

# GOLDEN RETRIEVER

## *Installation Instructions*



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\* Conditions apply

# Antenna Versions

The Golden Retriever case antenna comes in three versions – A, G, and L – with different features, listed below.

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

## Required Tools & Accessories

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

- Philips Screwdriver

The table below lists the required accessories for the A, G, and L versions of the Golden Retriever antenna.

	Golden Retriever A	Golden Retriever G	Golden Retriever L
Provided with Antenna	<ul style="list-style-type: none"> <li>• NEMA Male to Female Adapter</li> <li>• PTA0071B Black Round Head Screws, 8 pcs</li> <li>• PTA0399-TL Pan Head Screws, 4 pcs</li> <li>• Cable Ties</li> </ul>	<ul style="list-style-type: none"> <li>• PTA0071B Black Round Head Screws, 8 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, 4 pcs *</li> <li>• USB-A Cord *</li> <li>• USB-C to Barrel Adapter</li> <li>• Battery Tray for ChargeTech 20K Battery Pack</li> <li>• Cable Ties</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA Male to Female Adapter</li> <li>• PTA0071B Black Round Head Screws, 8 pcs</li> <li>• PTA0399-TL Pan Head Screws, 4 pcs</li> <li>• Ethernet Cords, 2 pcs *</li> <li>• Cable Ties</li> </ul>
To Be Purchased By Customer	<ul style="list-style-type: none"> <li>• 12V 2x2 Power Supply (Cradlepoint #170716-000)</li> <li>• NEMA 5-15P to IEC C13 Socket Power Cord (i.e. McMaster #71535K51) ***</li> </ul>	<ul style="list-style-type: none"> <li>• 20K AC Battery Pack (ChargeTech #CT-600060)</li> <li>• Power to Barrel Adapter (Cradlepoint #170665-000)</li> <li>• USB-A Cord **</li> <li>• Ethernet Cords, 2 pcs **</li> </ul>	<ul style="list-style-type: none"> <li>• Ethernet Cords, 2 pcs **</li> <li>• 12V 2x2 Power Supply (Cradlepoint #170716-000)</li> <li>• NEMA 5-15P to IEC C13 Socket Power Cord (i.e. McMaster #71535K51) ***</li> </ul>
	<ul style="list-style-type: none"> <li>• Router Options (for other routers, contact customer service at support@parsec-t.com) <ul style="list-style-type: none"> <li>○ Cradlepoint IBR600</li> <li>○ Cradlepoint IBR900</li> <li>○ Cradlepoint R500-PLTE</li> </ul> </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

\*\*\* For powering the antenna, length as required by customer

# Battery and Router Installation

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

- A. This step only applies to the Golden Retriever G.
- B. Remove the cover plate from the enclosure.
- C. 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.**
- D. 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. (Golden Retriever G)

