



oMG 500 Quick Set-Up Guide

oMG



SIERRA
WIRELESS®

oMG-ED-130504
1.2
April 29, 2015

Important Notice

Due to the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices such as the Sierra Wireless modem are used in a normal manner with a well-constructed network, the Sierra Wireless modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property. Sierra Wireless accepts no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using the Sierra Wireless modem, or for failure of the Sierra Wireless modem to transmit or receive such data.

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Do not operate the Sierra Wireless modem in areas where cellular modems are not advised without proper device certifications. These areas include environments where cellular radio can interfere such as explosive atmospheres, medical equipment, or any other equipment which may be susceptible to any form of radio interference. The Sierra Wireless modem can transmit signals that could interfere with this equipment.

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Consult our website for up-to-date product descriptions, documentation, application notes, firmware upgrades, troubleshooting tips, and press releases: www.sierrawireless.com

Document History

Version	Date	Updates
1.2	April 29, 2015	Updates for SWI logo
1.1	January 29, 2015	Updated to SWI template



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1. Introduction

This document provides the steps necessary to get up and running quickly with the Sierra Wireless oMG 500 including installation, configuration, verification of operation, and troubleshooting.

1.1. Related Publications

Title and Publication Number	Description
oMG-ED-130507 oMG 500 Installation Guide	Describes how to install the oMG in a vehicle.
oMG-ED-120202 SIM Card Installation Guide	Describes how to install SIM cards into an oMG.
oMG-ED-121006 oMG Operation and Configuration Guide	Provides detailed information about the operation and configuration of the oMG.



2. Before you Begin: Equipment

You must have the following:

- A Pre-Activated SIM Card (*Mini SIM (2FF)*).



Figure 1 - Mini SIM (2FF)

- Please contact your cellular service provider to verify the SIM is activated before proceeding.
- ESD protection measures including as grounded wrist-strap



Figure 2 - Example of a Grounded Wrist Strap

- Miscellaneous equipment:
 - Screwdriver - #1 Phillips.

Antenna ground planes if the vehicle roof is non-metal.



3. Install the SIM into the oMG

Warning: Use ESD protection including a grounded wrist strap.

1. Open the oMG cover by removing the four Philips screws around the bottom edge and gently lifting it away from the base:

