

NEWFOUNDLAND

Installation Instructions

The Newfoundland case antenna is a high-performance antenna built into the cover of a protective case. The Newfoundland case antenna is configurable up to thirteen-in-one with potential for 8X8 MIMO LTE allowing for simultaneous operation of dual SIMs. This 5G, IP67-rated* case antenna is designed for high performance during adverse conditions and is portable in case of emergency. The Newfoundland is available with up to two sets of 4X4 MIMO LTE (primary/failover), 4X4 MIMO WIFI, and GPS.



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* Conditions apply

Antenna Versions

The Newfoundland L case antenna has the following features.

| Newfoundland L |
|--|
| <ul style="list-style-type: none">• AC Power Port• 4x RJ-45 Ports• USB-A Port• Battery Operated (optional, battery not included)• 60mm Fan |

Required Tools & Accessories

The following tools (not provided) are required in for the installation of the Newfoundland case antenna:

- Philips Screwdriver
- 5/32" Hex Key

The table below lists the required accessories for the L version of the Newfoundland case antenna.

| | Newfoundland L |
|-----------------------------|--|
| Provided with Antenna | <ul style="list-style-type: none"> • PTA0395B Router Mount Brackets, 4 pcs • PTA0399-TL Pan Head Screws, 8 pcs • Ethernet Cords, 4 pcs * • USB-A Cord * • Surge Protector • 24" Hook-and-Loop Strap • 24" Cable Tie • 10" Cable Ties, 5 pcs |
| To Be Purchased By Customer | <ul style="list-style-type: none"> • Router Options (for other routers, contact customer service at support@parsec-t.com) <ul style="list-style-type: none"> ○ Cradlepoint AER2200 (requires eight M4 x 0.7mm thread x 6mm long screws) ○ Cradlepoint E3000 ○ Cradlepoint IBR1700 • Router Power Supplies <ul style="list-style-type: none"> ○ For IBR1700 Router, 12V 2x2 Power Supply (Cradlepoint #170869-000) with C7 Line Cord (Cradlepoint #170623-001) or 12V 2x2 Power Supply (Cradlepoint #170716-000) ○ For AER2200 and E3000 Routers, 54V 2x2 Power Supply (Cradlepoint #170751-000) with C13 Line Cord (Cradlepoint #170671-001) • Cradlepoint MC400 Modular Modem (required for more than 4 LTE) • ChargeTech 54K AC Battery Pack (ChargeTech #CT-600062) (optional) • USB-A Cord ** • Ethernet Cords, 4 pcs ** • Extension Cord (i.e. McMaster #9581T22) *** |

* For connecting the router to the ports on the case

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

*** For powering the antenna, length as required by customer, NEMA 5-15P outlet on case

Battery and Router Installation

Step 1: Remove the cover plate.

- A. Unscrew the size binding barrels and remove the cover plate.

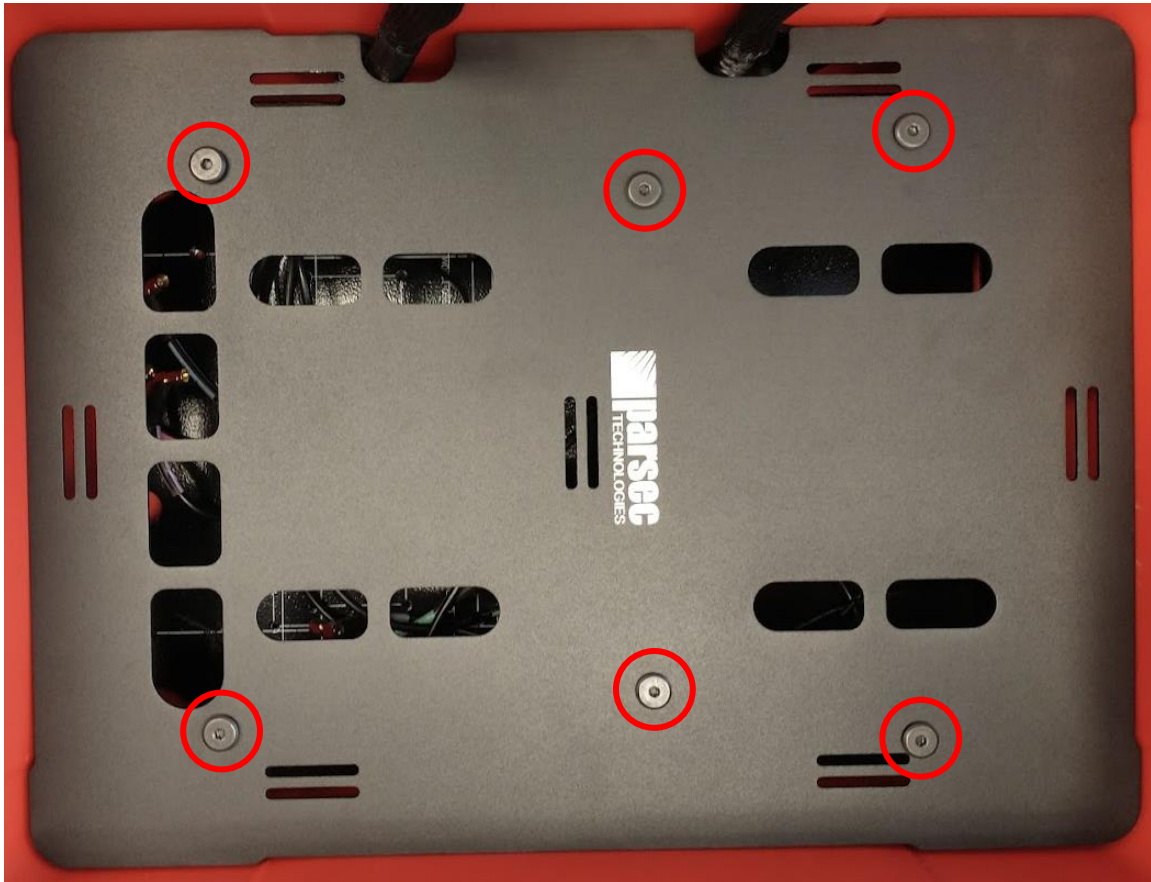


Figure 1: Remove the cover plate by unscrewing the binding barrels.

