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*Keeping you connected*

## IIM 5550 4G/5G Upgradeable Series Cellular Router Installation Guide

# **ATTENTION INSTALLER**

## **Please Read!**

### **SYSTEM Parts List:**

#### **IIM 5550 RV SYSTEM**

120 volt adapter with 2.1 MM barrel power connector

A 12/24 Volt DC power plug (pigtail) with 2.1 MM power connector (Red +12VDC, Black Ground)

High Gain Multi-Frequency External Antenna (black) with four 3 Meter cables with 4 SMA Male Connectors

Indoor/Outdoor, double sided adhesive pad

Cable Entry Cover

7 foot Red Ethernet Cable

(2) Black SMA Stick Antennas (flat blade), and 2 SMA-RP round WiFi antennas

#### **IIM 5550 PWC SYSTEM Includes all items in IIM 5550 RV System plus:**

IIM RB Series WiFi Router/Access Point

120 VAC adapter with 2.1 mm barrel/plug connector (for IIM B WiFi Router)

A 12 Volt DC Power cable adapter 12" Red +12VDC, Black- ground for IIM RB951 WiFi Router

1 foot Ethernet Cable (Yellow or white)

## ANTENNA INSTALLTION

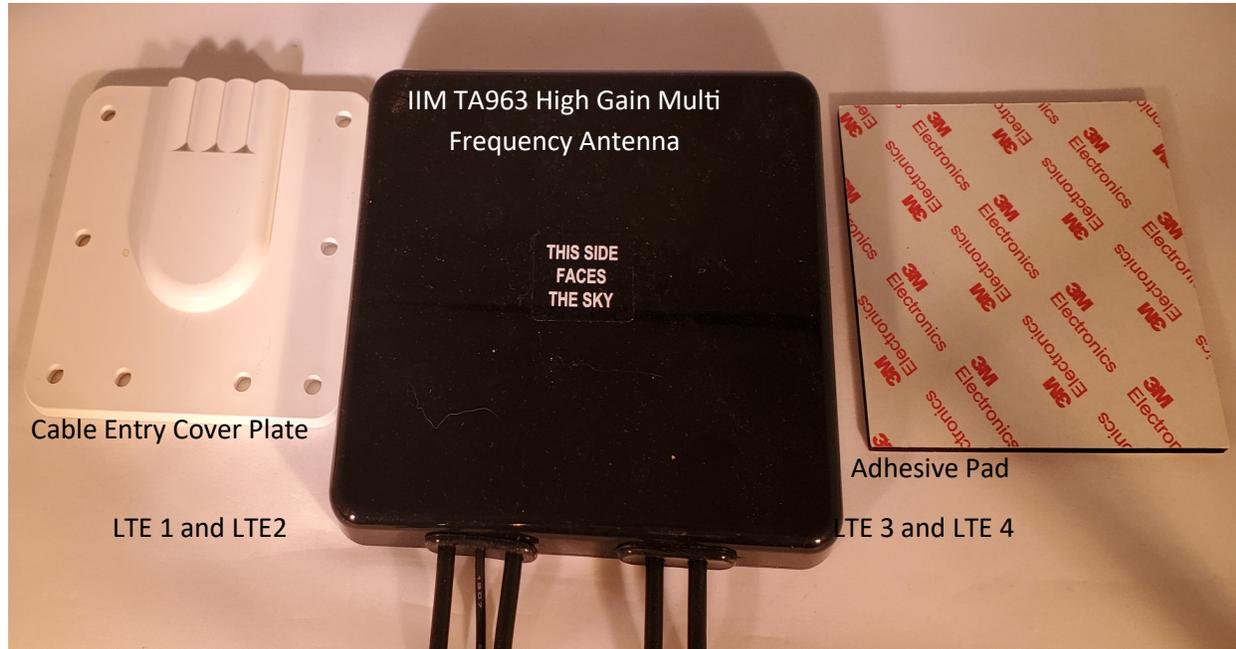


Figure 1

### IIM TA963 Multiband Cellular Antenna Installation

The TA963 antenna is IP67 certified for external use on a variety of surfaces. The antenna has 2 sets of 3 meter (10 ft.) cables with SMA male connectors. Cables need to be routed to the IIM5550 Cellular Router where cables will be connected to the router.

