

# Marine Internet Modem (MIM200)

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## Important Configuration Information

Your marine internet modem (MIM200) has been pre-configured to assist you with getting started. You may choose to leave all configuration settings at the defaults and utilise the network names and passwords listed below. If you choose to leave all settings at their defaults the modem will still be secure as these have been changed from the factory defaults.

**Modem IP address:** xxx.xxx.xxx.xxx

**Modem Password:** xxxxxx

**Wi-Fi Name (SSID):** xxxxxxxxxxxx

**Wi-Fi Password:** xxxxxxxxxxxx

## 1. Introduction

The Marine Internet Modem kit from PicoSense has been designed to provide you the best cellular internet connection possible onboard your vessel, wherever you may go.

The kit contents have been assembled specifically to operate in the harsh marine environment. The modem includes the ability for you to install up to two SIM cards to allow you to connect to the best network available based on your location. The modem operates as a Wi-Fi hotspot on your boat, allowing multiple Wi-Fi enabled devices (iPad, tablets, iPhones, Smart TV, etc) to connect to the internet. The modem also provides a single wired ethernet connection which allows expansion and legacy devices to connect which may not include Wi-Fi functionality. The modem is designed to be powered from either 12 or 24VDC.

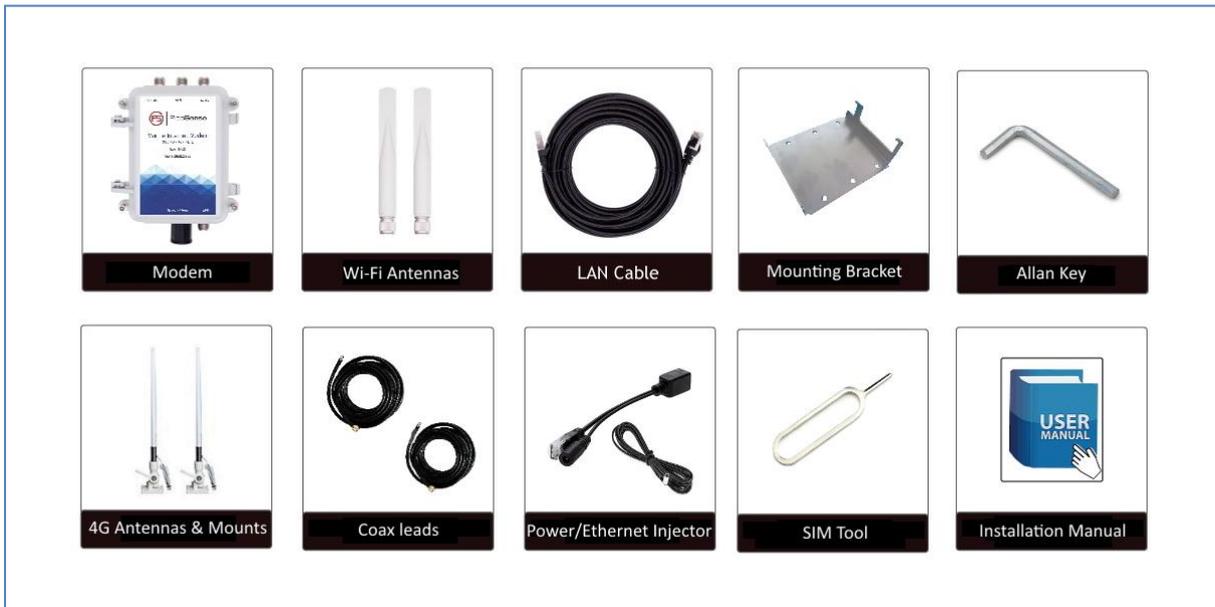