Step 2: Strap the battery pack down to the base plate (optional).

- A. This step is only required if you are using the 54K battery pack.
- B. If the 24" hook-and-loop strap and 24" cable tie are not installed in the base plate, guide the cable tie through the back pair of slots and the hook-and-loops strap through the front pair of straps. You may need to bend the tip of the cable tie.
- C. Place the battery pack inside the case and strap it down to the base plate with the hook-and-loop strap and cable tie, as shown in Figure 3. **Ensure that the display on top of the battery pack and the charging port on the side of the battery pack are not covered, as shown in Figure 3.**
- D. Cut the excess cable tie length.



Figure 2: Strap the battery pack down to the base plate.

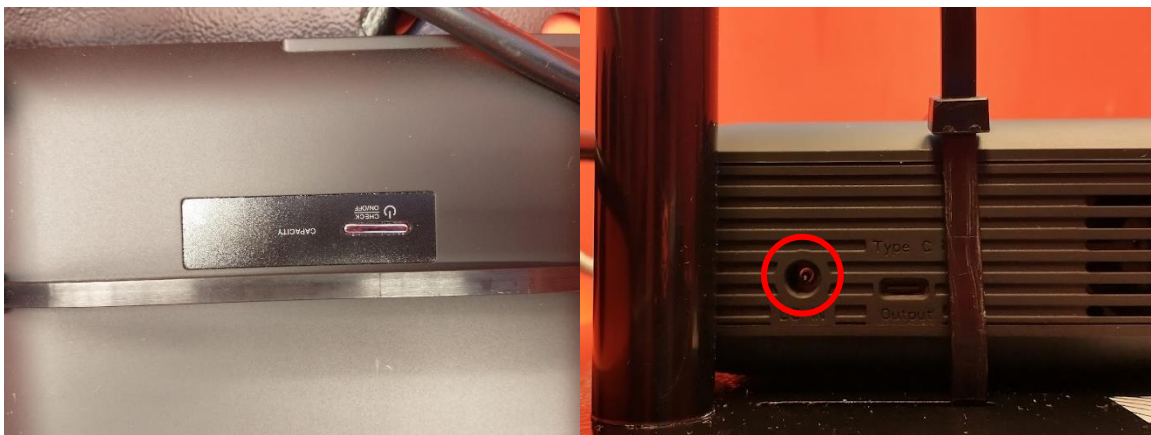


Figure 3: Ensure that the battery display and charging port are not covered by the cable tie.

Step 3: Mount the router to the base plate.

- A. For AER2200 and E3000 routers, mount the provided router mount brackets to the sides of the router using eight M4 x 0.7mm thread x 6mm long screws (not provided), as shown in Figure 4. Fasten the screws at opposite diagonal positions.
- B. Align the router with the holes on the cover plate. **Ensure the router orientation is correct, as shown in the image below. The router display lights should be on the left.** Mount the router using the eight PTA0399-TL pan head screws provided in the kit, as shown in Figure 5.



Figure 4: For AER2200 and E3000 routers, fasten the router mount brackets to the sides of the router using eight M4 screws.



Figure 5: Mount the router to the base plate using PTA0399-TL screws.