An industrial Grade indoor/outdoor adhesive pad is included for mounting the antenna. **Plan the mounting area carefully before removing the material covering the adhesive pad surfaces. The adhesive pad is very difficult to remove once it is attached.**

Locate the antenna on the roof away from other obstructions, near the cable entry point and IIM5550 cellular router.

The TA963 Cellular Antenna can be mounted internally or externally.

#### **External antenna installations**

After planning the correct placement and marking the preferred location, remove the protective sheet from one side of the adhesive pad and carefully apply the pad to the bottom of the antenna. Remove the remaining protective sheet from adhesive pad and attach the antenna to the external roof of the vehicle, trailer, boat or RV.

Route the 4 antenna cables to the cable entry hole in the roof then direct them to the IIM Router. Install the cable entry cover on the roof over the cables where they enter the vehicle, trailer, boat or RV.

Using a high grade external caulk/adhesive carefully caulk around the base of the antenna and the cable cover and over the cable cover screws to prevent roof leaks (For a high quality caulk recommendation see note below)

## Internal antenna installations

The antenna can be mounted inside if the roof is fiberglass or similar composite material. Be sure to avoid placing the antenna underneath any aluminum, steel or similar metallic devices.

For an interior mount, remove the protective sheet from one side of the adhesive pad and carefully apply the pad on the top of the antenna where the printing states **'THIS SIDE FACES THE SKY'** (see **Figure 1**).

After planning the correct placement and marking the preferred location, remove the remaining protective sheet from the adhesive pad and carefully apply the antenna to the internal roof of the vehicle, trailer, boat or RV. Route cables to IIM Cellular Router.

**Note:** The following Dicor Products website may be useful for instructions on sealing practices and procedures: <https://dicorproducts.com/product/epdm-self-leveling-sealant-for-manufacturers/>

There are Youtube videos for even more hints and tips.

There are other similar sealants that can be used if rated for extreme outdoor climate conditions.

## IIM 5550 ROUTER INSTALLATION

**INSTALL EQUIPMENT WITH THIS SIDE FACING OUT OF CABINET OR ENCLOSURE SO STATUS LEDS CAN BE VIEWED WHEN EQUIPMENT IS POWERED!**

- 1. INSTALL the IIM Cellular Router in a convenient place such as upper cabinet (Velcro works well on the bottom of the unit). DO NOT COVER SIM COMPARTMENT! See figure 3.**



Figure 2



Figure 3

2. Connect antenna cable labeled LTE-1 to Cellular Main and antenna cable labeled LTE-2 Cellular Diversity (see Figure 1)



Figure 4

3. Connect 120 VAC power supply to AC source. Or connect the DC pigtail accessory to a 12 VDC source and please save the 12 volt power supply for the coach owner. Note that if using RV's DC power, the power inputs are polarity sensitive.  
**(RED is +12 VDC, BLACK is GROUND)**

Apply 12 VDC power to the IIM 5550. Check status LEDs on front of router to verify power is on (See Figure 2).

4. Locate the 2 stick antennas labeled 2.4/5GHz Wi-Fi on bottom of antenna. Connect one to router connector labeled "Wi-Fi Antenna A" and connect the second antenna to router connector labeled "Wi-Fi Antenna B"

# IIM 5550 4G LTE ACTIVATION

For AT&T, T-Mobile or Verizon 4G LTE, North American and most International wireless networks.

To begin using the IIM5550 follow the steps below:

Contact wireless carrier of choice to obtain a data plan for a router with an embedded radio and a 2FF standard size SIM card. Most wireless carriers require the serial number of the embedded radio which is called the IMEI or electronic serial number. The IMEI can be found on the yellow sheet in the documentation package or on the label affixed to the top of the IIM 5550 router.

To install the SIM:

Using small Phillips Screwdriver, remove the screw from cover plate on bottom of router.

