

# BOXER

## *Installation Instructions*



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# Antenna Versions

The Boxer case antenna comes in multiple versions with the features listed below.

Boxer G	Boxer L
<ul style="list-style-type: none"> <li>• 2x RJ-45 Ports</li> <li>• USB-C Charger</li> <li>• Battery Operated (battery not included)</li> <li>• 40mm Fan</li> </ul>	<ul style="list-style-type: none"> <li>• 2x RJ-45 Ports</li> <li>• DC Power Port</li> </ul>

## Required Tools & Accessories

The following tool (not provided) is required for the installation of the Boxer case antenna:

- Philips Screwdriver

The table below lists the required accessories for the Boxer antenna.

	Boxer G	Boxer L
Provided with Antenna	<ul style="list-style-type: none"> <li>• PTA0071B Black Round Head Screws, 12 pcs</li> <li>• PTA0368-B Black Flat Head Machine Screws, 6 pcs</li> <li>• PTA0399-TL Pan Head Screws, 4 pcs</li> <li>• Ethernet Cords, 2 pcs *</li> <li>• USB-C to Barrel Adapter</li> <li>• Battery Tray for ChargeTech 20K Battery Pack</li> <li>• Power to Barrel Adapter (Cradlepoint #170665-001)</li> <li>• Cable Ties</li> </ul>	<ul style="list-style-type: none"> <li>• PTA0071B Black Round Head Screws, 12 pcs</li> <li>• PTA0399-TL Pan Head Screws, 4 pcs</li> <li>• Ethernet Cords, 2 pcs *</li> <li>• 12V 2A Power Adapter</li> <li>• Power to Barrel Adapter (Cradlepoint #170665-001)</li> <li>• Cable Ties</li> </ul>
To Be Purchased By Customer	<ul style="list-style-type: none"> <li>• 20K AC Battery Pack (ChargeTech #CT-600060)</li> <li>• Ethernet Cords, 2 pcs **</li> </ul>	<ul style="list-style-type: none"> <li>• Ethernet Cords, 2 pcs **</li> </ul>

\* For connecting the router to the ports on the case

\*\* Optional, for connecting external devices to the case, length as required by customer

# Battery and Router Installation-Boxer G

Step 1: Mount the ChargeTech 20K battery pack to the cover plate (**Boxer G only**).

- A. Remove the cover plate from the enclosure.
- B. Insert the battery pack into the battery tray, as shown in Figure 1. **Ensure that the battery pack ports are at the open end of the battery tray, as shown below.**
- C. Place the cover plate onto the battery tray and fasten with the six PTA0368-B black flat head machine screws provided in the kit, as shown in Figure 2. **If the battery tray does not align perfectly with the cover plate, partially tighten the screws at opposite diagonal positions first, then install all other screws before fully tightening. It may help to install the screws in the order shown in Figure 2.**



Figure 1: Place the ChargeTech battery pack into the battery tray. (Boxer G)

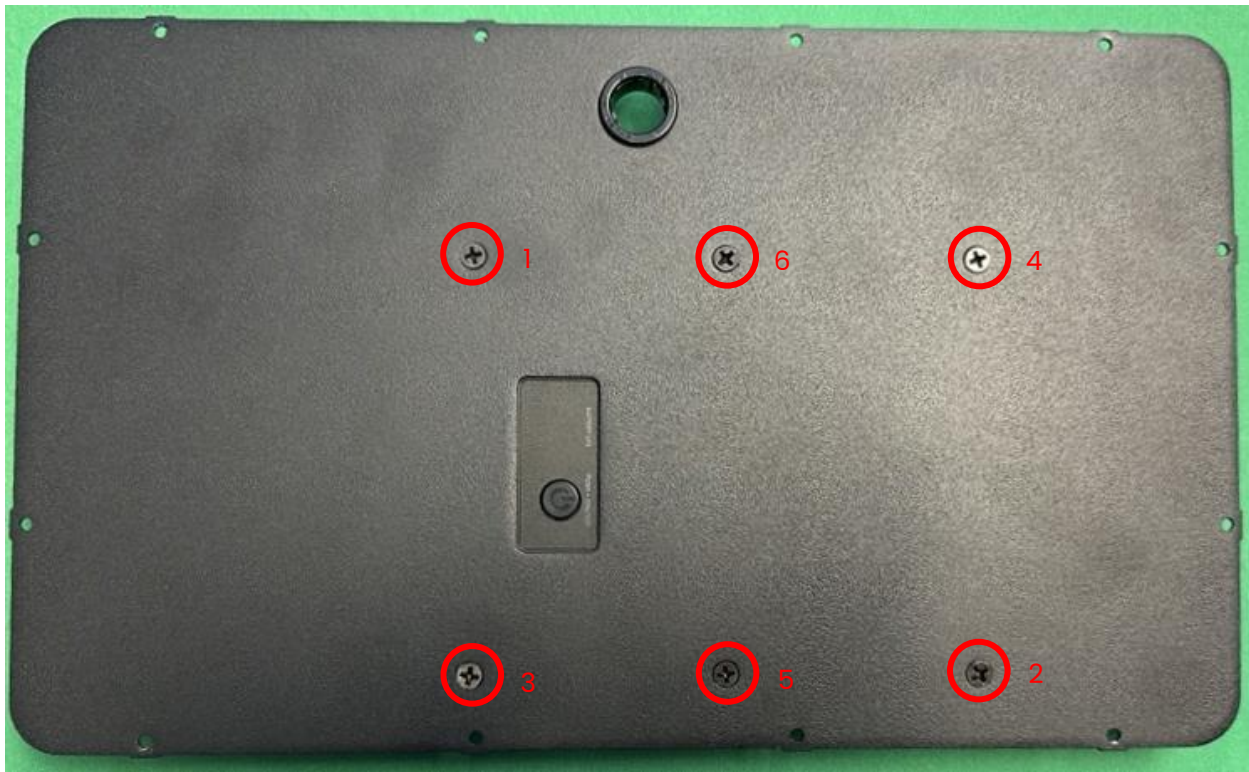


Figure 2: Fasten the battery tray with battery pack to the cover plate using PTA0368-B screws. (Boxer G)

Step 2: Mount the router to the bottom plate.