Connection

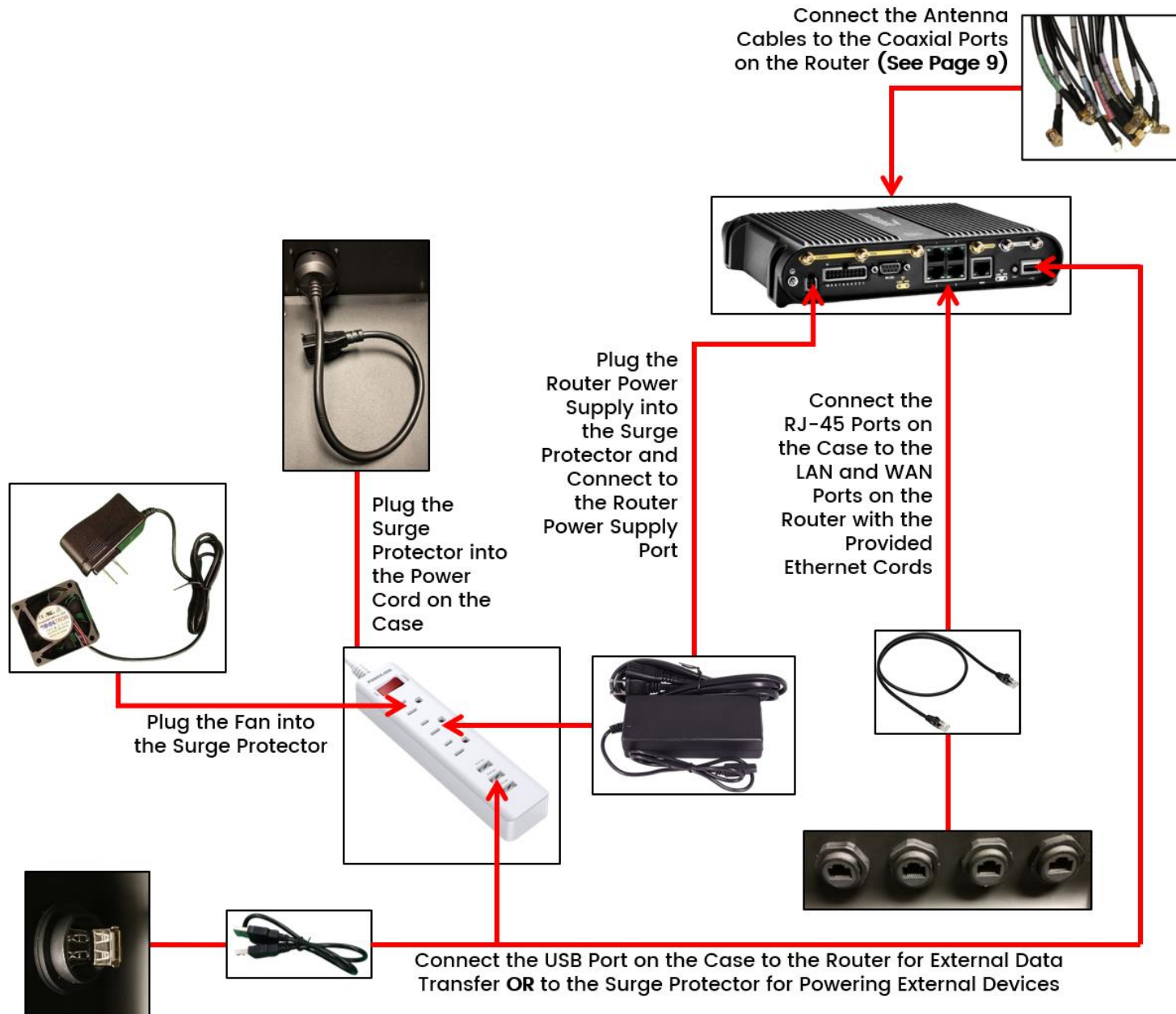


Figure 6: Connection Diagram for Newfoundland L Without a Battery Pack

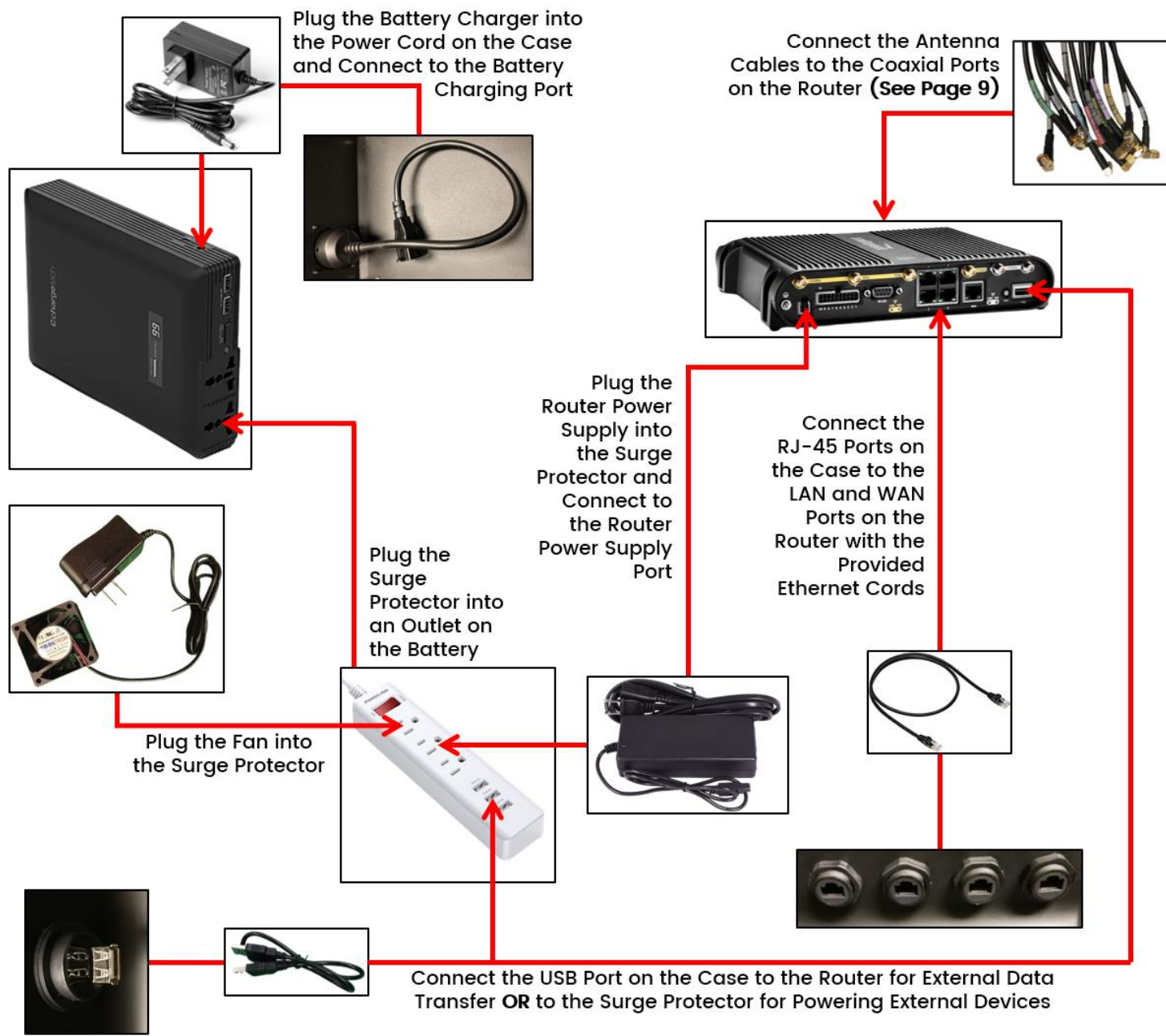


Figure 7: Connection Diagram for Newfoundland L With a Battery Pack

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.

| Cradlepoint AER2200 and IBR1700 | |
|--|------------------------|
| Antenna Cable | Router Terminal |
| LTE 1 | MAIN 0 |
| LTE 2 | AUX 0 |
| LTE 3 | MAIN 1 |
| LTE 4 | AUX 1 |
| LTE 5 | MAIN 0 on modem |
| LTE 6 | AUX 0 on modem |
| LTE 7 | MAIN 1 on modem |
| LTE 8 | AUX 1 on modem |
| GPS | GPS |
| WIFI 1 | 2.4/5GHz gold, left |
| WIFI 2 | 2.5/5GHz gold, right |
| WIFI 3 | 5GHz, left |
| WIFI 4 | 5GHz, right |

| Cradlepoint E3000 | |
|--------------------------|------------------------|
| Antenna Cable | Router Terminal |
| LTE 1 | MAIN0 |
| LTE 2 | DIV0 |
| LTE 3 | MAIN1 |
| LTE 4 | DIV1 |
| LTE 5 | MAIN 0 on modem |
| LTE 6 | AUX 0 on modem |
| LTE 7 | MAIN 1 on modem |
| LTE 8 | AUX 1 on modem |
| GPS | GPS |
| WIFI 1 | 2.4/5GHz, left |
| WIFI 2 | 2.4/5GHz, middle left |
| WIFI 3 | 2.4/5GHz, middle right |
| WIFI 4 | 2.4/5GHz, right |