Insert the SIM into the SIM slot A (primary slot) as shown in the picture below

**To install SIM card, slide the metal clip (shown on left) to the right to unlatch the SIM holder. Lift SIM carrier up 90 degrees. Insert SIM under metal clip with gold chip down, Carrier logo facing up and card notch to left bottom (as shown above). Move carrier down as shown. Slide metal clip to left to latch SIM card in place. SIM card A is to left, SIM card B is in right side carrier. SIM A is PRIMARY**



Power up the IIM 5550 by plugging the power supply into the connector on the back of the device.

Check the 3 LEDs

STATUS LED

WiFi LED

Cellular LED

OFF- No Power

OFF No Power

OFF: No Power

RED: Booting

Green: Ready to connect

Flashing Green -Ready for data

Flashing Green: Authenticating

Solid Green: Connected to Internet

# IIM5550 4G LTE INTERNAL WIFI CONFIGURATION

1. Connect an Ethernet cable to the IIM5550's LAN 1 Ethernet port on one end and a computer on the other end.
2. Alternate procedure using internal WiFi connection (laptop, tablet or smartphone):
3. Connect via WiFi by connecting to SSID (Broadcast Name) and entering password (see label on top of IIM5550 Router).
4. Open a web browser on the computer and enter the address 192.168.1.1 into the address bar. Enter the user name :

**default username (admin) and password (IIMccsc1000).**

In most Instances, the IIM5550 can identify the wireless carrier SIM and activate the IIM5550 Router automatically.

The screenshot displays the Peplink web interface for a Balance\_1A39 router. The interface includes a navigation menu with options: Dashboard, Setup Wizard, Network, AP, System, and Status. The main content area shows the following sections:

- WAN:** IP Address: 192.168.88.69, Status: Connected, Disconnect button.
- Cellular:** IP Address: 25.79.30.76, Status: Standby, Disconnect button.
- LAN Interface:** Router IP Address: 192.168.1.1.
- WiFi AP:** ON, Details button.
- Device Information:** Model: Peplink Balance 20X, Firmware: 8.0.2 build 1045, Uptime: 17 days 18 hours 35 minutes, CPU Load: 4%, Throughput: 397.0 kbps / 69.0 kbps.

A yellow warning banner states: "Your device has not been added to any organization in InControl. Please do so immediately. If you do not need InControl management, please turn off InControl Management here." Below this, the Remote Assistance Status is shown as "Turn off".

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peplink
Dashboard Setup Wizard Network **AP** System Status Apply Changes

**AP**

- Wireless SSID
- Settings

**Controller Status**

- Info
- Access Point
- Wireless SSID
- Wireless Client
- Nearby Device
- Event Log

**Toolbox**

Logout

**AP Controller**

AP Management  Integrated AP  External AP

Save

⚙️ InControl management enabled. Wireless SSID can now be configured on [InControl](#).

SSID	Security Policy	
INTERNET IN MOTION DE...	WPA/WPA2 - Personal	✖
<span style="border: 1px solid #ccc; padding: 2px 10px;">New SSID</span>		

peplink
Dashboard Setup Wizard Network **AP** System Status Apply Changes

**AP**

- Wireless SSID
- Settings

**Controller Statu**

- Info
- Access Point
- Wireless SSID
- Wireless Client
- Nearby Device
- Event Log

**Toolbox**

Logout

**SSID**

**SSID Settings**

SSID	INTERNET IN MOTION DEMO
Enable	Always on ▼
VLAN	Untagged LAN ▼
Broadcast SSID	<input checked="" type="checkbox"/>

**Security Settings**

Security Policy	WPA/WPA2 - Personal ▼
Encryption	TKIP/AES:CCMP
Shared Key	INMOTION## <input type="checkbox"/> Hide Characters
Management Frame Protection	Disabled ▼

**Access Control Settings**

Restricted Mode	None ▼
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**Guest Protect**