- A. If not already done, remove the cover plate from the enclosure.
- B. Install the SIM Card/s into the Router.
- C. Align the router with the holes on the bottom plate. **Ensure the router orientation is correct, as shown in the image below.**
- D. Mount the router using the four PTA0399-TL pan head screws provided in the kit, as shown in Figure 3.
- E. Guide the cable bundles back through the grommet in the cover plate.



*Figure 3: Fasten the router to the bottom plate using PTA0399-TL screws.*



# Router Installation-Boxer L

Step 1: Mount the router to the bottom plate (**Boxer L only**).

- A. Remove the cover plate from the enclosure.
- B. Install the SIM Card/s into the Router.
- C. Align the router with the holes on the bottom plate. **Ensure the router orientation is correct, as shown in the image below.**
- D. Mount the router using the four PTA0399-TL pan head screws provided in the kit, as shown in Figure 4.
- E. Guide the cable bundles back through the grommet in the cover plate.



*Figure 4: Fasten the router to the bottom plate using PTA0399-TL screws.*

## Connection: Boxer G

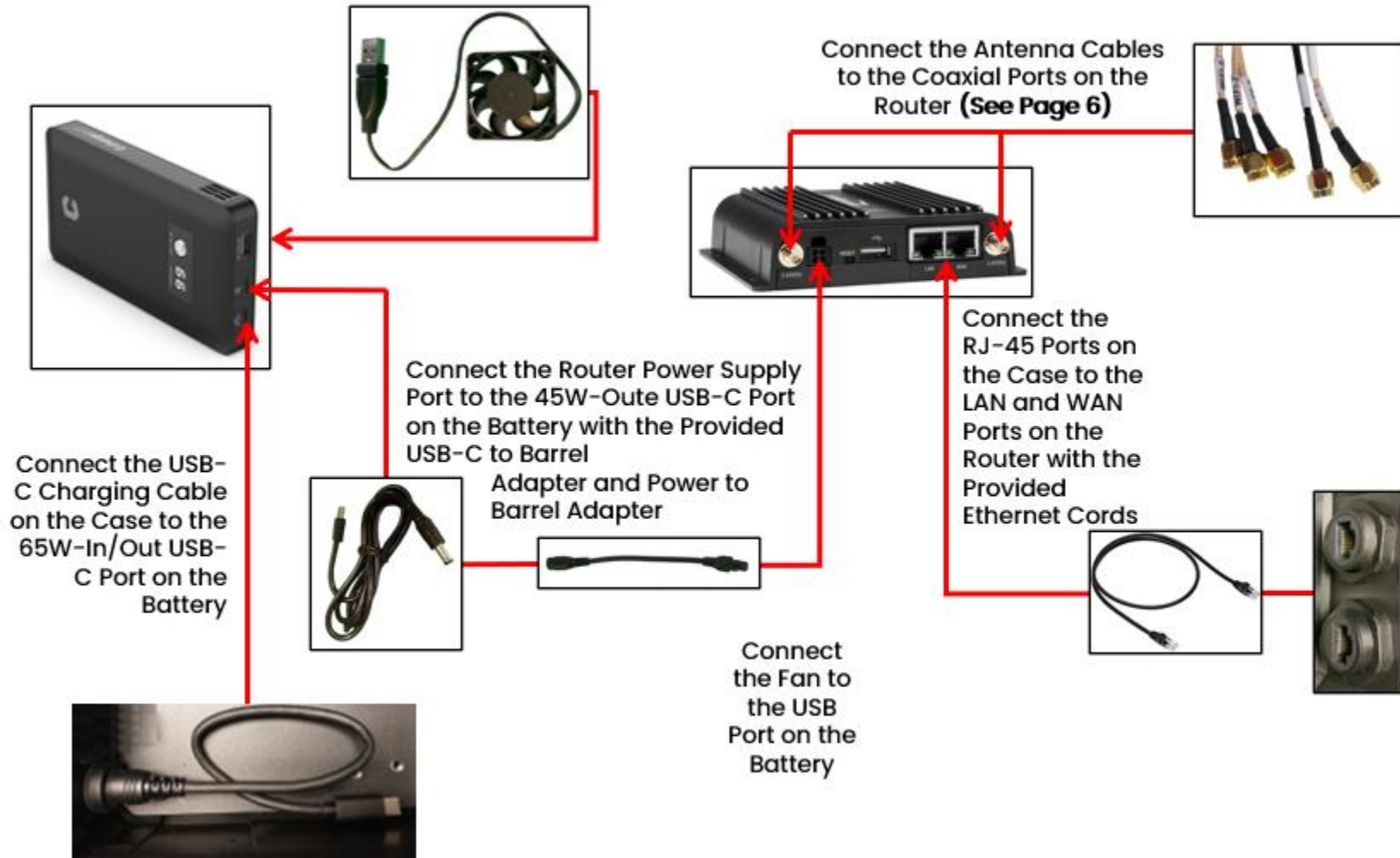


Figure 5: Connection Diagram for Boxer G

## Connection: Boxer L

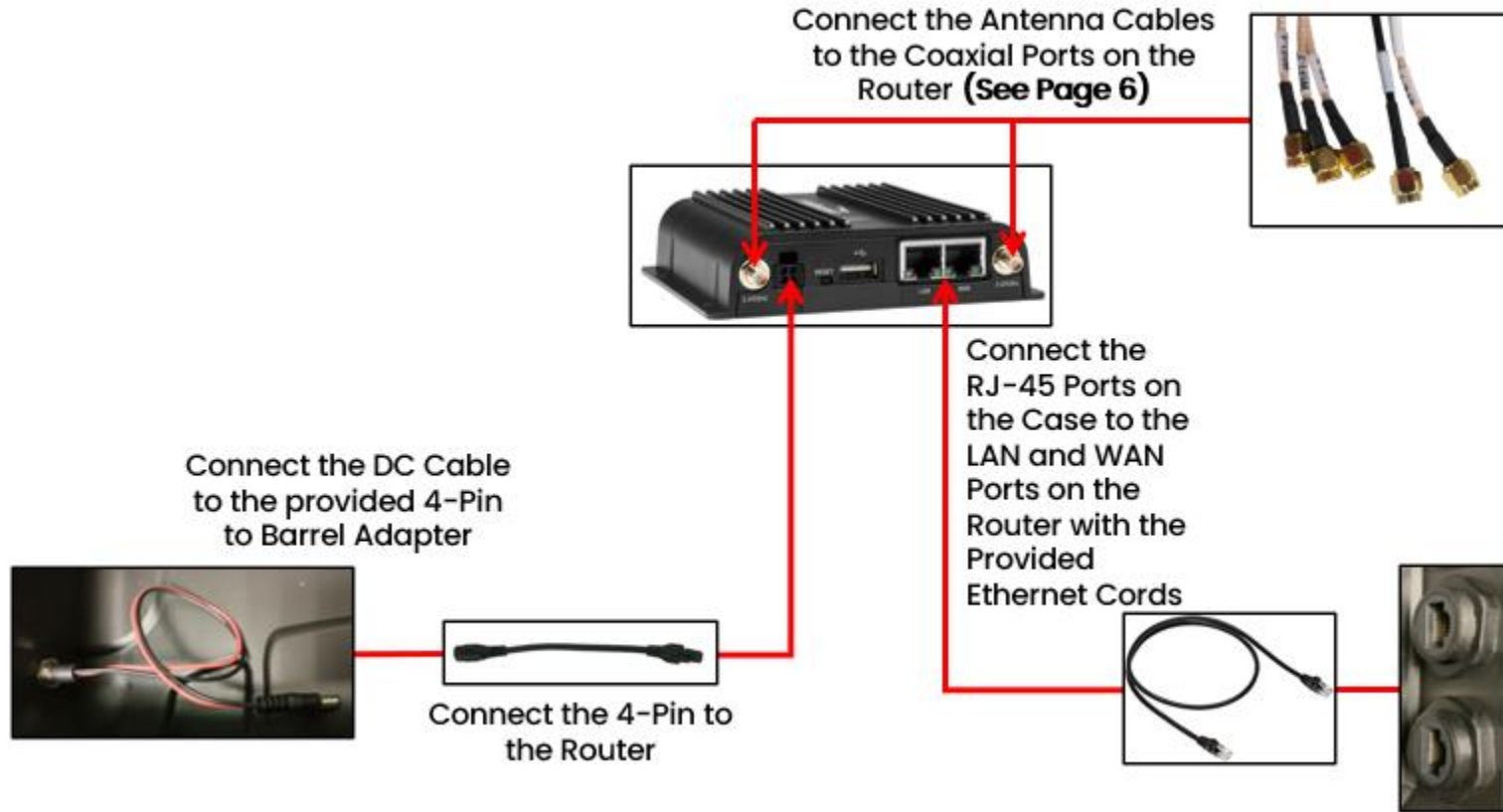


Figure 6: Connection Diagram for Boxer L

# Connection: Boxer G & L

Step 1: Connect the antenna cables to the router.

- A. Use canned air or isopropyl alcohol to clean all the connectors to ensure that there is no dust in the terminals.
- B. Connect the antenna cables to the designated terminals on the router, as shown in the tables and images below.

Peplink MAX BR1 Pro 5G	
Antenna Cable	Router Terminal
CELL 1	Cellular A
CELL 2	Cellular B
CELL 3	Cellular C
CELL 4	Cellular D
GPS	GPS
Wi-Fi 1	Wi-Fi Antenna A
Wi-Fi 2	Wi-Fi Antenna B