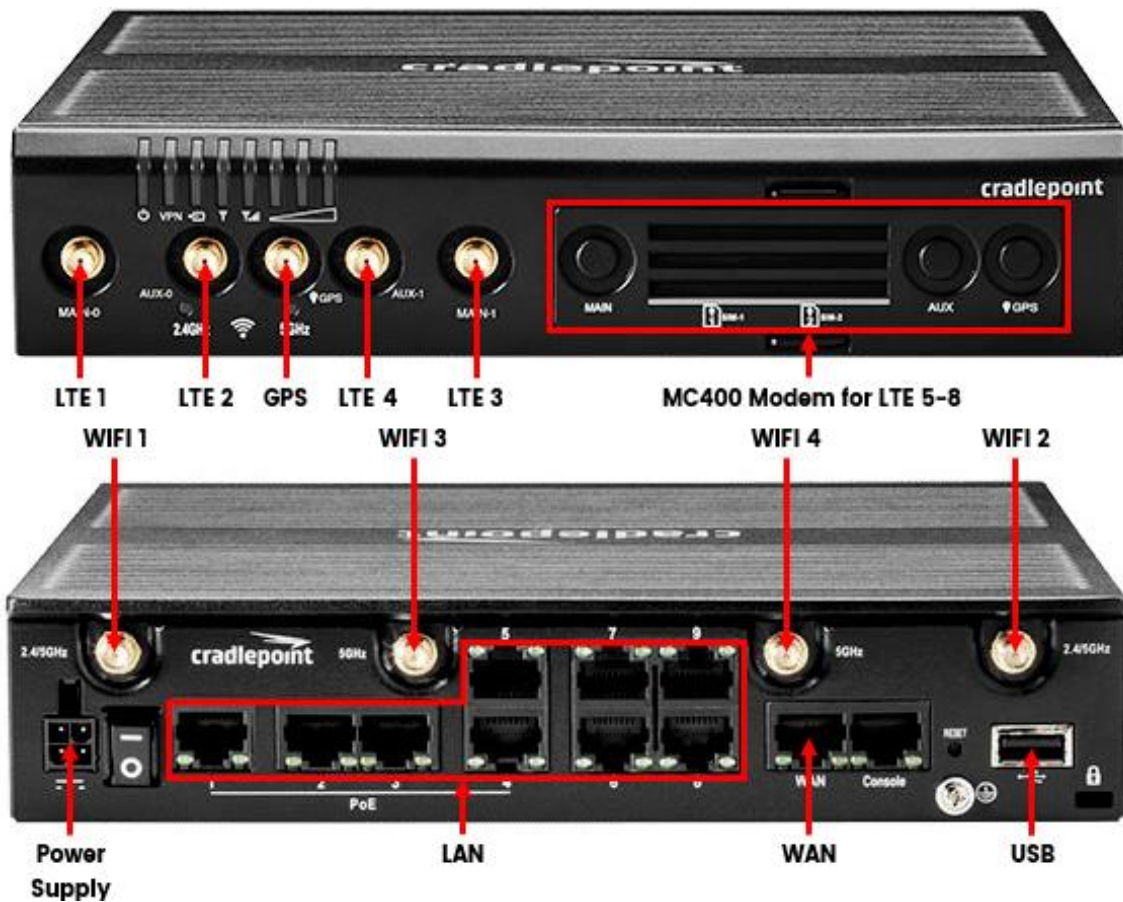


Figure 8: Cradlepoint AER2200 Connections

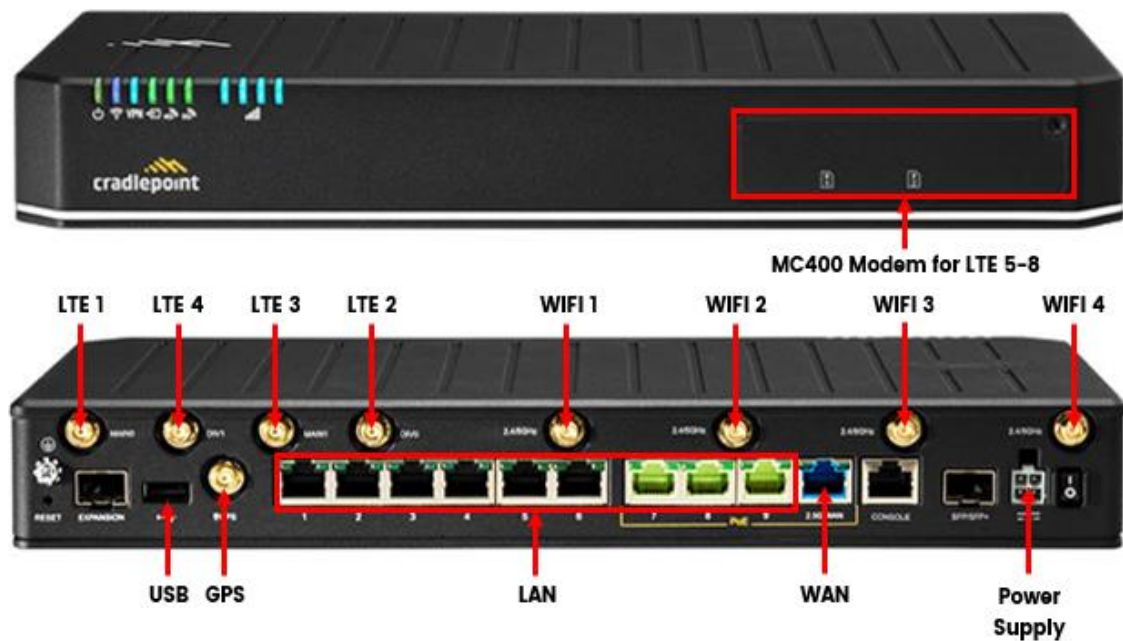


Figure 9: Cradlepoint E3000 Connections

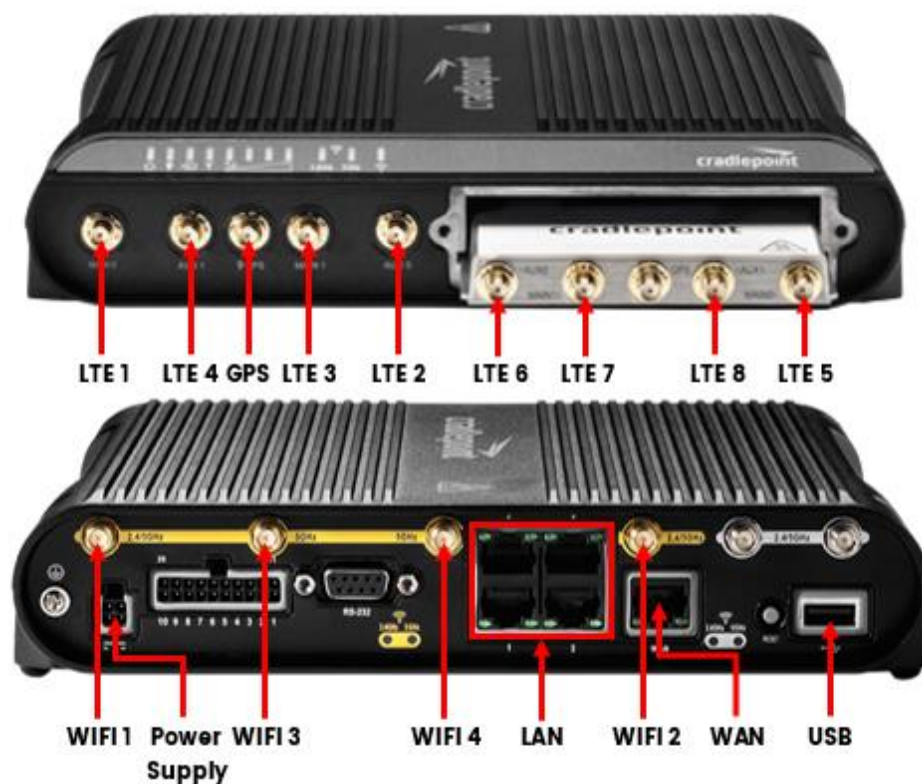


Figure 10: Cradlepoint IBR1700 Connections

Step 2: Connect the power supply to the router.

- A. Connect the router power supply to the power supply port on the router, shown in Figures 8, 9 & 10.
- B. Plug the router power supply into the surge protector provided in the kit.
- C. Use cable ties or hook-and-loop straps to secure the router power supply to the surge protector.

Step 3: Connect the fan to the surge protector.

- A. Plug the fan power supply into the surge protector. Use cable ties or hook-and-loop straps to secure the fan power supply to the surge protector.
- B. Turn the surge protector ON.

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 and WAN ports on the router, shown in Figures 8, 9 & 10.
- 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 three RJ-45 ports, as shown in Figure 11.



Figure 11: Connect the router to the RJ-45 ports on the case using ethernet cords.

Step 5: Connect the USB-A port on the case to the battery pack.