Block All Private IP	<input type="checkbox"/>						
Custom Subnet	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Network</th> <th style="width: 30%;">Subnet Mask</th> <th style="width: 20%;"></th> </tr> <tr> <td><input type="text"/></td> <td>255.255.255.0 (/24) ▼</td> <td style="text-align: center; color: blue; font-weight: bold;">+</td> </tr> </table>	Network	Subnet Mask		<input type="text"/>	255.255.255.0 (/24) ▼	+
Network	Subnet Mask						
<input type="text"/>	255.255.255.0 (/24) ▼	+					
Block Exception	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Network</th> <th style="width: 30%;">Subnet Mask</th> <th style="width: 20%;"></th> </tr> <tr> <td><input type="text"/></td> <td>255.255.255.0 (/24) ▼</td> <td style="text-align: center; color: blue; font-weight: bold;">+</td> </tr> </table>	Network	Subnet Mask		<input type="text"/>	255.255.255.0 (/24) ▼	+
Network	Subnet Mask						
<input type="text"/>	255.255.255.0 (/24) ▼	+					

**Firewall Settings**

## Installation of IIM RB951 WiFi Router included with IIM5550 PWC Kit



Cable connection between the IIM cell router and the IIMRB951: The orange or yellow ethernet cable connects to Port 1 on the IIMRB951 the other end of the orange or yellow cable connects to Ethernet port on IIM 2550-VAST. **Do not connect ethernet cable to port 5.**

To check that the IIMRB951 should be operational

PWR led should be lit on the back panel next to the Power cable

The Antenna symbol and the #1 led should be lit on the top of unit

For questions and assistance with additional configuration please call:

Internet in Motion technical support @ 866-999-7970

# Configuration of IIM RB951 WiFi Router included with IIM5550 PWC Kit

Configuration: Each WIFI router has a label on it with a GUEST SSID (broadcast address) and a passphrase (preshared key) to be used by passengers. A second SSID (broadcast address) is included for administrative use with a separate passphrase.

Administration information gateway address: 192.168.88.1; Username: admin; Administration password: IIMCCSC1000!

To change the Network Broadcast Name (SSID) and/or WiFi Security password:

Log into router

Open the Quickset page

At top left, the default name is: INTERNET IN MOTION XXXX

Recommended change is Company Name and Bus Number (32 Character limit).

On left column, the WiFi security section display

Verify checked boxes should be:

WPA

WPA2

AES-CCM

Do not check TKIP

Password default shown is: inmotion

Choose a new password, must be 8 or more characters

Use a simple, easy to type password

Can be combination of letters and numbers

Lower case letters are recommended

Click the Apply Configuration on the upper right side of page

Test new wireless connection

Provide information for driver and passengers

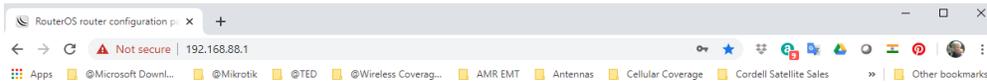
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**MikroTik**

**RouterOS v6.46.5**

You have connected to a router. Administrative access only. If this device is not in your possession, please contact your local network administrator.

WebFig Login:

Login:

Password:

Winbox Telnet Graphs License Help

© mikrotik

WebFig | 192.168.88.1/webfig/

RouterOS v6.46.5 (stable) | Quick Set | WebFig | Terminal | Home AP | Quick Set

active

### Wireless

Network Name:

Frequency:  MHz

Band:

Country:

MAC Address: 6C:3B:6B:4F:12:3B

Use Access List (ACL):

WiFi Password:   Hide

### Guest Wireless Network

Guest Network:

Guest WiFi Password:   Hide

Limit Download Speed:

### Wireless Clients

MAC Address	In ACL	Last IP	Uptime	Signal Strength
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### Internet

Address Acquisition:  Static  Automatic  PPPoE

IP Address: 192.168.1.10

Netmask: 255.255.255.0 (/24)

Gateway: 192.168.1.1

MAC Address:

Firewall Router:

### Local Network

IP Address:

Netmask:

Bridge All LAN Ports:

DHCP Server:

DHCP Server Range:

NAT:

UPnP:

### VPN

VPN Access:

VPN Address: 643206406142.sn.mynetname.net