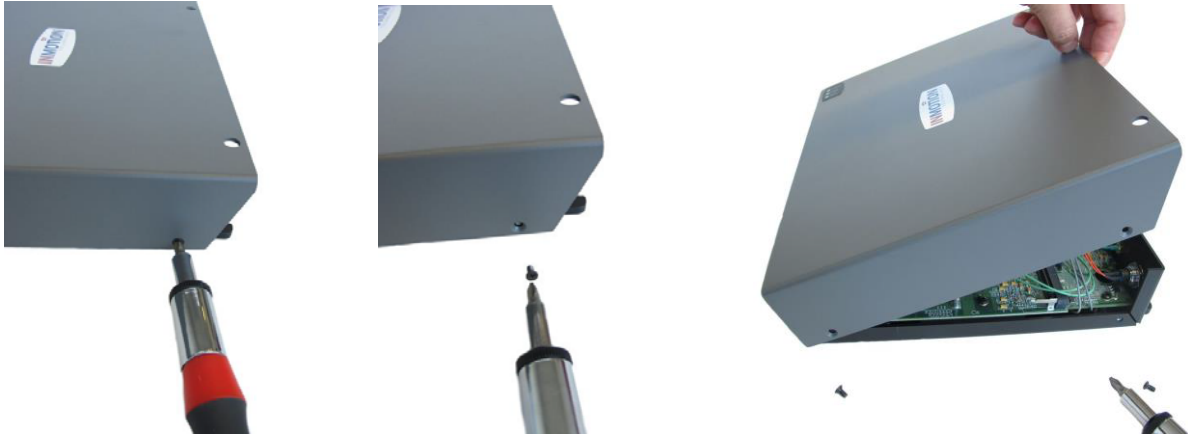


Figure 3 - Location of screws and Removal of Cover

2. Locate the primary SIM tray and use a pen or small screwdriver to press the ejection button:

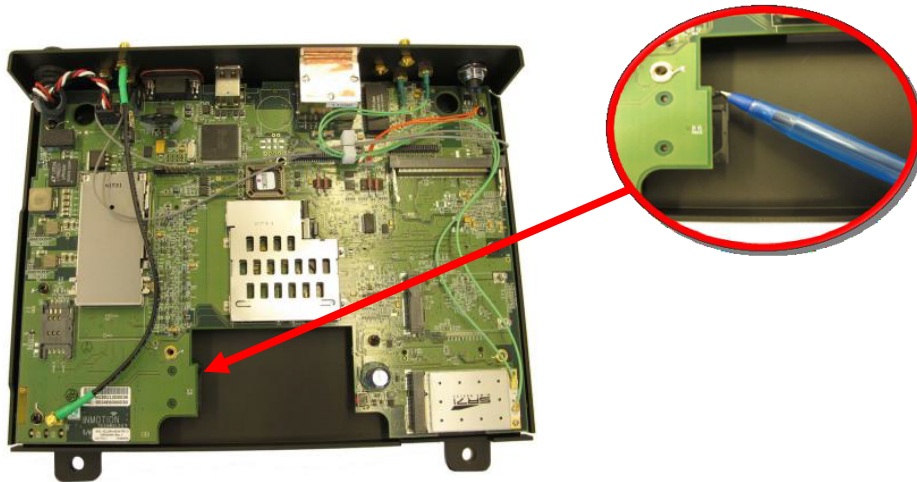


Figure 4 - Location of the SIM Tray

3. Place the SIM into the tray ensuring that it sits flat and the connection pads are facing upwards:



Figure 5 - Correct Orientation of the SIM Card

4. Reinsert the SIM tray into the slot and gently press until it is locked in place:

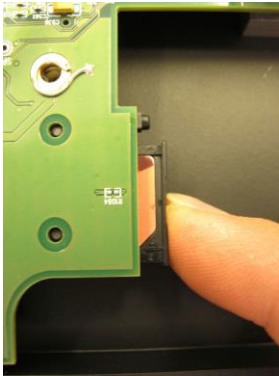


Figure 6 - Inserting the SIM Card into the SIM Tray

5. Once SIM is inserted, replace the center cover and retighten the screws.



4. Install the oMG in a Vehicle

1. Mount the oMG inside the vehicle in a waterproof area using the four mounting holes.
2. Be sure there is 3.5 inches of clearance as indicated in Figure 7 and Figure 8 below, for service access to antenna, power, and other connectors.

