



Smart Plant™ Remote Monitoring Systems

INSTALLATION GUIDE

WX Outdoor Gateway



- **Revision History**

Release 1 – 2022-11-15

IAC Form #: IAC-IG-001

In case of emergency call 911.

For IAC afterhours troubleshooting and service assistance contact:

IAC 24/7 Customer Support Hotline
Phone: 913-834-5511, Option # 4

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1 INTRODUCTION

1.1 PURPOSE

The WX outdoor gateway is a cellular backhaul device that communicates sensor readings from local wireless WX sensor nodes and cloud based IoT platform.



1.2 INTENDED AUDIENCE

This guide will be useful for all users of the WX Outdoor Gateway. It will guide Operators and Maintenance personnel through mounting, connection, start-up, and operation.

1.3 HOW TO USE THIS GUIDE

This guide will explain proper mounting, grounding, powering, and operation of the WX gateway. It will also explain different LED status lights & troubleshooting device connection issues.

2 MOUNTING

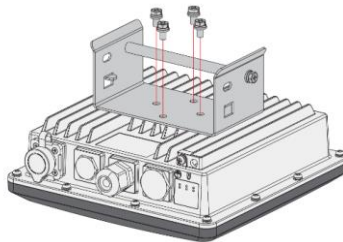
2.1 PERFORMING INSTALLATION

Installation of this product should be performed by an appropriately licensed Electrician. The device should be mounted away from sources of excessive heat or electrical interference and be placed at a location central to all WX sensor nodes. Installation with line of sight to sensor nodes is ideal, also installation at high elevation is preferred.

Installation and wiring methods should comply with all applicable Electrical codes.

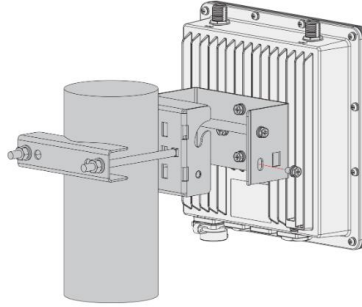
2.2 MOUNTING – STEP ONE (1)

Fix the bracket included in the mounting kit on the bottom of the enclosure with four M6*12 screws.



2.3 MOUNTING – STEP TWO (2)

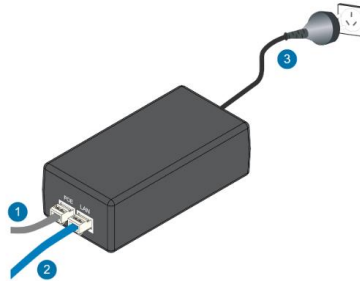
Position and tighten the pole clamps together around the pole with bolts, washers, and nuts. The diameter of the pole that is supported by the brackets is 50-100 mm. If the pole diameter is more than this value, hose clamps can be used. The standard mounting kit does not include hose clamps. If needed, they should be purchased separately. The clamp's back also has openings for hose clamps that are not included in the mounting kit. Position the enclosure and fasten it with two M6*12 screws.



3 CONNECT PoE ADAPTER

Connect the Ethernet cable from the enclosure to the Ethernet port labeled PoE adapter.

Connect one end of the power cord to the adapter. Connect the other end of the power cord to a power outlet. Note that the PoE adapter is not rated for direct outdoor locations and must be mounted within an appropriately rated weatherproof enclosure (not provided).



4 GROUNDING

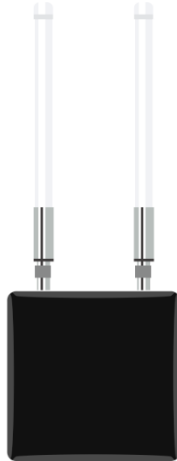
The gateway enclosure ground stud should be connected to a quality earth ground using at minimum 10AWG wire.

5 LIGHTNING PROTECTION

If the gateway is installed in a location with frequent lightning strikes and is located on a roof, or other area that is a potential for a lightning strike it is recommended to install a lightning arrestor between the antenna and the gateway. A device similar to L-Com AL6-NMNFBW-9 is recommended. Consult factory for further details.

6 ANTENNA

Attach all antennas to the Gateway (one LoRa antenna for 8-channel gateways, two LoRa antennas for 16-channel gateways).



7 START UP

Apply power to the PoE adapter. The PWR LED indicator on the gateway should light up. During bootup the gateway will search for a cellular connection and once connected the LTE LED indicator will begin to flash with data traffic. The LoRa1 LED indicator will light solid when the system is up and running and ready to accept LoRa radio communication from WX sensor nodes

8 OPERATION

The WX gateway is provided fully provisioned and ready for operation. There is no user adjustment of settings required for normal operation. Monitoring of gateway operation is done by observing the status LEDs on the gateway bottom surface. During normal operation the LEDs will show:

PWR – on solid

LTE – blinking periodically

LoRa1 – on solid

If the LEDs do not indicate this status the gateway may be powered OFF then back ON. Note that the gateway has a small amount of internal energy storage, so it is required to remove power for several minutes for it to fully power down. Check the PWR led to ensure it is fully OFF before re-applying power.

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