- A. Connect one end of the provided USB-A cord into the USB-A port on the case.
- B. **For powering external electrical devices**, plug the other end of the USB-A cord into one of the USB-A ports on the surge protector.
- C. **For transferring data to external devices**, connect the other end of the USB-A cord into the USB-A port on the router, shown in Figures 8, 9 & 10.

Step 6: Connect the surge protector to the battery pack or AC power port.

- A. **If using the battery pack**, plug the surge protector into one of the AC outlets on the battery pack, shown in Figure 12. Connect the battery pack charger to the battery pack charging port and plug into the AC power port at the back of the case. **Ensure the battery pack is OFF.**
- B. **If not using the battery pack**, plug the surge protector into the AC power port at the back of the case.

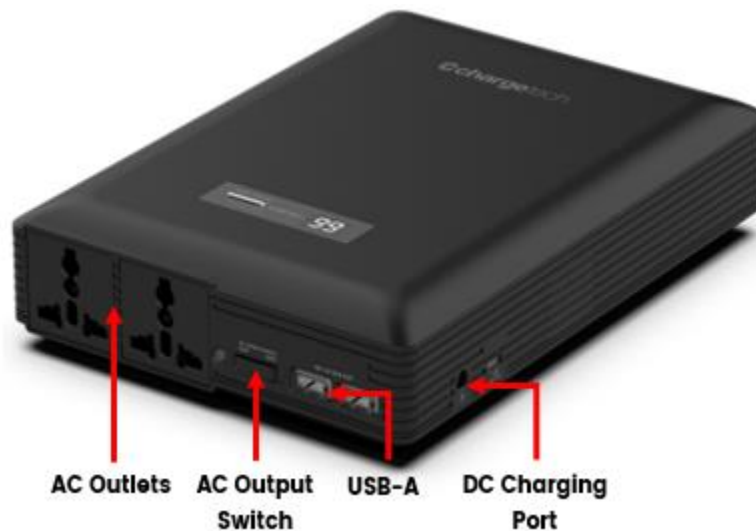


Figure 12: ChargeTech 54K Battery Pack Connections. (Optional)

Final Assembly

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" minimum bend radius).**
- C. **For AER2200 router, ensure that the power switch on the router is turned ON.**