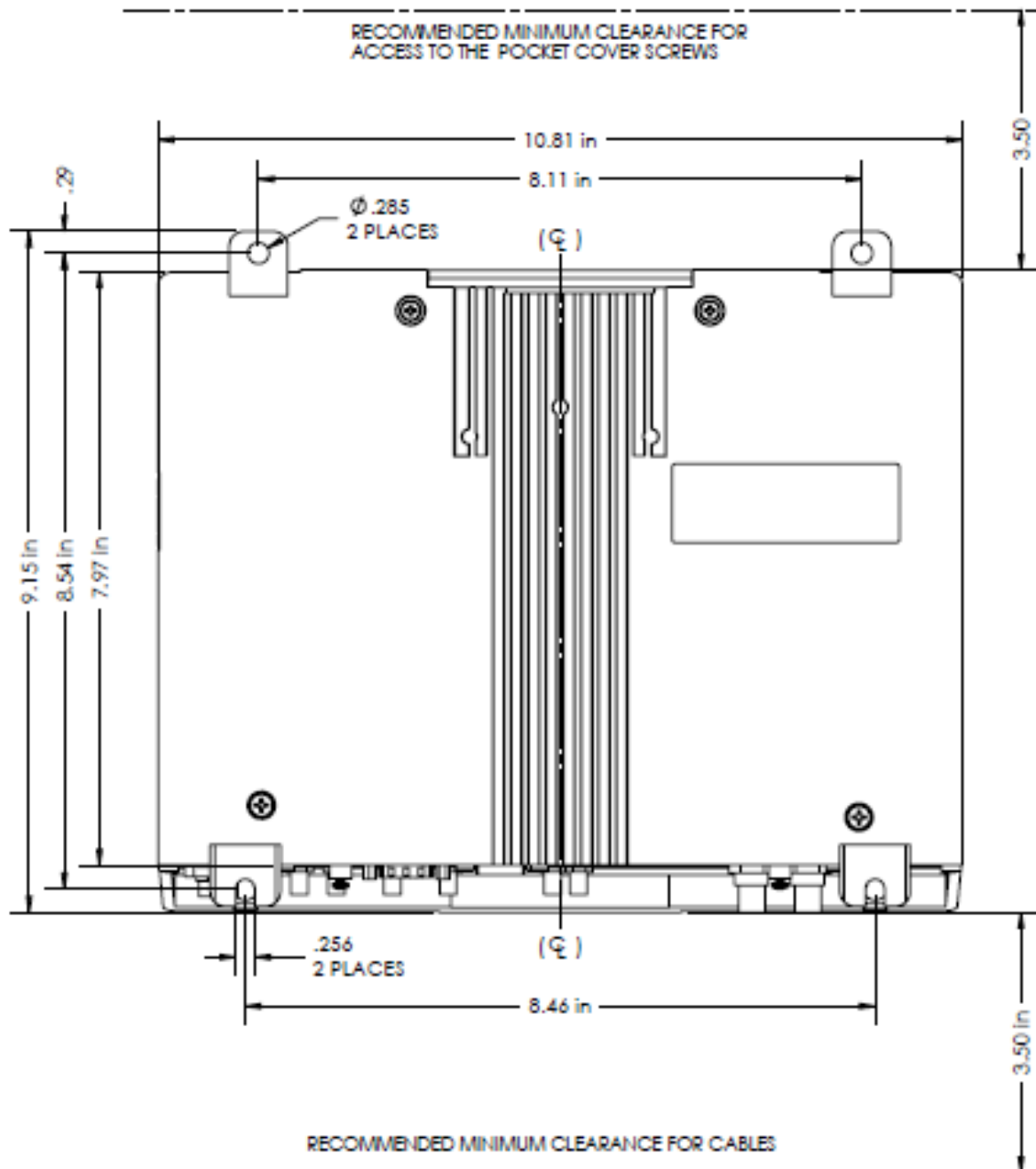


Figure 7 - Recommended Clearances

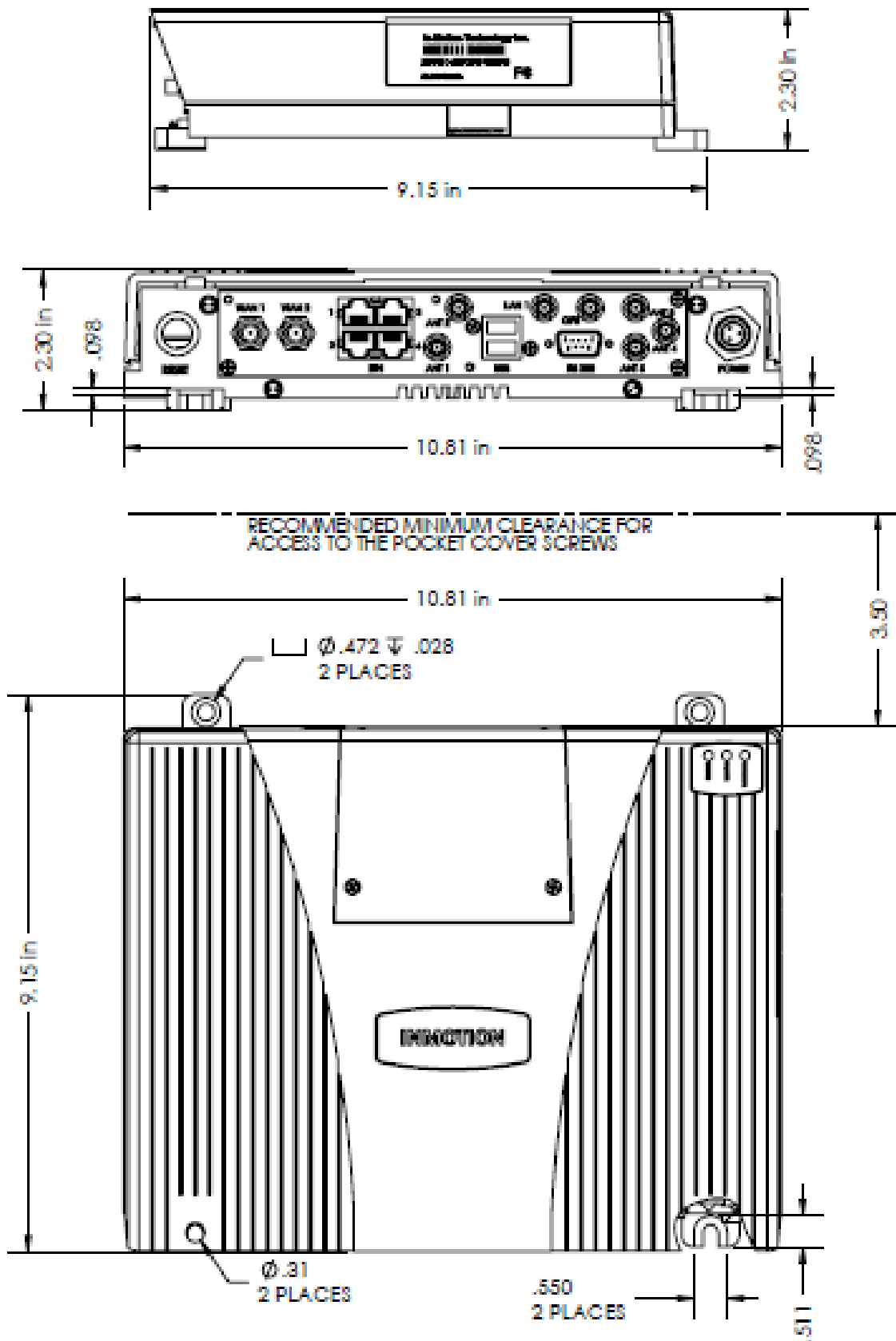


Figure 8 - Additional Clearance Details



5. Connect the Power Cable to the Power Source

Wire the cable-end of the DC power cable into the vehicle's electrical system according to the diagram.



Figure 9 - oMG 500 Power Cable

Wire Color	Purpose