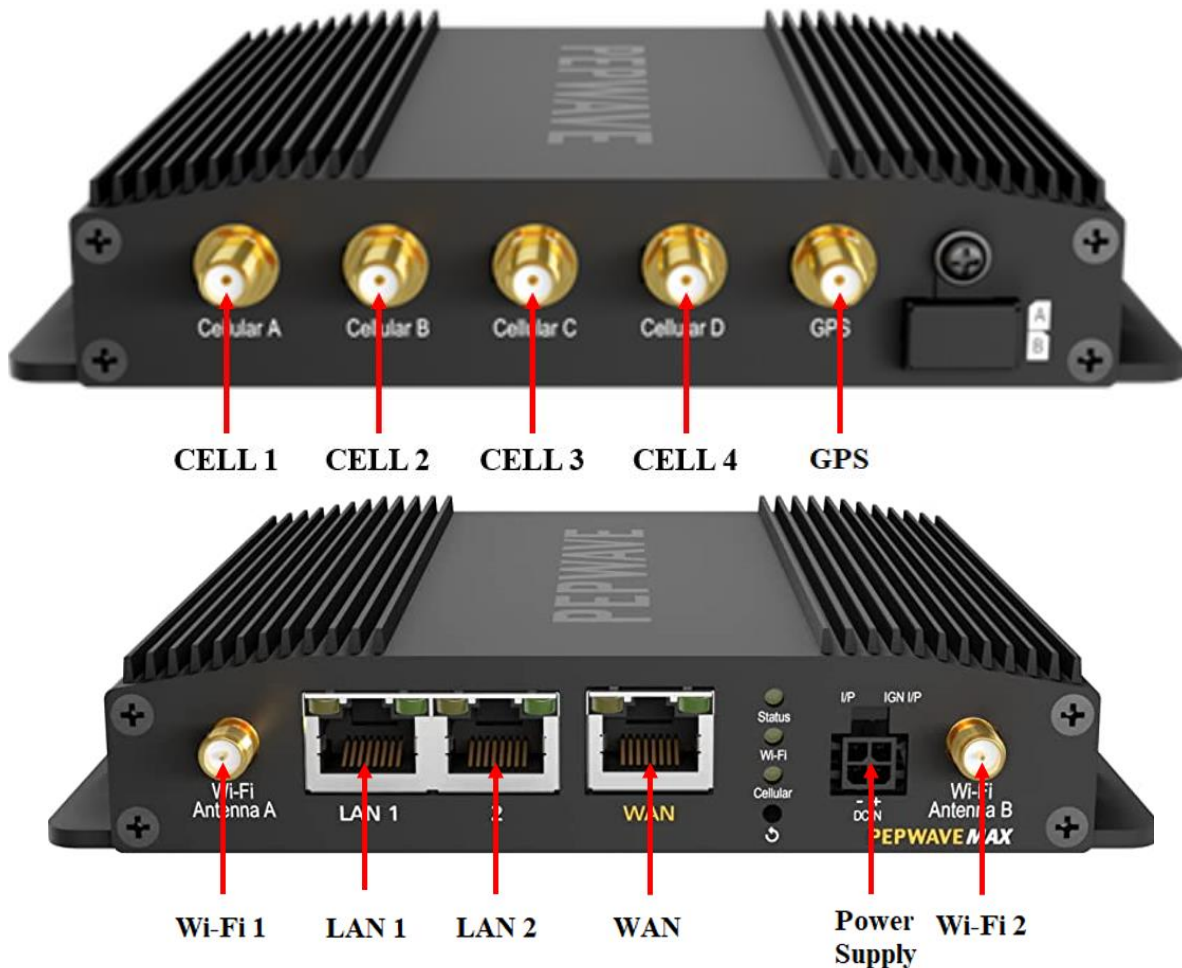


Figure 7: Peplink MAX BR1 Pro 5G Connections



Step 2: Connect the power supply to the router.

- A. For the Boxer G, connect the power to barrel adapter to the router power supply port and to the USB-C to barrel adapter. Connect the USB-C to barrel adapter to the Power Adapter and plug in the Power Adapter to the Battery, as shown in Figure 9.
- B. For the Boxer L, connect the power to barrel adapter to the DC cable. Connect the 4-pin cable to the power supply on the router, as shown in Figure 7.

Step 3: Connect the fan to the battery (Boxer G only).

- A. Plug the USB-A cord from the fan into the USB-A port on the battery, shown in Figure 9.

Step 4: Connect the router to the RJ-45 ports on the case using ethernet cords.

- A. Connect the provided ethernet cords to the LAN ports and WAN port on the router, shown in Figure 7.
- B. Connect the other ends of the ethernet cords from the router to the RJ-45 ports on the case. Keep track of which cord is connected to the WAN port on the router. Consider connecting the WAN port on the router to the left RJ-45 port and the LAN ports on the router to the right RJ-45 ports, as shown in Figure 8.



Figure 8: Connect the router to the RJ-45 ports on the case using ethernet cords.

Step 5: Connect the battery pack to the USB-C charging port on the case (Boxer G only).

- A. Connect the USB-C charging port cable from the case to the 65W-In/Out Type-C port on the battery pack, shown in Figure 9.



Figure 9: ChargeTech 27K Battery Pack Connections.

## Final Assembly: Boxer G

Step 1: Make sure all the cables and devices are properly connected.

- A. Inspect every cable connection and ensure that no connections are loose.
- B. Use cable ties or other wire management to neatly bundle the cables. Pack the cables neatly inside the bottom half of the case. **Ensure that the antenna cables are not excessively bent ( $1/2$ " minimum bend radius). For the Boxer G, ensure that no antenna cables are running across the top of the router.**

