

Sierra Wireless RV50 Install

Scope

Connect the RV50 to power and antennas for RMA upgrade or new field.

SAFETY WARNING

ADHERE TO ALL CAUTIONS AND SAFETY INSTRUCTIONS IN THE SIERRA WIRELESS MANUAL AND THE ALSOENERGY INSTALLATION MANUAL.

Overview

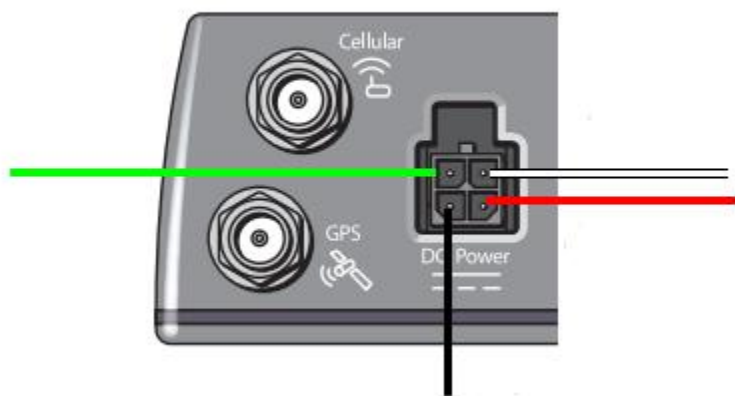
RV50 runs on 24VDC and uses dual antennas for cell connection. They are typically provided preconfigured for Verizon 4G service by AlsoEnergy.

Installation Procedure

Power Connection

1. Red and White connect to 24VDC
2. Black connects to negative DC
3. Green is unused

Power Connector on the RV50



Antenna Connections

Mount the antennas as high as possible and carefully route the cables into the enclosure.

1. Dual antennas use the Cellular and Diversity connectors.
2. Single antenna with three cables, small cable is for GPS connector, other two will be Cellular and Diversity.

AirLink RV50 Hardware User Guide

Note: Take extra care when attaching the antennas to the SMA connectors. Finger tight (approximately 0.6–0.8 Nm 5–7 in-lb.) is sufficient and the max torque should not go beyond 1.1 Nm (10 in-lb.).

To install the antennas:

1. Connect the cellular antenna to the SMA cellular antenna connector.
Mount the cellular antenna so there is at least 20 cm between the antenna and the user or bystander.
2. If used, connect a GPS antenna to the SMA GPS antenna connector.
Mount the GPS antenna where it has a good view of the sky (at least 90°).
3. If used, connect the diversity antenna to the SMA diversity antenna connector.

Note: If the antenna is located away from the gateway, keep the cables as short as possible to prevent the loss of antenna gain. Route the cables so that they are protected from damage and will not be snagged or pulled on. There should be no binding or sharp corners in the cable routing. Excess cabling should be bundled and tied off. Make sure the cables are secured so their weight will not loosen the connector from the gateway over time.

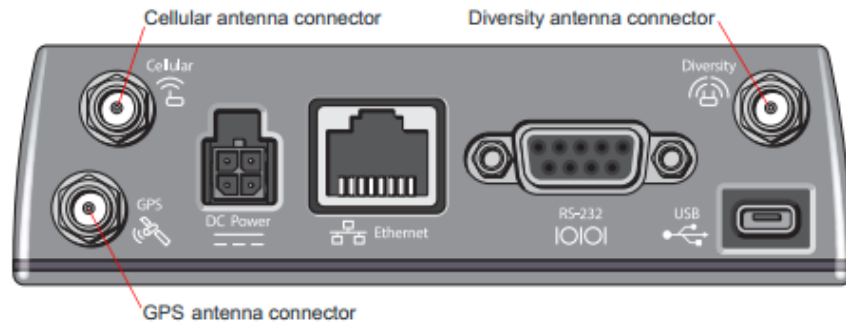


Figure 3-2: Antenna Connectors

Troubleshooting

LED Behavior



Table 3-10: LED Behavior

LED	Color/Pattern	Description	LED Power Saving Mode ^a
Power	Off	No power or input voltage ≥ 36 VDC or ≤ 7 VDC	
	Solid Green	Power is present.	
	Green with Amber Flash	Power is present and the gateway has a GPS fix.	
	Solid Red	Standby mode	
	Flashing Green	When you press the reset button, flashing green indicates when to release the reset button to reboot the gateway.	
	Flashing Red	When you press the reset button, flashing red indicates when to release the reset button to reset the gateway to the factory default settings.	
Signal	Solid Green	Good signal (equivalent to 4–5 bars)	Off
	Solid Amber	Fair signal (equivalent to 2–3 bars)	Off
	Flashing Amber	Poor signal (equivalent to 1 bar) If possible, Sierra Wireless recommends moving the gateway to a location with a better signal.	
	Flashing Red	Inadequate (equivalent to 0 bars) Sierra Wireless recommends moving the gateway to a location with a better signal.	
<i>Note: The quality of the signal strength is measured using the appropriate parameters for the radio technology in use.</i>			

Table 3-10: LED Behavior

LED	Color/Pattern	Description	LED Power Saving Mode ^a
Network	Solid Green	Connected to an LTE network	Off
	Solid Amber	Connected to a 3G or 2G network	Off
	Flashing Green	Connecting to the network	
	Flashing Red	No network available	
	Flashing Red/Amber	Network Operator Switching is enabled, but the gateway is unable to locate the required firmware. For more information, refer to the ALEOS Software Configuration User Guide (Admin chapter).	
Activity	Flashing Green	Traffic is being transmitted or received over the WAN interface.	
	Flashing Red	Traffic is being transmitted or received over the serial port. This behavior only appears if the RV50 is configured to display it. For more information, refer to the ALEOS Software Configuration Guide (Serial chapter).	
	Flashing Amber	Traffic is being transmitted or received over both the WAN interface and the serial port. This behavior only appears if the RV50 is configured to display it. Refer to the ALEOS Software Configuration Guide (Serial chapter).	
ALL	Green LED chase	Radio module reconfiguration/firmware update or Network Operator Switching is in progress.	
	Amber LED chase	ALEOS software update is in progress.	

a. To configure LED Power Saving Mode, refer to the ALEOS Software Configuration User Guide (Services chapter).

Ethernet LEDs

The connector has two LEDs that indicate speed and activity. When looking into the connector:

- **Activity** – The right LED is solid amber when a link is present and flashing amber when there is activity.
- **Connection Speed** – The left LED indicates the Ethernet connection speed:
 - Solid Green—1000 Mbps
 - Solid Amber—100 Mbps
 - Off—10 Mbps

More information

More information can be found online in the [AirLink RV50 Hardware User Guide](#).