect Network Cables



- 1 For RJ-45 ports, connect 100-ohm Category 5, 5e or better twisted-pair cable.
- 2 As connections are made, check the RJ-45 port status LEDs to be sure the links are valid:
 - ♦ On Green — Port has a valid link.
 - ♦ Blinking Green — Indicates network activity.

7. Connect to the Web User Interface

To access the web interface, connect a PC directly to a switch RJ-45 port. In a web browser, enter the DHCP-assigned IP address to access the web login page.

The switch IP address is automatically assigned through DHCP by default. If a DHCP server is not available on the network, the switch reverts to a fallback IP address of 192.168.1.20.



Log in to the web interface using the default settings:

- ♦ Username — root
- ♦ Password — admin123

8. Complete the Setup Wizard

Manage the Switch with the IgniteNet Cloud Controller

To manage the switch using the IgniteNet Cloud controller, select “Yes, I will manage this device with the IgniteNet Cloud controller.” Click “Done” to complete the Setup Wizard.

Go to **cloud.ignitenet.com** to register your switch.

Log in and select **Devices** from the menu. Click **Add Device** and enter the switch serial number and MAC address to register the switch with your cloud network. The serial number and MAC address can be found on the product packaging or label.

Manage the Switch in Stand-Alone Mode

To manage the switch in stand-alone mode, select “No, I will be operating this device in stand-alone mode.” Click “Done” to complete the Setup Wizard.

For more information on switch configuration in stand-alone mode, refer to the *MeshLinq User Manual*.

Safety and Regulatory Information

FCC Class A

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

You may use unshielded twisted-pair (UTP) for RJ-45 connections - Category 3 or better for 10 Mbps connections, Category 5 or better for 100 Mbps connections, Category 6a or 7 for 2.5 Gbps connections. For fiber optic connections, you may use 50/125 or 62.5/125 micron multimode fiber or 9/125 micron single-mode fiber.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

CE Mark

CE Mark Declaration of Conformance for EMI and Safety (EEC)

This information technology equipment complies with the requirements of the Council Directive 2014/30/EU on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility and 2014/35/EU for electrical equipment used within certain voltage limits. For the evaluation of the compliance with these Directives, the following standards were applied:

RFI Emission:

- ◆ Limit according to EN 55032:2012/AC:2013, Class A
- ◆ Limit for harmonic current emission according to EN 61000-3-2:2014, Class A
- ◆ Limitation of voltage fluctuation and flicker in low-voltage supply systems according to EN 61000-3-3:2013

Immunity:

- ◆ Product family standard according to EN 55024:2010, Class A
- ◆ Electrostatic Discharge according to IEC 61000-4-2:2008 ED. 2.0
- ◆ Radio-frequency electromagnetic field according to IEC 61000-4-3:2010 ED. 3.2
- ◆ Electrical fast transient/burst according to IEC 61000-4-4:2012 ED. 3.0
- ◆ Surge immunity test according to IEC 61000-4-5:2014 ED. 3.0
- ◆ Immunity to conducted disturbances, Induced by radio-frequency fields: IEC 61000-4-6:2013 ED. 4.0
- ◆ Power frequency magnetic field immunity test according to IEC 61000-4-8:2009 ED. 2.0

- ◆ Voltage dips, short interruptions and voltage variations immunity test according to IEC 61000-4-11:2004 ED. 2.0

LVD:

- ◆ EN 60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 + A2: 2013



The Declaration of Conformity (DoC) can be obtained from www.ignitenet.com/support.

Warnings and Cautionary Messages



Warning: This product does not contain any serviceable user parts.

Warning: Installation and removal of the unit must be carried out by qualified personnel only.

Warning: When connecting this device to a power outlet, connect the field ground lead on the tri-pole power plug to a valid earth ground line to prevent electrical hazards.



Caution: Wear an anti-static wrist strap or take other suitable measures to prevent electrostatic discharge when handling this equipment.

Caution: Do not plug a phone jack connector in the RJ-45 port. This may damage this device.

Caution: Use only twisted-pair cables with RJ-45 connectors that conform to FCC standards.

Hardware Specifications

Chassis

Size (WxDxH)	152 x 241 x 49 mm (4.69 x 7.2 x 1.18 in)
Weight	720 g (1.59 lb)
Temperature	Operating: -30° C to 55° C (-22° F to 131° F) Storage: -40° C to 70° C (-40° F to 158° F)
Humidity	Operating: 5% to 90% (non-condensing)
Network Ports	<ul style="list-style-type: none"> ◆ 1 2.5GBASE-T RJ-45 passive PoE-in port ◆ 4 1000BASE-T RJ-45 passive PoE-out ports
Waterproof/ Dustproof	IP55
Status LEDs	Power, Status, Port Link

Power

DC Input Power	24V, 4A / 48V, 2A
PoE Input Power	24V, 1A / 48V, 0.5A
PoE Output Power	96 W (maximum)

Standards

Ethernet	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3ab 1000BASE-T IEEE 802.3bz 2.5GBASE-T
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Regulatory Compliance

Emissions	EN 55032:2012/AC:2013, Class A EN 61000-3-2:2014, Class A EN 61000-3-3:2013 FCC Class A
Immunity	EN 55024:2010 IEC 61000-4-2/3/4/5/6/8/11

Manufacturer

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