



Rekor Comms Box Guide

Version 1.0

Revision History

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1.0	8/17/2022	Initial draft	M. Covington

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1 Introduction

The Rekor Communications (Comms) Box provides the communication components for the Rekor Edge camera systems. This document provides instructions on how to configure the communications components, including the Sierra modem, the Antaira PoE switch and a power supply.

! Note: If the site is using Power over Ethernet (PoE), the Ethernet cables must be rated CAT5E or CAT6.

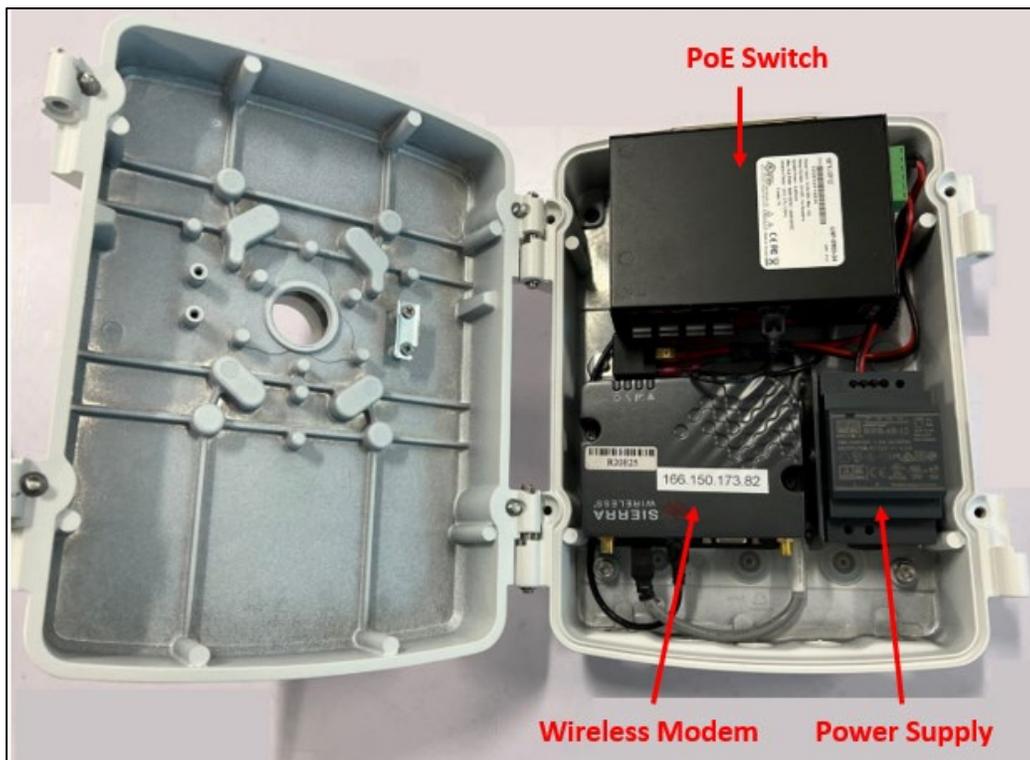


Figure 1. Communications Box Interior

2 Installation

2.1 Mounting

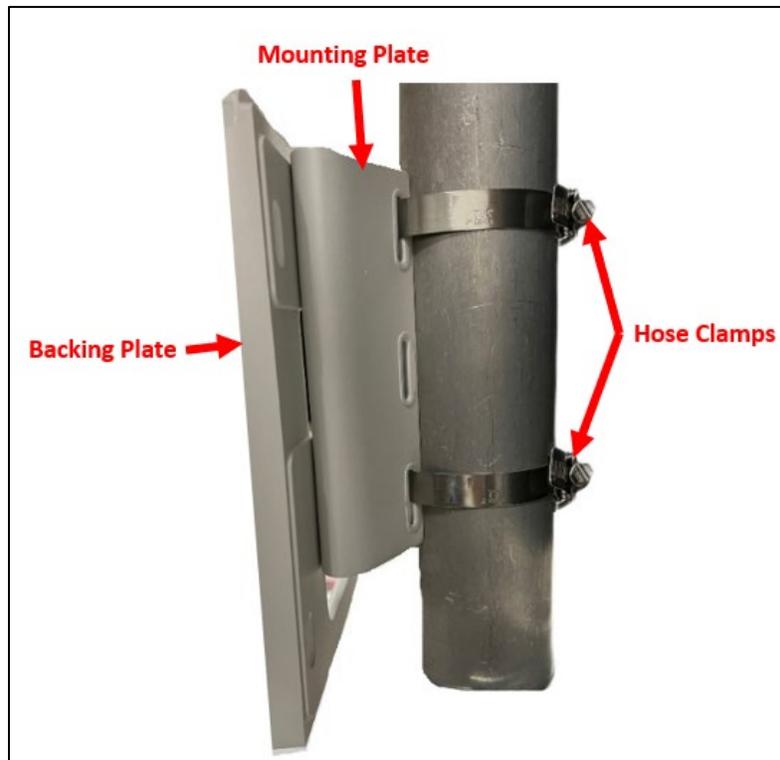


Figure 2. Band Clamp Slots on Mounting Plate

1. Locate and mark the position on the pole where you plan to install the Comms Box.
2. Insert the hose clamps into the slots on the mounting plate.
3. Wrap the band clamps around the pole and cinch them tight. Secure the clamps by tightening the screws on the clamps.