## 2. Hardware

### Kit Contents

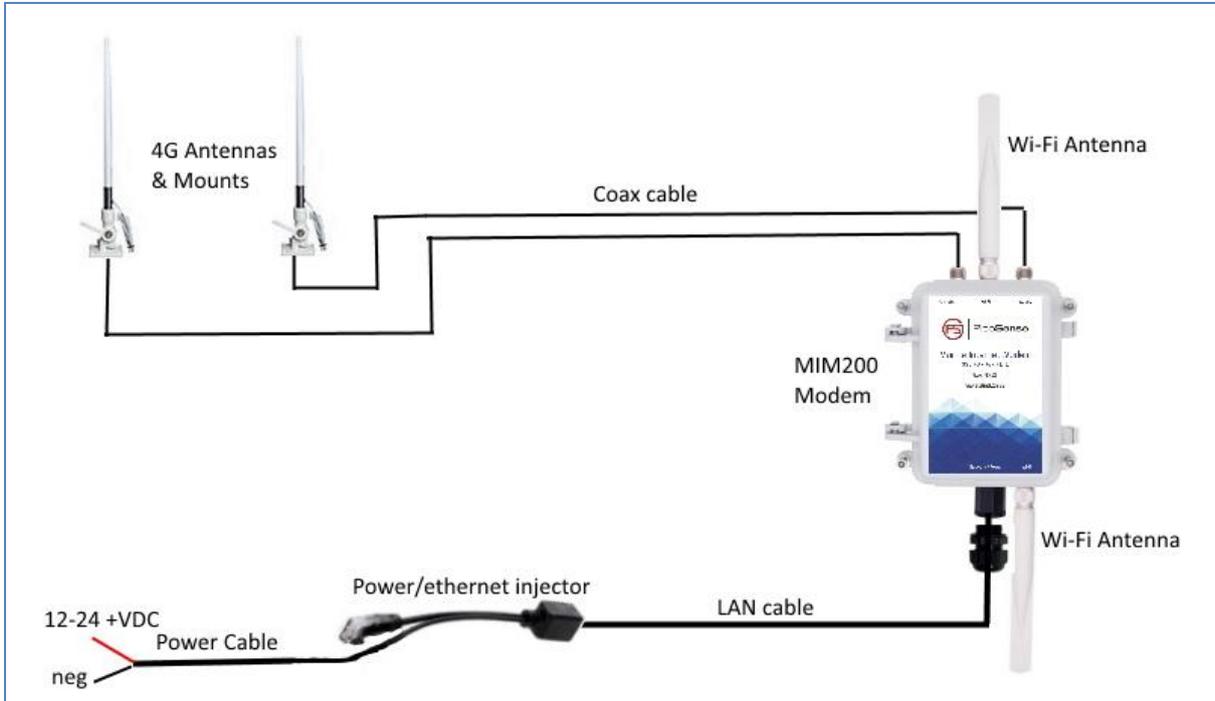
- 1 x Marine Internet Modem (MIM200)
- 1 x Mounting bracket
- 2 x Marine 9dB antenna
- 2 x Nylon adjustable antenna mount
- 2 x 10m LCU400 Coax cables
- 2 x 2.4G Wi-Fi antennas
- 1 x 10m LAN cable (Supplies power and data)
- 1 x Cable gland (pre-attached to LAN cable)
- 1 x Power / ethernet injector with power lead
- 1 x Allan key
- 1 x SIM Tool
- 1 x Installation Instructions

# Marine Internet Modem (MIM200) Instructions

Version 1 - 2020



## Connection Overview



## 3. Installation

### Installation Location Considerations

Before beginning the installation of the modem and antennas it is important to consider where you will mount the hardware. The kit includes coax cables 10m long for the cellular antennas so determining the positioning is important to ensure everything can connect.

### Antenna location

The kit includes two high gain cellular 4G antennas and mounting brackets. Factors determining where to mount the antennas:

- As high as practicable. On a power boat this is usually a radar arch, sides or top. Alternatively on the cabin top or sides.
- On a yacht the best place is often the rear bimini frame or arch on either side of the boat.
- Spaced ideally 1.5m apart
- Not within 1m of a radar
- Not within 0.5m from another antenna (VHF or other)
- Not anywhere the antennas might foul sails or ropes
- Consider the cable run length from antenna mounting location to the modem.