Red	+V supply (12V/24V DC). This line includes a 2.5 A fuse.
Black	0 V return
White	Ignition switch (+12V/24V for operation, 0 V for standby)

Figure 10 - Power Wire Connections

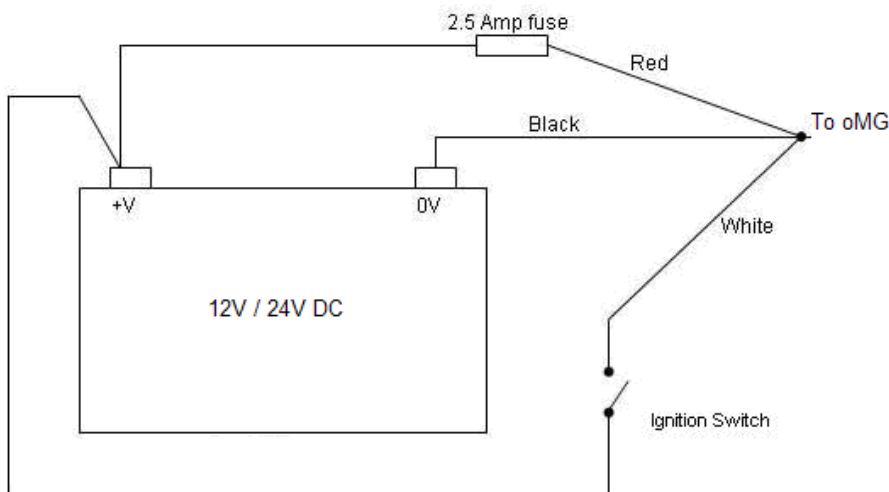


Figure 11 - Wiring Diagram

When you connect the oMG power cord to the 12V/24V DC power source, ensure that the connection has the proper polarity.