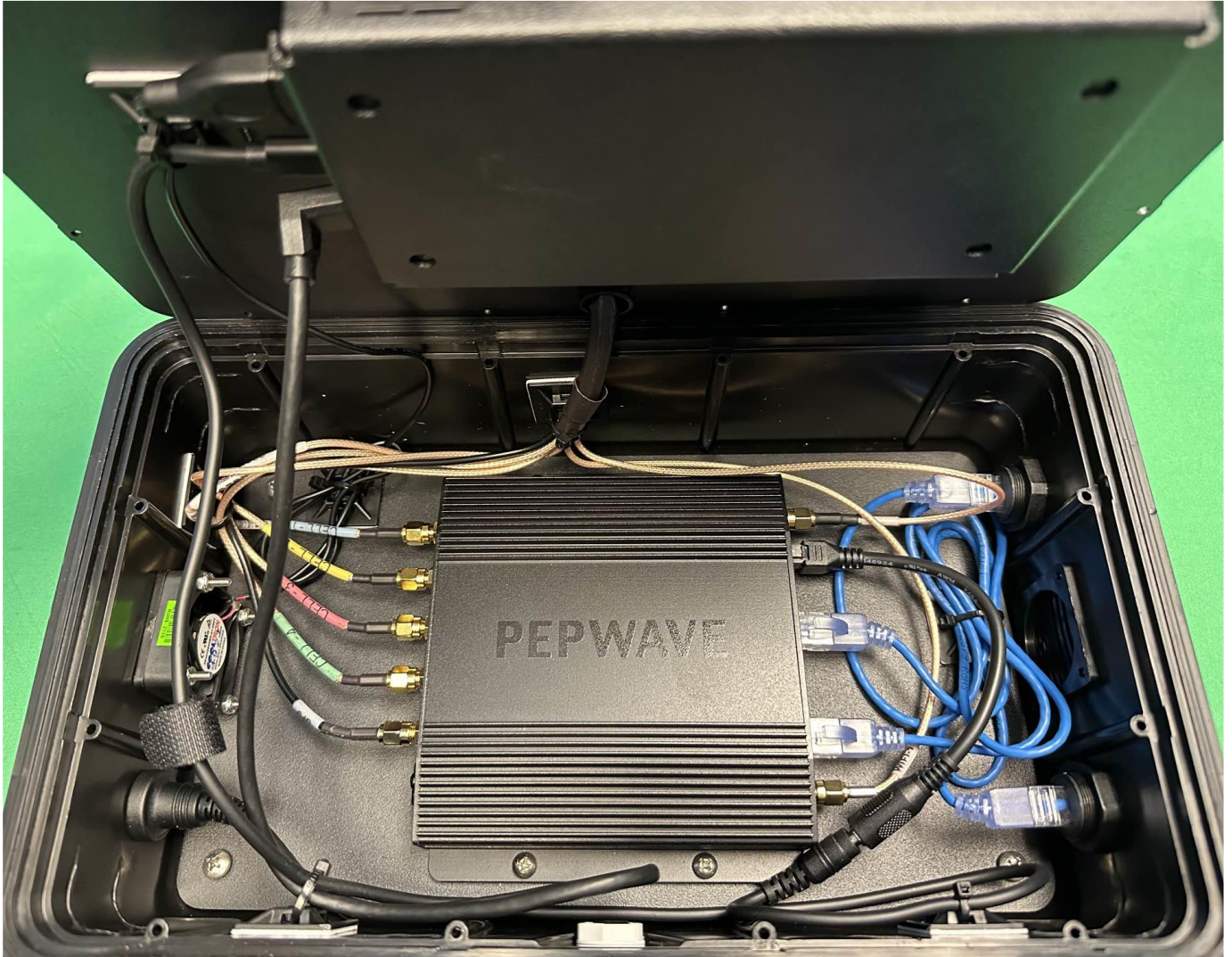
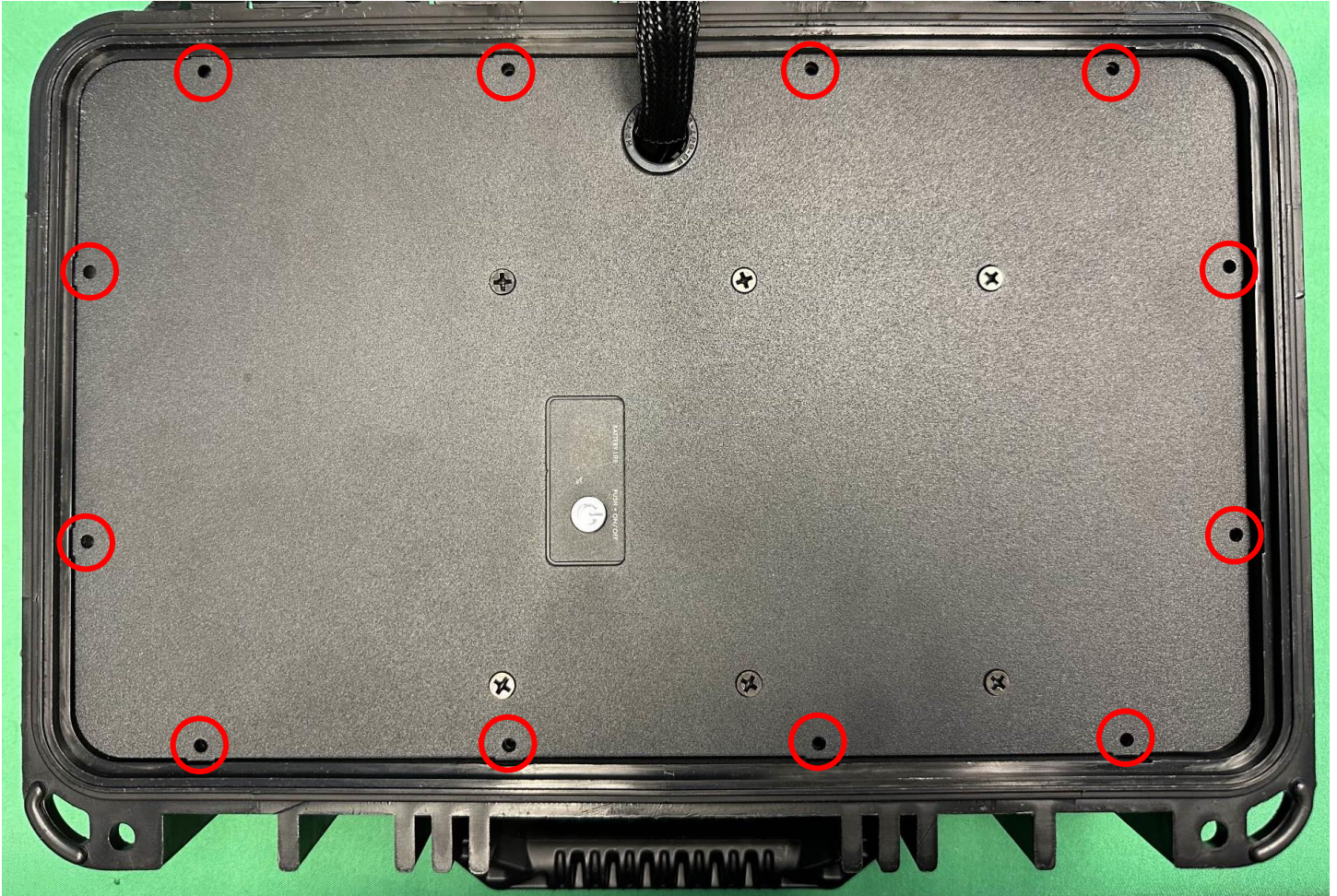