Figure 3. Backing Plate Bolts and Screws

4. Attach the backing plate to the mounting plate with 4 hex-head bolts.
5. Hang the Comms box onto the slots on the backing plate, then secure the box by adding screws through the box into the backing plate.



Figure 4. Antenna Location

6. Attach the two antennas to the bottom of the box.



Figure 5. Mounted Comms Box

2.2 Modem Connections

The Sierra RV 50 modem delivers LTE broadband connectivity for critical remote fixed assets and industrial IoT infrastructure. With low power consumption, the RV50X can run on battery or solar power.

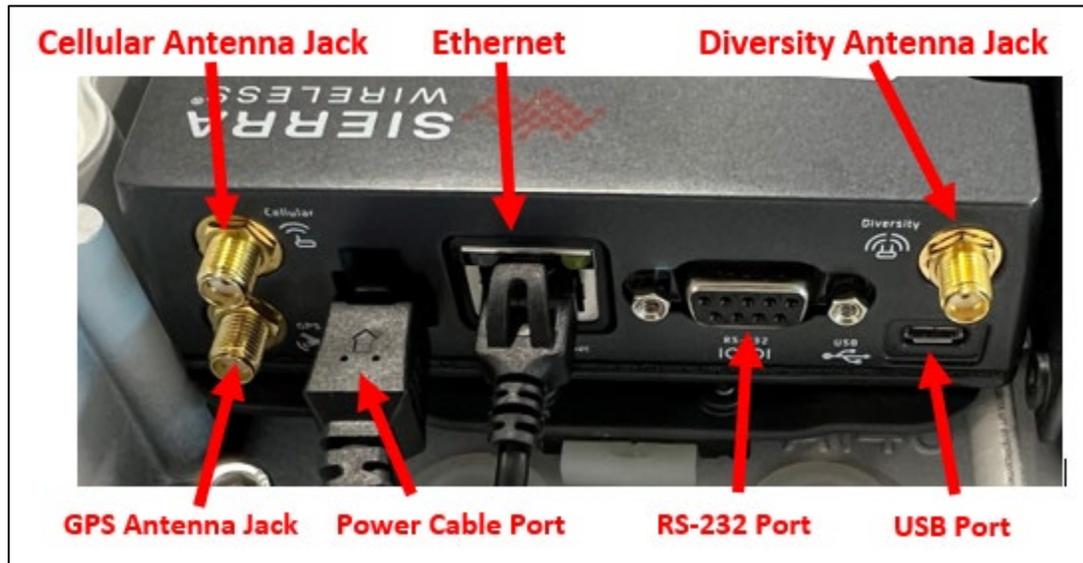


Figure 6. Modem Connections

1. Run the cellular antenna cable through the conduit port on the box enclosure and connect the Cellular antenna cable to the Cellular Antenna Port.
2. If used, run the GPS antenna cable through the conduit port on the box enclosure and connect the GPS antenna cable to the GPS Antenna Port.

! Note: The Sierra modem will have the power supply and Ethernet cable already connected upon receipt.