Warning: DO NOT connect power to the oMG at this time.

For additional wiring tips and best practices refer to the oMG 500 Installation Guide listed in Section 1.1.



6. Install the Antennas

1. Mount the antennas on the roof of the vehicle. If your configuration requires two antennas, ensure they are separated by at least 20 cm (7.9 inches) to comply with FCC regulations.
2. If the roof of the vehicle is not metal, installation of a ground plane is necessary for optimum antenna performance (please consult a qualified mobile radio shop).
3. Antennas supplied by Sierra Wireless will be labeled with the supported frequency ranges of each antenna lead and should be connected as shown below:

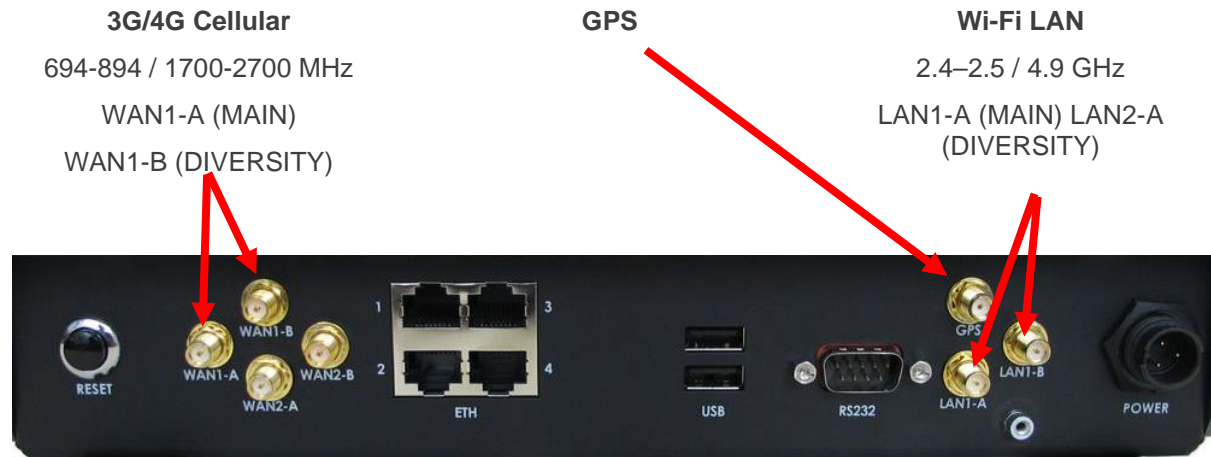


Figure 12 - oMG 500 Rear Ports

If your oMG 500 was ordered with additional LAN or WAN radio options, consult the *oMG 500 Installation Guide* listed in Section 1.1 for additional connection options.

7. Power Up the oMG

Power-on the oMG by connecting the power cable to the power socket on the oMG's back panel:



Figure 13 - Location of oMG Power Socket

Note: This may require you to turn on the vehicle's ignition.

The *Power* (amber) LED will blink slowly (once per second).

After about one to two minutes it will stop flashing and will remain lit.

The *Status* (green) LED will then blink (four times per second) as the oMG searches for a network connection. The *Status* LED will turn solid once the network connection has been established.



Figure 14 - Location of Status LED

Note: If the Green LED does not come on after four minutes or if it continues to blink longer than two minutes, consult Section 10 - Troubleshooting.

For a full description of all the LED patterns consult the *oMG Configuration and Operations Guide* listed in Section 1.1.



8. Connect the PC and Test the Internet Connection

Connect your PC to the oMG using ONE of these methods:

- **Wireless:** use the 802.11 Wireless interface of your PC to connect to the oMG. The default SSID of the oMG is the serial number (ESN) which can be found on the side of the unit.
- **Wired:** use an Ethernet cable between Port 1, 2 or 3 of the oMG and your PC Ethernet connector. Do not use Port 4

Open your PC's browser (e.g. Firefox, IE, or Chrome) and browse to a well known website (e.g. www.sierrawireless.com).