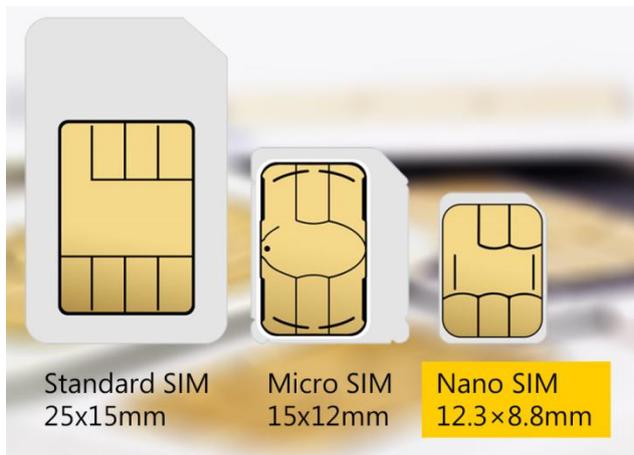
### Modem Location

The modem includes an easy to fit mounting bracket to hold the modem securely. The modem is **not** designed to be installed outside. When determining where to mount the modem you must consider the height requirement of the modem with both Wi-Fi antennas connected to the top and bottom of the modem. The modem can be mounting out of sight if required as there are no lights on the front of the unit. It should be mounted as vertical as possible to provide the best Wi-Fi performance.

**\* Make sure power is turned OFF to the modem before inserting or removing SIM**

### Inserting a SIM card

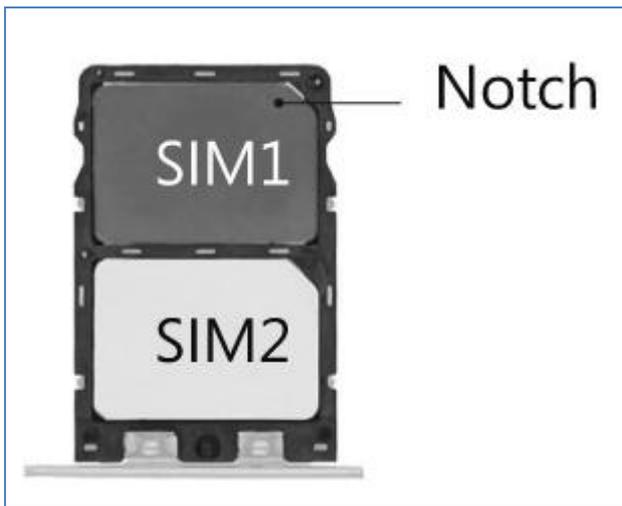
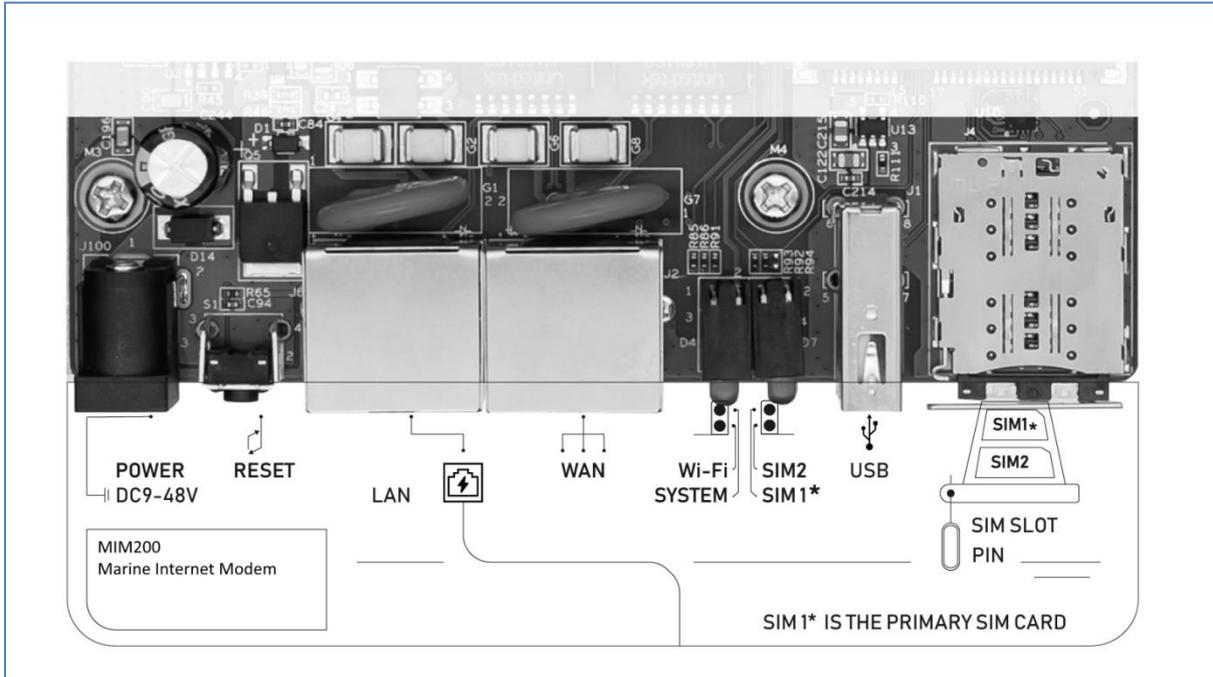
The MIM200 supports two SIM cards. The SIMs are installed on a small tray within the modem. Both SIM cards must be nano sized. Nano SIMs can be pushed out from a full sized SIM tray. SIM 2 is not required for the modem to function, only the SIM 1 (Primary) SIM is required.