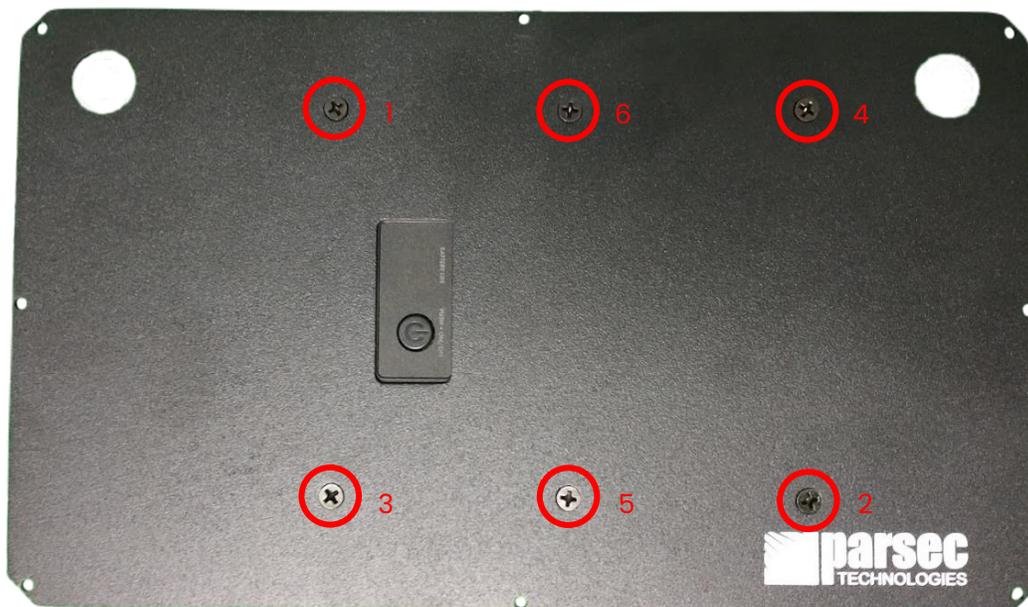


Figure 2: Fasten the battery tray with battery pack to the cover plate using PTA0368-B screws. (Golden Retriever G)

Step 2: Mount the router to the bottom plate.

- A. If not already done, remove the cover plate from the enclosure.
- B. For Golden Retriever A & L, install the antenna cable labeled CELL 1 (or PLTE 1 in some cases) to the router port labeled MAIN (see Figure 6 on Page 7). This is because the MAIN port on the router is difficult to access once the router is installed on the bottom plate.
- 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 holes in the cover plate.