9. Configure the oMG

If you were able to connect to the Internet and browse to various servers, then congratulations, your oMG 500 is fully operational and ready to use with the data devices in your vehicle.

Some additional configuration may be required depending on your specific applications. Refer to the *oMG Operation and Configuration Manual* listed in Section 1.1 for full details of the options available to you. At a minimum, Sierra Wireless recommends that you secure the wireless access point (i.e. *hotspot*) to prevent unauthorized access or usage of your cellular data plan.

1. With the PC connected to the oMG via Ethernet or WiFi, open an internet browser (e.g. Firefox, IE, or Chrome) and enter the address <http://welcome.to.inmotion/MG-LCI> into the browser's address bar.
2. Login with username = *admin*, password = *admin*.
3. Click on **LAN** -> **Access Points** -> **Configure**:

The screenshot shows the 'oMG Configuration Interface' with the Sierra Wireless logo and version H130112J1167. The navigation menu includes Status, Device, Security, LAN, WAN, GPS, General, Logs, Applications, and Logout. Under the LAN menu, 'Access Points' is selected. Below this, a table lists devices with columns for Device Type, Friendly Name, and Actions. The 'Configure' link in the Actions column is highlighted with a red box. 'Save' and 'Cancel' buttons are at the bottom.

Device Type	Friendly Name	Actions
Ubiquiti SR71-E	Ubiquiti Networks SR71-E Mini-PCIe Wireless Adapter	Configure
Compex WLM200NX	WLM200NX@mini-PCI Slot 0	Configure

4. Modify the configuration according to your requirements.
5. Click **Save**.

>> 10. Troubleshooting

After powering on the oMG, if the Green LED continues to blink after two minutes, perform the following troubleshooting steps at the end of this document:

1. Confirm that the SIM has been activated by contacting your service provider.
2. Log in to the oMG Configuration Interface and click **Devices -> Cellular** tab.
3. Verify that the Novatel Wireless E362 or E371 is displayed and is enabled for use as a WAN interface:
 - a. If the *Installed* checkbox is blank, contact Sierra Wireless Technical Support for InMotion Solutions (IMS).
 - b. If the *Use* field is not set to WAN, set it to WAN and click **Save**.

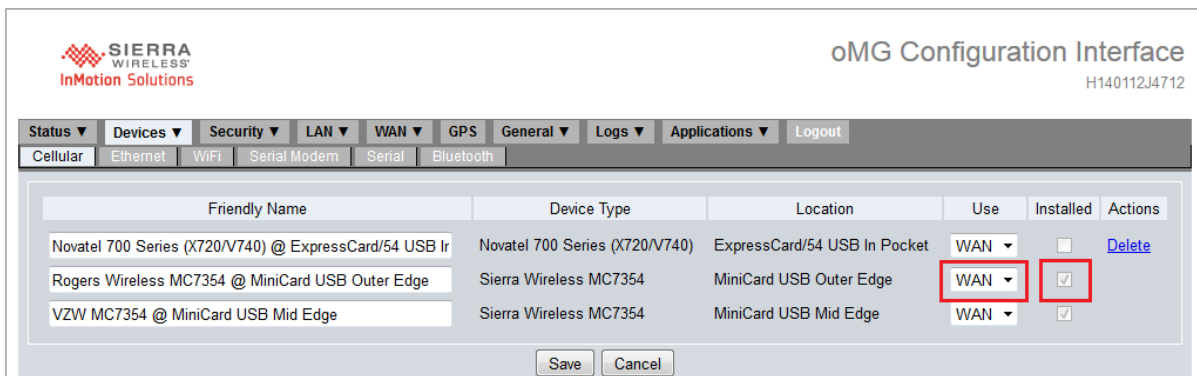


Figure 15 - Location of WAN Settings in the LCI

4. Verify cellular coverage:
 - a. Click on the **Status -> WAN** tab.
 - b. Select the **Show Extended Status** option.
 - c. Click **Update**.
 - d. The RSSI (*Received Signal Strength Indicator*) should be between -50 and -70. Values below -70 may be too weak to obtain a connection.