1. Disconnect power from the modem and use the included Allen key to loosen all four bolts on the front side of the modem, then open the case.
2. Use the included SIM tool to push the pinhole gently until the SIM card holder pops out.
3. Put the primary SIM card in the first slot. Make sure the notch on the SIM is in the inside direction and gold pins face down. There is only one correct way to settle the Nano SIM card into the SIM card holder.
4. Carefully reposition the SIM card holder in the slot and push it back gently. Do not force it!

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## Power

Power to the modem is supplied via the combination network/power cable (10m) with a splitter to be plugged into the network cable at the powered side. The splitter injects the power from the boat supply into the network cable. One side of the splitter includes a length of power cable with bare wires. These are to be connected to the boats power supply. The modem will operate from either 12 or 24VDC. It is necessary to wire the modem to a 2AMP fuse (not included) or circuit breaker.

## Mounting the modem in the bracket and connecting up

The modem attaches to the bracket by sliding in to the left hand side of the bracket on approx. 45deg angle such that the fingers slot around the hinge of the modem. The modem can then be pushed flat against the bracket. There are two Allan key bolts and restraints that need to be replaced through the mounting bracket to ensure it is secure.

There is a mounting and drilling template for the bracket included at the end of this installation manual to assist with mounting the bracket.



**It is recommended that you install the SIM card prior to mounting the unit in the bracket to make your life easier.**

Taking note of the labels on the modem, carefully screw the two Wi-Fi antennas to the modem, ensuring you do not cross thread them. Do the same with the two cellular antenna cables, connecting to 4G Main and 4G Div ports on the modem. Ensure the cellular antenna cables are not bent too tightly around sharp corners to avoid any problems.

The network cable (LAN cable) is supplied with the cable gland pre-attached and simply requires the network connection to be clicked into place in the bottom centre port of the modem. Then simply slide the gland up the cable to meet the black gland on the modem. Carefully screw the gland into the mounting on the bottom of the modem. There is no need to overtighten this. Finger tight is fine. Then screw closed the gland around the network cable to complete.

## Antenna installation

The antennas include adjustable nylon deck mounts which are able to be adapted to suit mounting on many different angled surfaces. Once the mounts are installed, screw the antenna to the mount. The antennas include a short 30cm fly lead. When screwing to the mount ensure the cable has **not** already been connected to the long thick coax lead as this may cause damage to the antenna cable. Once the antenna is screwed onto the mount, you can then attach the thicker coax cable to the thinner fly lead. After ensuring that the connection is made and not cross-threaded **it is recommended to use self-amalgamating tape to fully seal and waterproof the connection to avoid corrosion.**

**TIP!**

**Leave the rolls of coax out in the sun for a few hours prior to installation. This will help soften the cable and help with routing through the boat.**