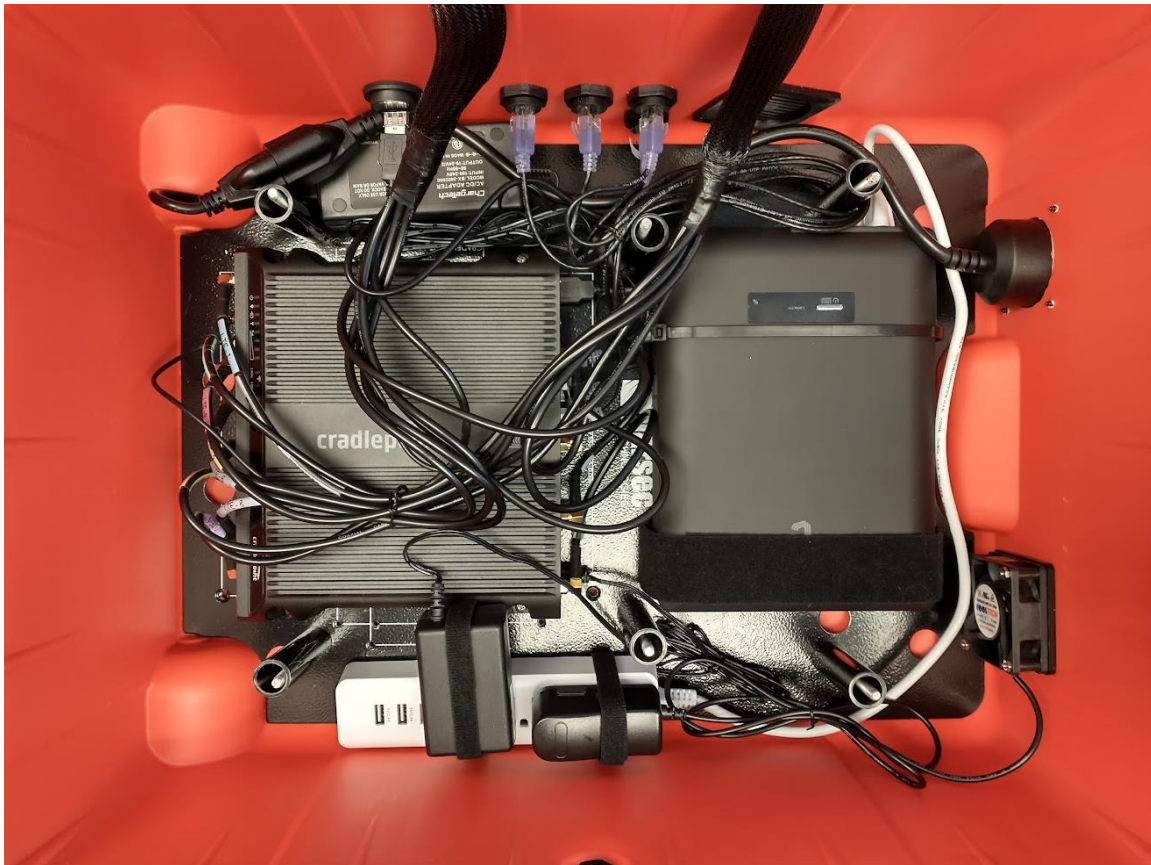


Figure 13: Fully Connected 13in1 Newfoundland L with 54K Battery Pack and Cradlepoint IBR1700 Router

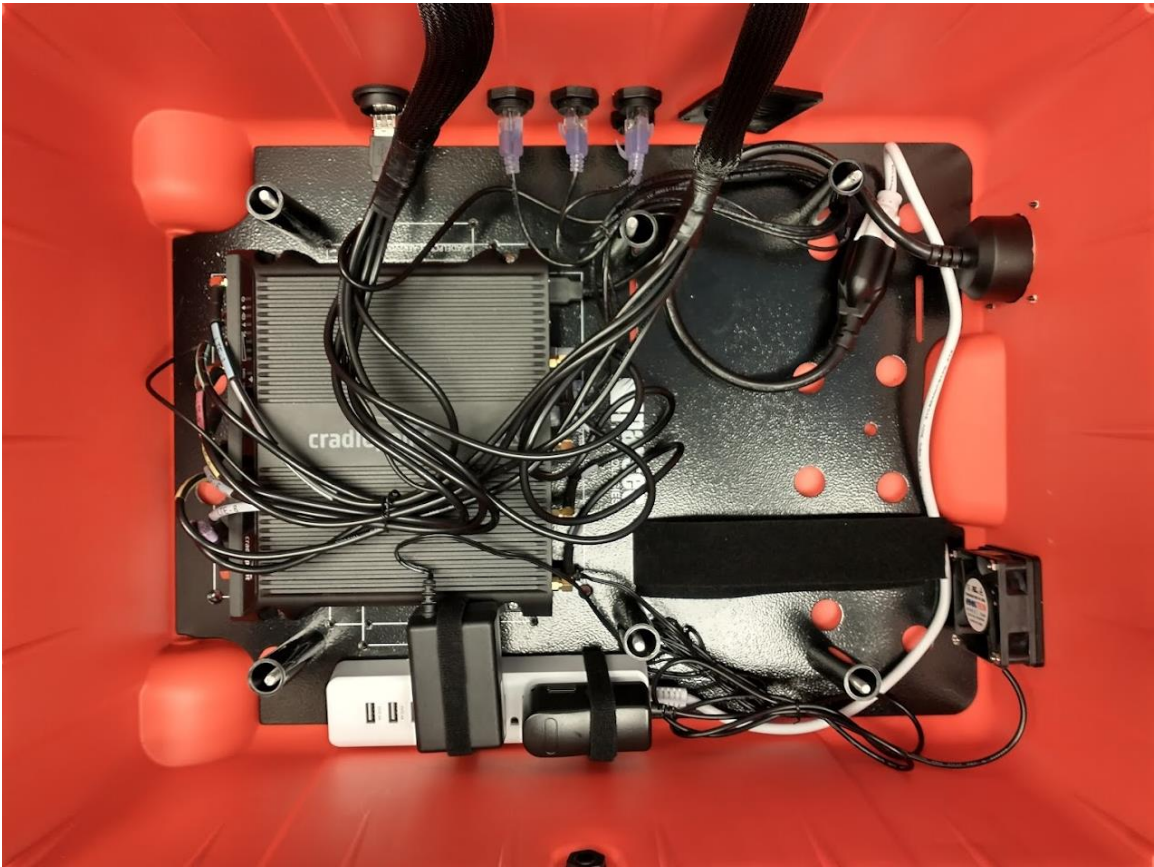


Figure 14: Fully Connected 13in1 Newfoundland L with Cradlepoint IBR1700 Router

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 six binding barrels you removed earlier, as shown in Figure 15.