2.3 PoE Switch Connections

The Antaira LNP-0500-24 is an industrial Gigabit PoE+ unmanaged Ethernet switch featuring 4 PoE RJ45 device connection ports. Each PoE Ethernet port supports an IEEE 802.3at/af with a high power PoE+ output up to 30W per port, making it ideal for applications that demand a high power PoE power source within any harsh or outdoor environment.

! Note: If the site is using Power over Ethernet (PoE), the Ethernet cables must be rated CAT5E or CAT6.

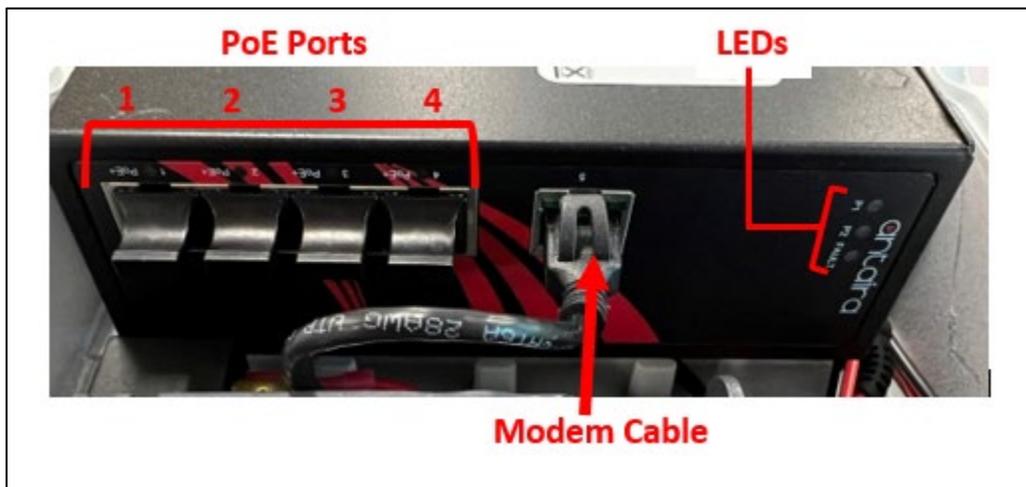


Figure 7. PoE Switch Connections

1. Run the CAT5E/CAT6 cable from the ALPR camera through the conduit port on the box enclosure and plug the RJ-45 connector into PoE Port 1.
2. If the site has a second camera, run the Cat5E/Cat6 cable from the second ALPR camera through the conduit port on the box enclosure and plug the RJ-45 into PoE Port 2.
3. Check the LEDs to ensure the camera(s) have power and are communicating.

! Note: The PoE switch will have the power supply connected and an Ethernet cable will already be connected to the modem upon receipt.

3 Modem Configuration

The Sierra modem communicates with the ALPR camera through a static IP. The modem access communicates only through the HTTPS protocol over port 32772.

Example: <https://<modem ip>:32772>

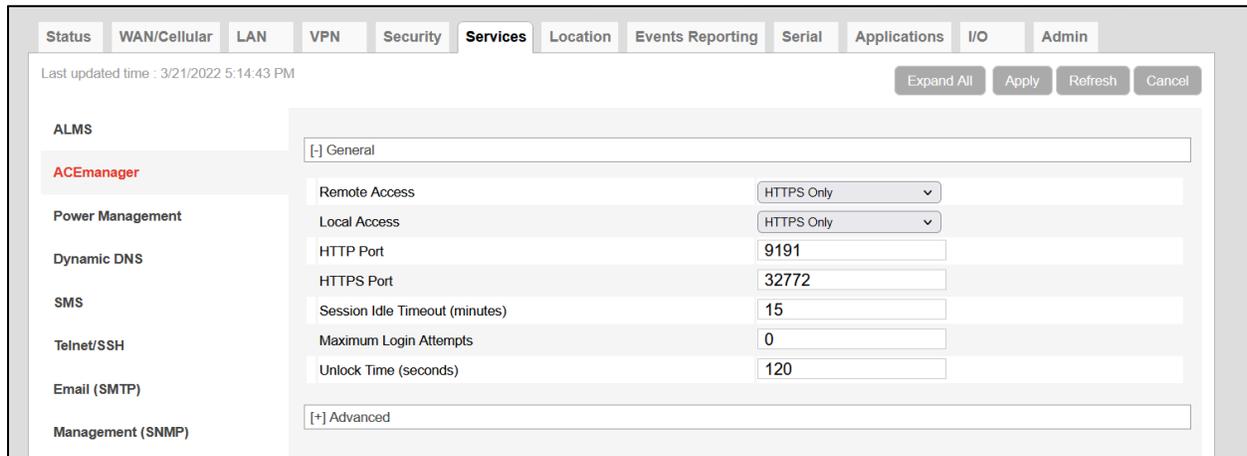


Figure 8. Modem Configuration

Once logged in to the modem, click the Services tab at the top, then go to ACEmanager in the left frame and double check that following settings match those listed below:

- Remote Access: HTTPS Only
- Local Access: HTTPS Only
- HTTP Port: 9191
- HTTPS Port: 32772
- Session Idle Timeout: 15 minutes
- Maximum Login Attempts: 0
- Unlock Time: 120 seconds

Click the Security tab at the top, then go to Port Forwarding in the left frame.

3.1 Port Forwarding

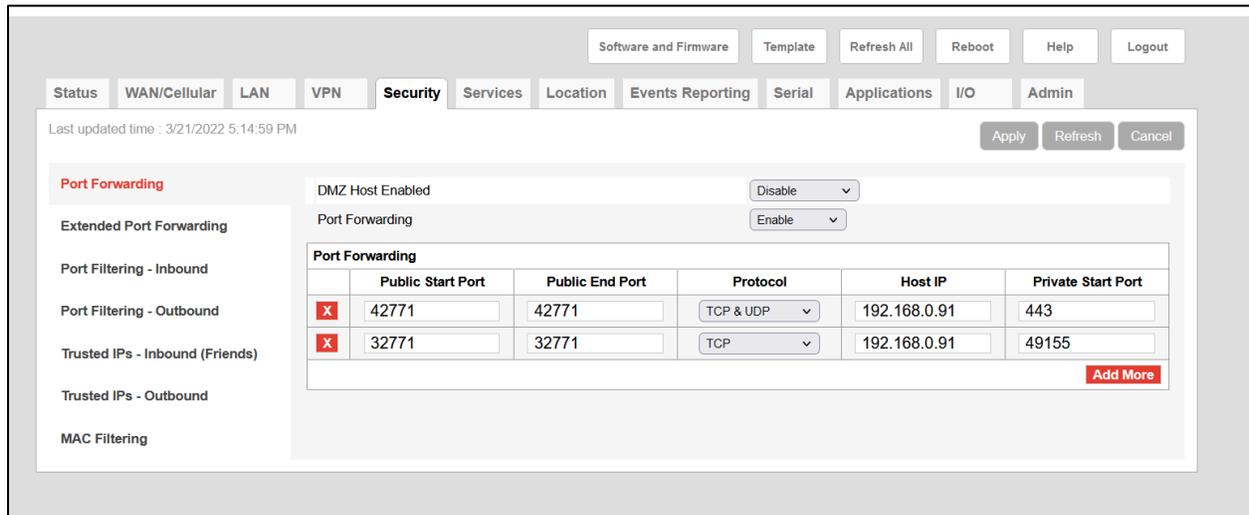


Figure 9. Port Forwarding

Double check that following settings match those listed below:

DMZ Host Enable: Disable

Port Forwarding: Enable

If the site is using an Edge Pro camera, the Edge Pro web interface can be accessed through the static IP of the modem via port 42771. Below is an example to access the web interface:

`https://<modem_ip>:42771`

The internal SSH port used by the Edge Pro is 49155. This has been routed to public port 32771. Below is an example to access the Edge Pro via SSH:

`ssh root@<modem_ip> -p 32771`

The following table displays the port forwarding information for multiple cameras:

Cameras	Service	Public Port	Protocol	Host IP	Private Start Port
Camera 1	HTTPS	42771	TCP & UDP	192.168.0.91	443
	SSH	32771	TCP	192.168.0.91	49155
Camera 2	HTTPS	43771	TCP & UDP	192.168.0.92	443
	SSH	33771	TCP	192.168.0.92	49155
Camera 3	HTTPS	44771	TCP & UDP	192.168.0.93	443
	SSH	34771	TCP	192.168.0.93	49155
Camera 4	HTTPS	45771	TCP & UDP	192.168.0.94	443
	SSH	35771	TCP	192.168.0.94	49155