Figure 10: Fully Connected 5in1 Boxer G with Peplink MAX BR1 Pro 5G Router



Step 2: Fasten the cover plate to the case.

- A. Place the cover plate onto the bottom half of the case. **Ensure that no cables are pinched between the cover plate and the case.**
- B. Fasten the cover plate to the case using the twelve PTA0071B black oval head screws provided in the kit, as shown in Figure 11.



*Figure 11: Fasten the cover plate to the case using PTA0071B screws.*



## Final Assembly: Boxer L

Step 1: Make sure all the cables and devices are properly connected.

- A. Inspect every cable connection and ensure that no connections are loose.
- B. Use cable ties or other wire management to neatly bundle the cables. Pack the cables neatly inside the bottom half of the case. **Ensure that the antenna cables are not excessively bent ( $1/2$ " minimum bend radius). For the Boxer G, ensure that no antenna cables are running across the top of the router.**

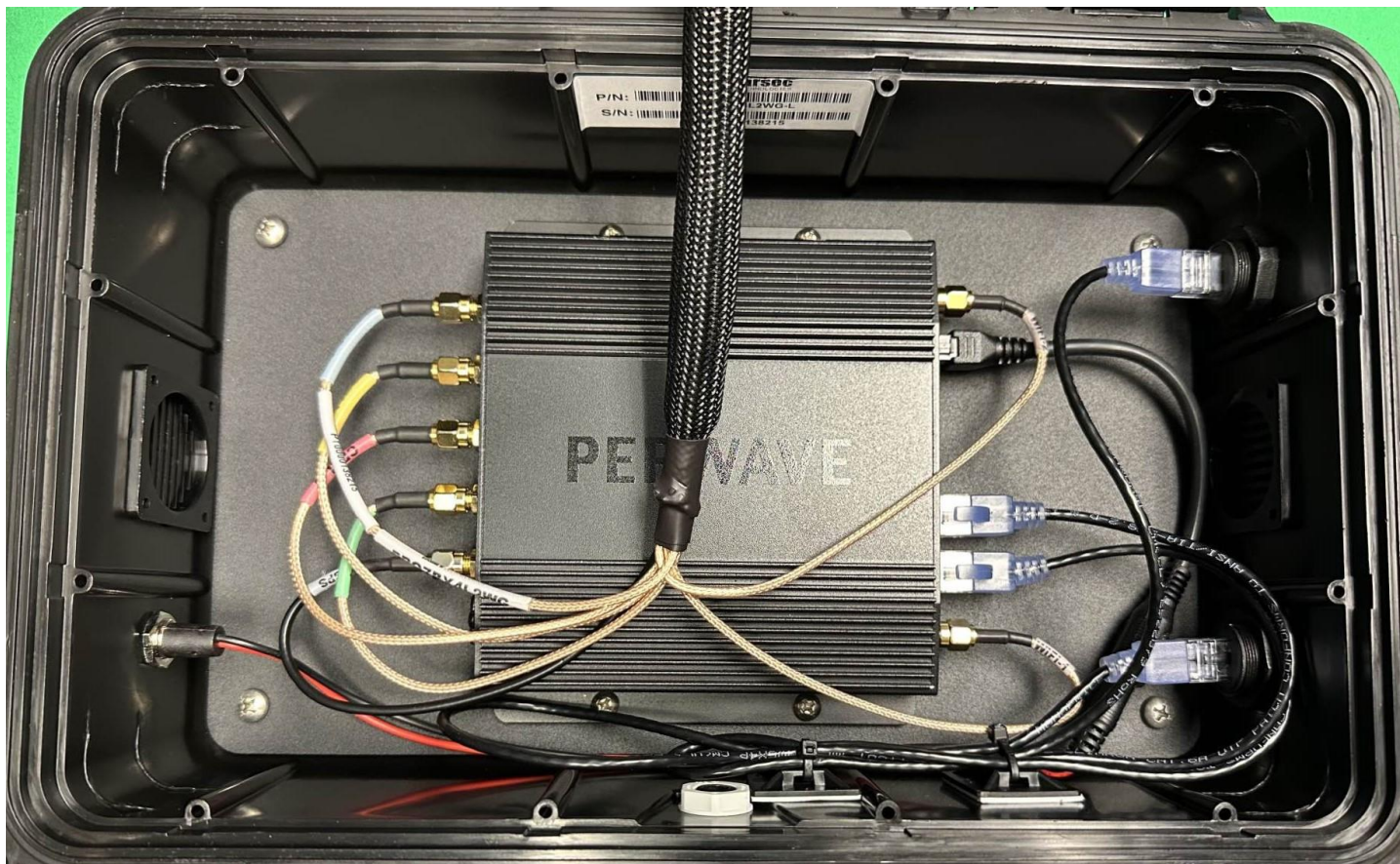
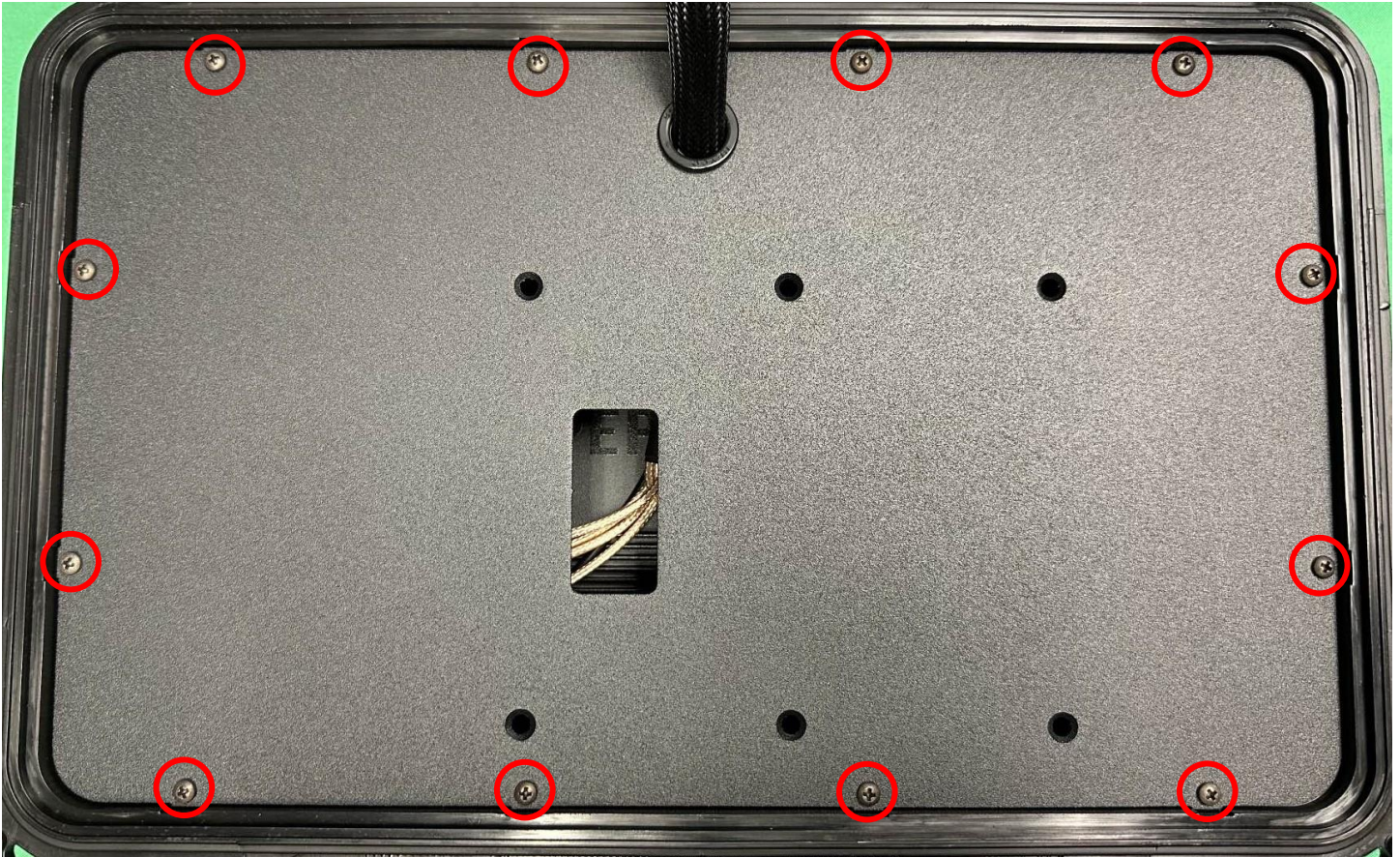


Figure 12: Fully Connected 7 in 1 Boxer L with Peplink MAX BR1 Pro 5G Router



Step 2: Fasten the cover plate to the case.

- A. Place the cover plate onto the bottom half of the case. **Ensure that no cables are pinched between the cover plate and the case.**
- B. Fasten the cover plate to the case using the twelve PTA0071B black oval head screws provided in the kit, as shown in Figure 13.



*Figure 13: Fasten the cover plate to the case using PTA0071B screws.*

# Operational Setup

Step 1: Open the fan and vent caps.

- A. Before turning the antenna ON, always open the fan and vent caps. The type of cap may vary.
- B. **Ensure that the antenna is away from any liquids when the caps are open.**



*Figure 14: Open the fan and vent caps.*

Step 2: Power on the router – Boxer G only.