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

# Connection

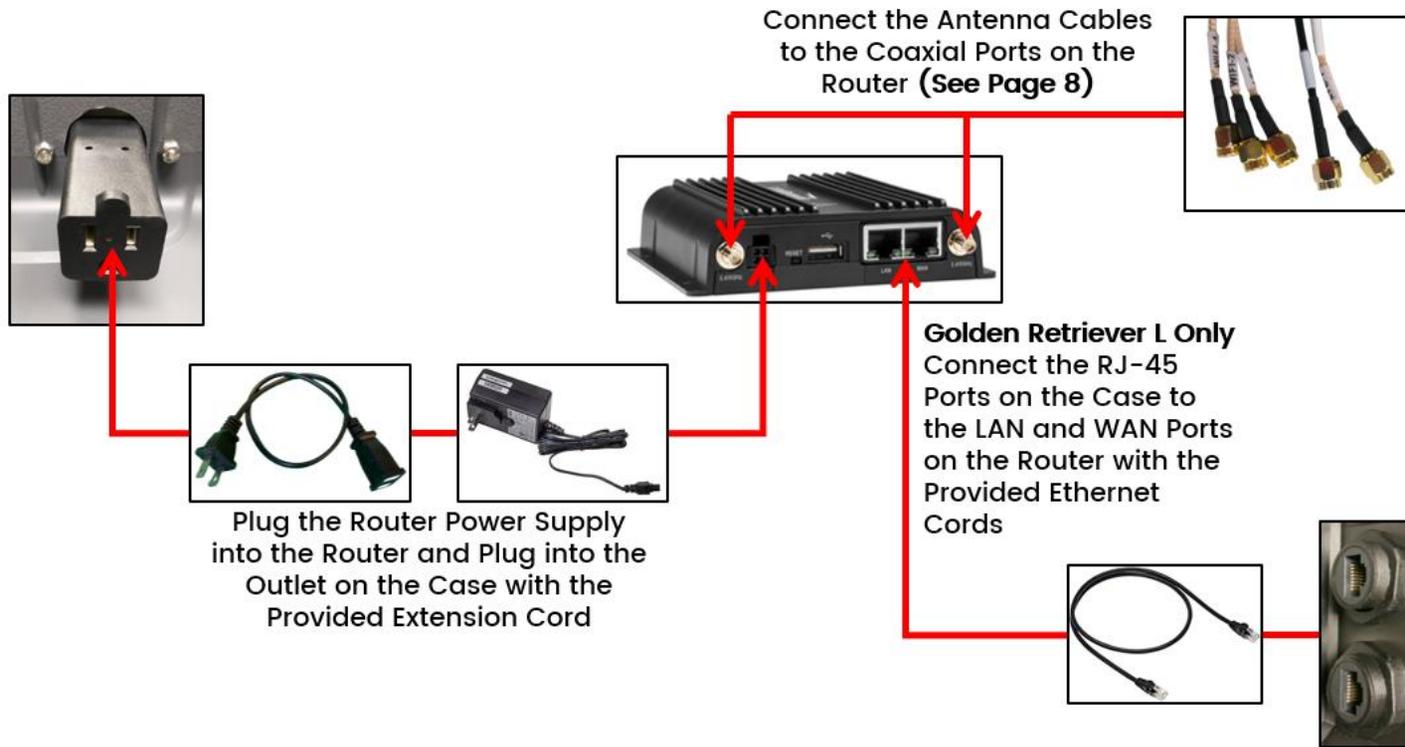


Figure 4: Connection Diagram for Golden Retriever A & L

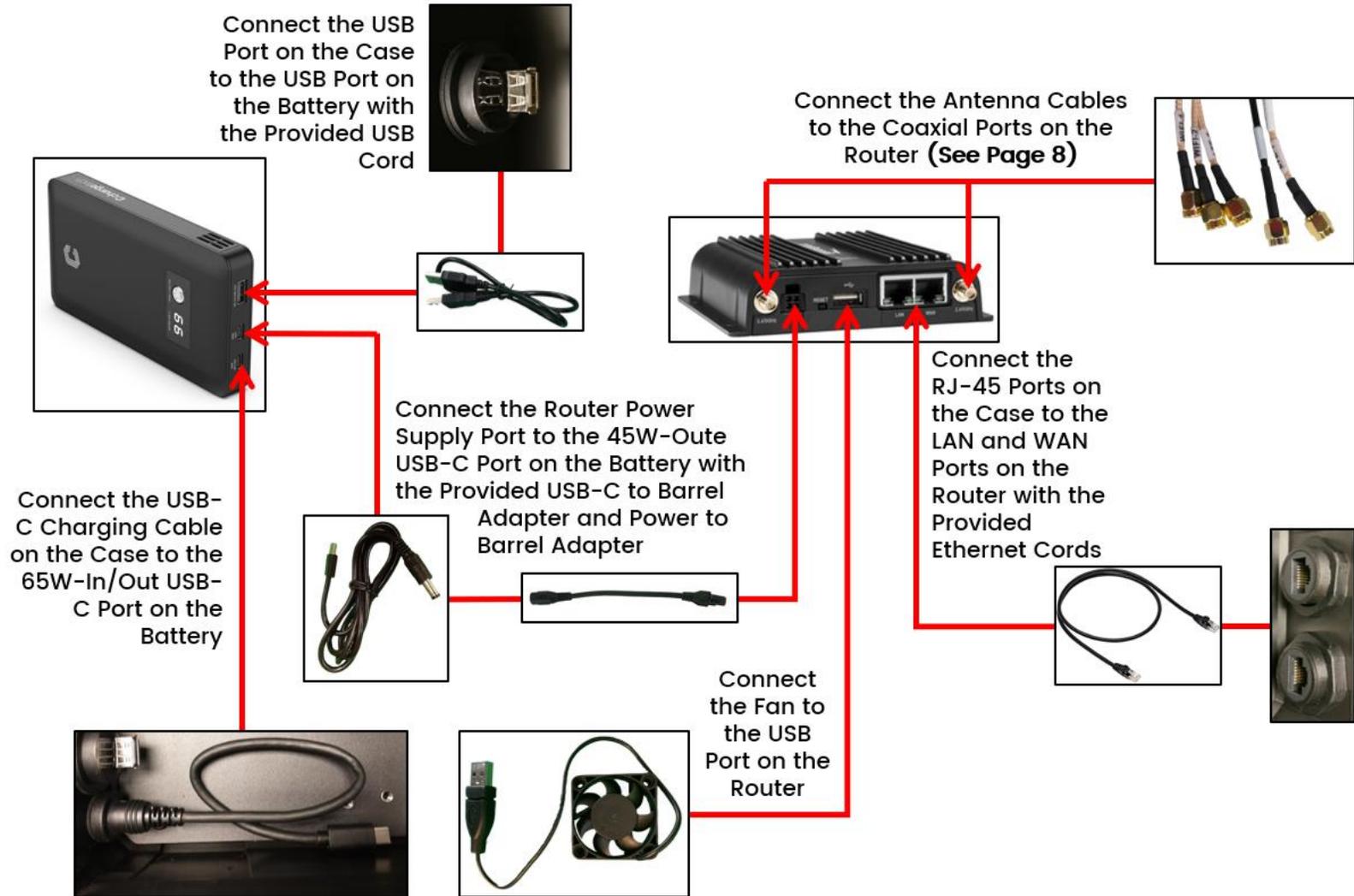


Figure 5: Connection Diagram for Golden Retriever G

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 IBR600 and IBR900	
Antenna Cable	Router Terminal
CELL 1	MAIN
CELL 2	AUX
GPS	GPS
WIFI 1	2.4/5GHz, left
WIFI 2	2.4/5GHz, right

Cradlepoint R500-PLTE	
Antenna Cable	Router Terminal
PLTE 1	MAIN
PLTE 2	AUX
GPS	GPS
WIFI 1	2.4/5GHz, left
WIFI 2	2.4/5GHz, right



Figure 6: Cradlepoint IBR600, IBR900, & R500-PLTE Connections

Step 2: Connect the power supply to the router.

- A. For Golden Retriever A & L, connect the router power supply to the power supply port on the router, shown in Figure 6, and plug it into the NEMA male to female adapter, provided in the kit. Plug the NEMA male to female adapter into the AC power port on the case.
- B. For Golden Retriever 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 45W-Out Type-C port on the battery pack, as shown in Figure 8.

Step 3: Connect the fan to the router (Golden Retriever G only).

- A. This step only applies to the Golden Retriever G.
- B. Plug the USB-A cord from the fan into the USB-A port on the router, shown in Figure 6.

Step 4: Connect the router to the RJ-45 ports on the case using ethernet cords (Golden Retriever G & L only).

- A. This step only applies to the Golden Retriever G and L.
- B. Connect the provided ethernet cords to the LAN port and WAN port on the router, shown in Figure 6.
- C. 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 front RJ-45 port and the LAN port on the router to the back RJ-45 port, as shown in Figure 7.



*Figure 7: 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 (Golden Retriever G only).

- A. This step only applies to the Golden Retriever G.
- B. Plug the provided USB-A cord into the USB-A port on the case and the USB-A port on the battery pack, shown in Figure 8.

Step 6: Connect the battery pack to the DC charging port on the case (Golden Retriever G only).

- A. This step only applies to the Golden Retriever G.
- B. 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 8.



*Figure 8: ChargeTech 20K Battery Pack Connections. (Golden Retriever G)*

# 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 (1/2" minimum bend radius). For the Golden Retriever G, ensure that no antenna cables are running across the top of the router.**