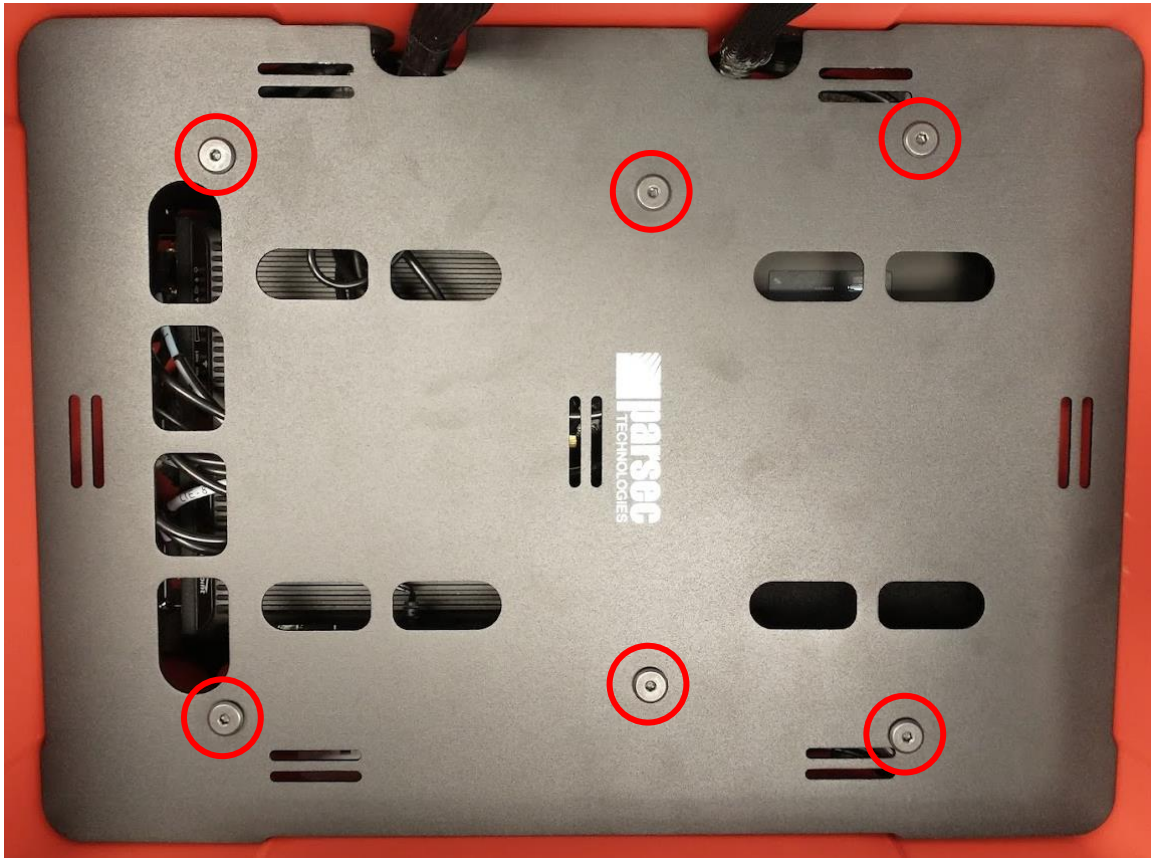


Figure 15: Fasten the cover plate to the case using binding barrels.

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 16: Open the fan and vent caps.

Step 2: Power on the antenna.

- A. **If not using the battery pack**, connect a power cord to the AC outlet on the outside of the case.
- B. **If using the battery pack**, follow steps 2C–2G below.
- C. Turn the battery pack ON by pressing and holding the power button for 3 seconds. The display on the battery pack will indicate the battery pack's current battery life (%). **Do not hold the button for longer than 3 seconds; this will cause the battery pack to enter programming mode. To exit programming mode, turn the battery pack OFF then ON again.**
- D. Set the AC output switch on the battery pack to ON. The switch can be accessed through the slot in the cover plate.
- E. Shortly after turning on the battery pack, the fan will start.
- F. To charge the battery pack, connect a power cord to the male power outlet on the outside of the case.
- G. See Page 20 for Battery Operation and Safety Guidelines.

Step 3: Connect the antenna to a computer.

- A. Use an ethernet cable to connect a computer to one of the RJ-45 ports on the case that are connected to the LAN ports on the router.

Step 4: Login to Cradlepoint NetCloud.

- A. Open a web browser on the computer and type 192.168.0.1 into the address bar. This will bring up the Cradlepoint NetCloud login, shown in Figure 17.
- B. Login to Cradlepoint NetCloud. The username is “admin”, and the password is found on the router, shown in Figure 18.