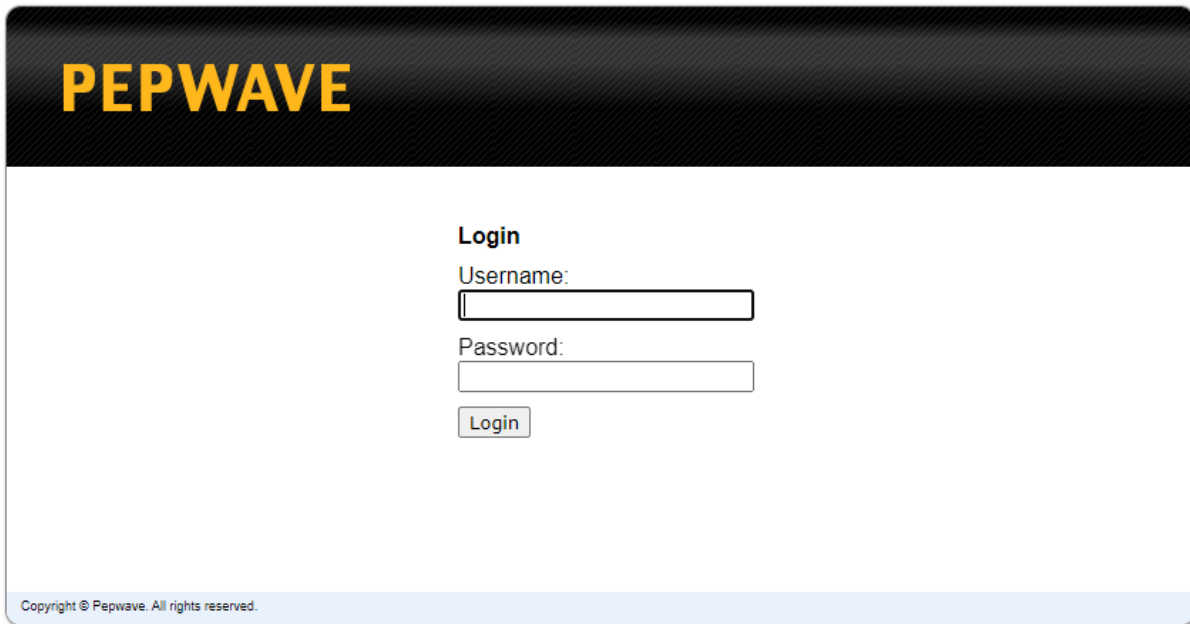
- A. For the Boxer L, connect the power adapter to the DC port on the case
- B. For the Boxer G:
  - I. Turn the battery pack ON by pressing and holding the power button for 2 seconds. The display on the battery pack will indicate the battery pack's current battery life (%). **Do not hold the button for longer than 2 seconds; this will cause the battery pack to enter programming mode. To exit programming mode, turn the battery pack OFF then ON again.**
  - II. Shortly after turning on the battery pack, the fan will start.
  - III. To charge the battery pack, connect the battery pack charger to the DC charging port on the outside of the case.
  - IV. See Page 16 for Battery Operation and Safety Guidelines.

Step 3: Connect the router to a computer.

- A. Use an ethernet cable to connect a computer to the RJ-45 port on the case that is connected to the LAN port on the router.

Step 4: Login to PEPWAVE.

- A. Open a web browser on the computer and type 192.168.50.1 into the address bar. This will bring up the PEPWAVE, shown in Figure 15.
- B. Login to PEPWAVE. The username is "admin", and the password is "admin".



PEPWAVE

Login

Username:

Password:

Login

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Figure 15: Access PEPWAVE.

## Antenna setup is complete!

For best antenna performance, operate the antenna with the lid closed and the case oriented with the lip on top.

If applicable, make sure the fan and vent caps are open while using the antenna.

## Battery Operation and Safety Guidelines

- A. To manually power ON/OFF, press and hold the power button (located on the top of the unit) for 2 seconds. All LED lights/display should turn ON/OFF.
- B. Holding the power button for longer than 2 seconds will cause the battery pack to enter programming mode. To exit programming mode, turn the battery pack OFF and then ON again.
- C. Recharging the battery pack can be done with the included 45W PD charger and cable but can be charged using up to 65W.
- D. If no power draw is detected after 1 minute, the battery pack will shut OFF to conserve energy. While the unit is OFF, press and hold the power button until the display begins flashing. This activates continuous mode, and the entire unit will stay ON until manually turned OFF.
- E. While plugged in and charging, the battery pack will allow pass-through charging to continue powering any devices that are plugged in to the battery pack. To disable this function, press and hold the power button for 2 seconds while the battery pack is charging. Repeat to re-enable pass-through charging for all ports.
- F. Warning: if the battery pack exceeds a safe operating temperature due to insufficient ventilation or a high-temperature environment, the unit will automatically shut OFF.
- G. Keep out of reach of children.
- H. The product may become uncomfortable warm, reaching 140°F (60°C) under extended, high-power usage. While using the product, make sure to keep it away from materials that may be affected by high temperatures.
- I. Hold on carefully when inserting or removing a cable. Make sure not to force or bend cables when inserting them into the charging ports.
- J. Avoid inserting any foreign objects into the ports.
- K. Do not attempt to open, alter, or modify the unit.
- L. Do not use in temperatures over 100°F (40°C).
- M. Do not expose the product to wet conditions such as water, rain, or snow.
- N. Failure to follow these safety guidelines may cause personal injury and/or property damage to the product. It may also void the product warranty.





**CAUTION**

To comply with FOC RF Exposure requirements in section 1.1310 of the FCC Rules, antennas used with this device must be installed to provide a separation distance of at least 20 cm from all persons to satisfy RF exposure compliance.



**DO NOT**

- Operate the transmitter when someone is within 24 inches of the antenna
- Install the antenna or mast assembly on a windy day
- Install the mast close to power lines as it can cause serious injuries or death



**WARNING**

This document gives detailed instructions to install an antenna to the best of our knowledge. This document is for general information only. It cannot be used as a warranty. Parsec Technologies Inc. will not accept any liability for any damage caused by an antenna due to unknown variables.



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Last Revised: 05-24-2024