Figure 9: Fully Connected 5in1 Golden Retriever A with Cradlepoint IBR900 Router



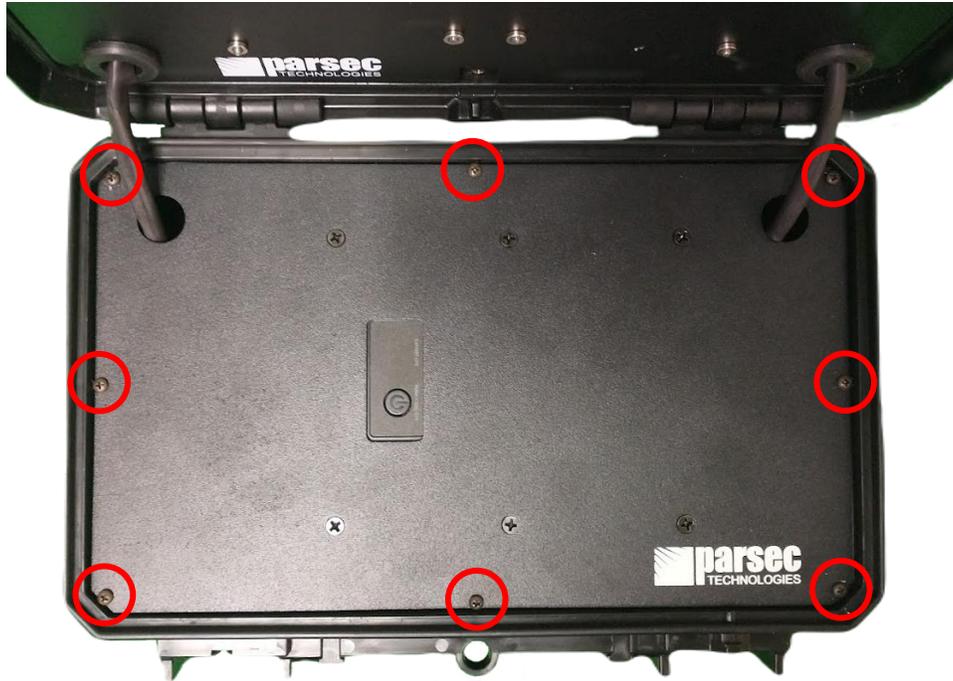
*Figure 10: Fully Connected 5in1 Golden Retriever G with Cradlepoint IBR900 Router*



*Figure 11: Fully Connected 5in1 Golden Retriever L with Cradlepoint IBR900 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 eight PTA0071B black oval head screws provided in the kit, as shown in Figure 12.



*Figure 12: Fasten the cover plate to the case using PTA0071B screws.*

# Operational Setup

Step 1: Open the fan and vent caps (Golden Retriever G only).

- A. This step only applies to the Golden Retriever G.
- B. Before turning the antenna ON, always open the fan and vent caps. The type of cap may vary.
- C. **Ensure that the antenna is away from any liquids when the caps are open.**



*Figure 13: Open the fan and vent caps. (Golden Retriever G)*

Step 2: Power on the antenna.

- A. For Golden Retriever A & L, connect a power cord to the AC outlet on the outside of the case.
- B. For Golden Retriever G, follow steps 2C-2G below.
- C. 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.**
- D. Shortly after turning on the battery pack, the fan will start.
- E. To charge the battery pack, connect the battery pack charger to the USB-C charging port on the outside of the case.
- F. See Page 18 for Battery Operation and Safety Guidelines.

Step 3: Connect the antenna 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 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 14.
- B. Login to Cradlepoint NetCloud. The username is "admin", and the password is found on the router, shown in Figure 15.