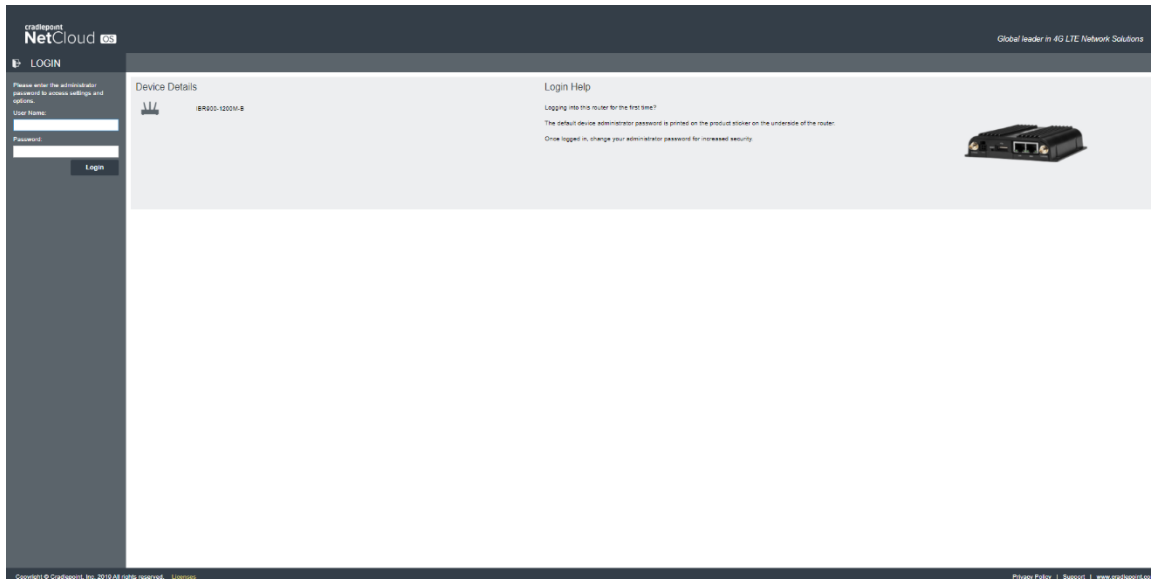


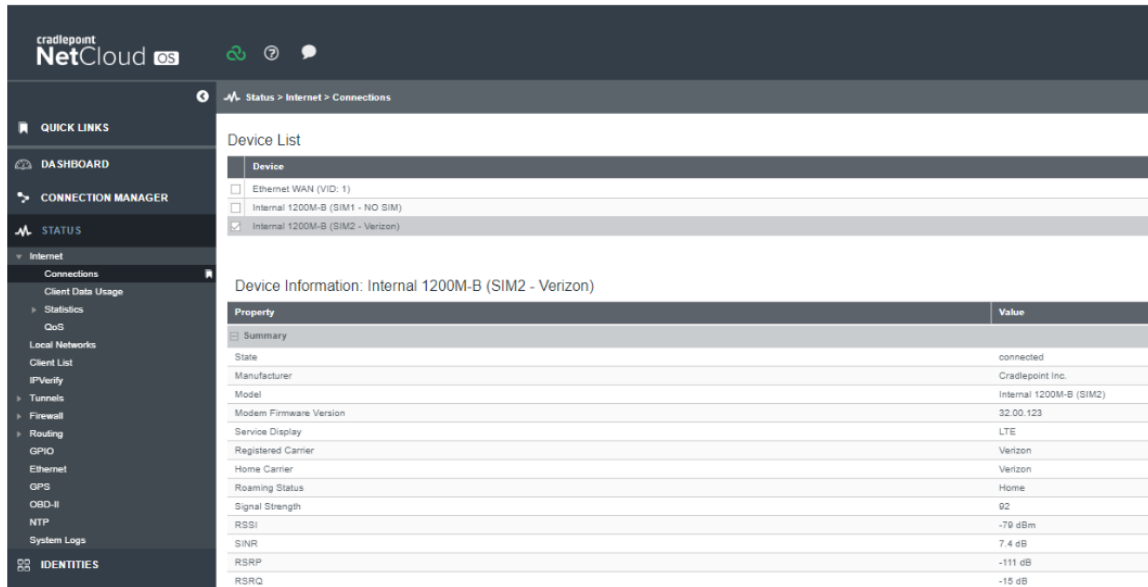
Figure 17: Access Cradlepoint NetCloud.



Figure 18: Cradlepoint NetCloud Login Password

Step 5: Select the antenna in the device list on Cradlepoint NetCloud.

- A. On the left side of the page, select STATUS. From the dropdown menu, select INTERNET and then CONNECTIONS.
- B. In the Device List table, select the option with a cellular SIM, as shown in Figure 19.



The screenshot shows the Cradlepoint NetCloud OS interface. On the left is a navigation menu with sections: QUICK LINKS, DASHBOARD, CONNECTION MANAGER, STATUS, and IDENTITIES. The STATUS section is expanded, showing Internet > Connections. The main area displays the 'Device List' table with three rows: Ethernet WAN (VID: 1), Internal 1200M-B (SIM1 - NO SIM), and Internal 1200M-B (SIM2 - Verizon) which is selected. Below the table, 'Device Information: Internal 1200M-B (SIM2 - Verizon)' is shown, including a 'Summary' table with properties like State, Manufacturer, Model, and Signal Strength.

| Property | Value |
|--------------------------|-------------------------|
| Summary | |
| State | connected |
| Manufacturer | Cradlepoint Inc. |
| Model | Internal 1200M-B (SIM2) |
| Modem Firmware Version | 32.00.123 |
| Service Display | LTE |
| Registered Carrier | Verizon |
| Home Carrier | Verizon |
| Roaming Status | Home |
| Signal Strength | 92 |
| RSSI | -79 dBm |
| SINR | 7.4 dB |
| RSRP | -111 dB |
| RSRQ | -15 dB |

Figure 19: Select the device with a cellular SIM in Cradlepoint NetCloud.

Antenna setup is complete!

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 3 seconds. All LED lights/display should turn ON/OFF.
- B. Holding the power button for longer than 3 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 48W Charging Adapter or with a Type-C PD Charger with at least 45W of power and up to 65W maximum.
- D. To use the AC outlet, slide the AC power switch to the ON position and press the power button. The solid red LED light will come on, which indicates that the AC outlet is on. A device plugged into the AC outlet must be 15–250W for the AC outlet to work. Otherwise, the AC outlet will automatically shut off.
- E. If no power draw is detected after 90 seconds, 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.
- F. 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.
- G. 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.
- H. **Keep out of reach of children.**
- I. **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.**
- J. **Hold on carefully when inserting or removing a cable. Make sure not to force or bend cables when inserting them into the charging ports.**
- K. **Avoid inserting any foreign objects into the ports.**
- L. **Do not attempt to open, alter, or modify the unit.**
- M. **Do not use in temperatures over 100°F (40°C).**
- N. **Do not expose the product to wet conditions such as water, rain, or snow.**
- O. **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 the 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.



Last Revised: 9-29-2022