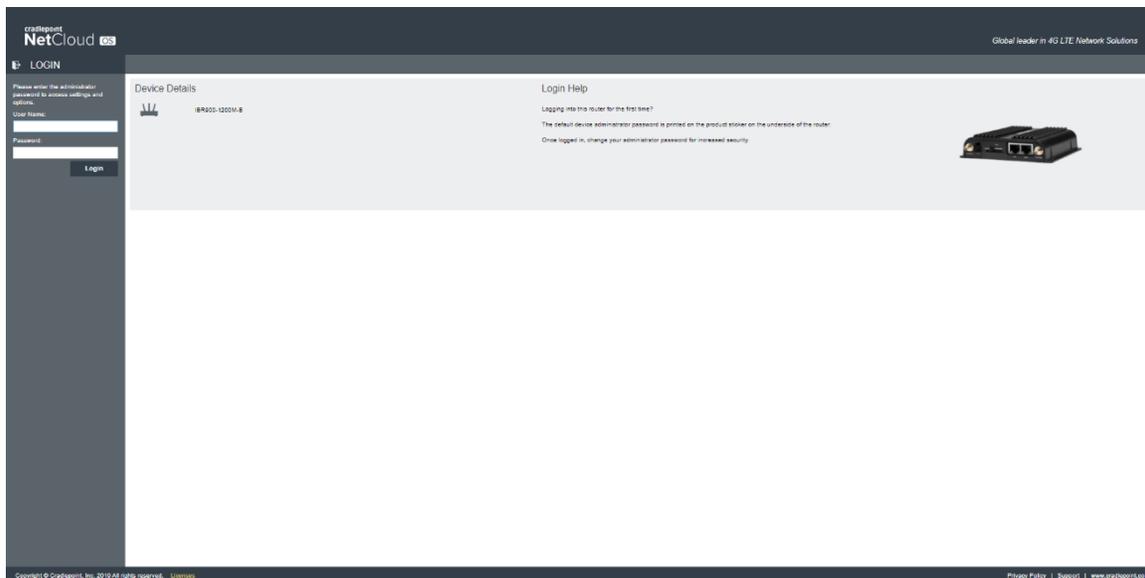


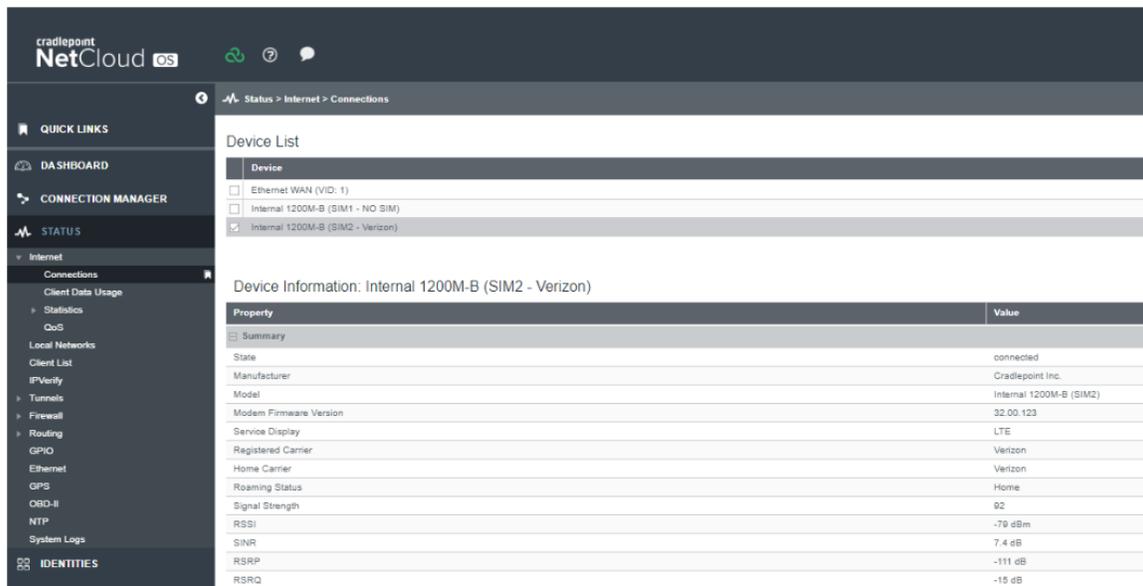
Figure 14: Access Cradlepoint NetCloud.



Figure 15: 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 16.



The screenshot shows the Cradlepoint NetCloud interface. The left sidebar contains navigation options: QUICK LINKS, DASHBOARD, CONNECTION MANAGER, STATUS, Internet (with sub-options: Connections, Client Data Usage, Statistics, QoS, Local Networks, Client List, IPVerify, Tunnels, Firewall, Routing, GPIO, Ethernet, GPS, OBD-II, NTP, System Logs), and IDENTITIES. The main content area is titled 'Status > Internet > Connections' and displays a 'Device List' table with three entries: Ethernet WAN (VID: 1), Internal 1200M-B (SIM1 - NO SIM), and Internal 1200M-B (SIM2 - Verizon). The third entry is selected. Below the table, the 'Device Information: Internal 1200M-B (SIM2 - Verizon)' is shown in a table format.

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

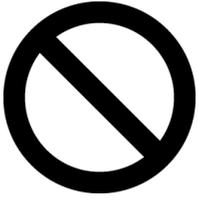
## Antenna setup is complete!

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. The Type-C PD port can be used to charge other devices up to a maximum of 65W.
- E. 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.
- 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 uncomfortably 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.



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