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SENSYS networks FLEX Repeater Votre Source Pour

SENSYS networks FLEX Repeater Votre Source Pour User Guide

Contents

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Product Information

Specifications:

- Product Name: RTMS Echo
- Recommended Mounting Height: 15 – 34 ft / 4.6 – 10.4 m
- Maximum Recommended Detection Distance: 120 – 250 ft / 36.6 – 76.2 m
- Power Requirement: 12-24VDC
- Communication: RJ-45 connector
- Manufacturer: ISS Sensys Networks

Product Usage Instructions

1. Mounting the RTMS Echo:

1. Attach the bracket to the roadside pole using stainless steel banding or bolts.
2. Secure the RTMS Echo to the mounting bracket ensuring the cable connector is at the bottom.
3. Adjust the RTMS Echo to be perpendicular to the travel lanes and level with the road.
4. Tilt the RTMS Echo towards the farthest monitored zone.
5. Hand tighten the nuts temporarily.
6. Connect the RJ-45 connector from the cable to the receptacle on the bottom of the sensor.
7. Connect the cable to power and communications following the pinouts provided.

2. Connect to the Echo Web App:

1. Start a web browser on your device.
2. Enter the login credentials (admin/rtmsecho) to access the Echo sensor settings.

3. Aiming the Sensor:

1. Select the Aim tab in the Echo Web App.
2. Adjust the sensor left or right to align it perpendicular to the road.

Frequently Asked Questions

- **Q: What should I do if I need recommendations outside the specified boundaries?**
  - **A:** Contact ISS Support for personalized recommendations based on your specific site geometry.
- **Q: What is the default login credentials for accessing the EchoWeb App?**
  - **A:** The default login credentials are admin/rtmsecho.

What's in the Box

- RTMS Echo
- Mounting bracket

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- 50 ft (15.24 m) cable
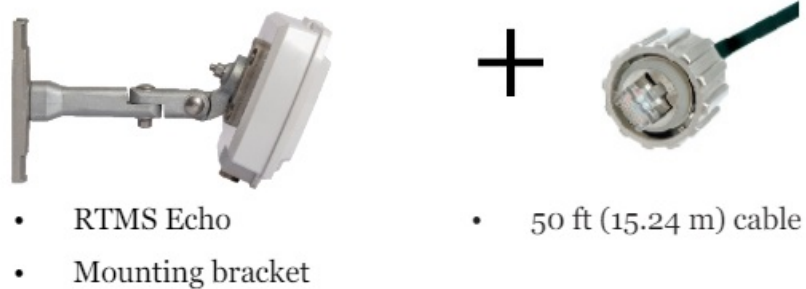
Other Required Equipment

- Stainless steel banding and/or stainless steel bolts used to mount the sensor to a pole
- Junction boxes
- 12-24 VDC power supply, etc.
- Hand-held tally counter

Mounting Height and Tilt Recommendations

| Closest Zone (ft / m)	Recommended Mounting Height (ft / m)		Maximum Recommended Detection Distance* (ft / m)
0 / 0	Contact ISS for recommendations based on site geometry.		
5 / 1.5			
10 / 3.1	15 – 26 / 4.6 – 7.9	-16 to -20	120 – 140 / 36.6 – 42.7
15 / 4.6	15 – 28 / 4.6 – 8.5	-12 to -17	150 – 160 / 45.7 – 48.8
20 / 6.1	20 – 31 / 6.1 – 9.4	-12 to -16	180 – 190 / 54.9 – 57.9
25 / 7.6	23 – 34 / 7.0 – 10.4	-11 to -15	210 – 220 / 64 – 67.1
30 / 9.1	26 – 35 / 7.9 – 10.7	-11 to -13	240 – 250 / 73.2 – 76.2
35 / 10.7	28 – 35 / 8.5 – 10.7	-10 to -12	250 / 76.2
40 / 12.2	31 – 35 / 9.4 – 10.7	-10 to -11	250 / 76.2
45 / 13.7	33 – 35 / 10.1 – 10.7	-10	250 / 76.2
50 / 15.2	35 / 10.7	-10	250 / 76.2
55 / 16.8	35 / 10.7	-9	250 / 76.2
60 / 18.3	35 / 10.7	-8	250 / 76.2

Mount the RTMS Echo

NOTE: Always follow local wiring codes and local standards that apply to the location in which the RTMS Echo is being installed.

1. Attach the bracket to the roadside pole (or another specified location) using stainless steel banding or bolts.
2. Secure the RTMS Echo to the mounting bracket using the washer, lock washer and nut. Make sure that the cable connector is on the bottom of the unit when it is mounted.
3. Adjust the RTMS Echo to be perpendicular to the travel lanes and level with the road. This is the roll and can be fine tuned in section 5.

Mounting pole
Stainless steel band
Mounting bracket

Echo Bracket
Mounting Bracket
Lock Washer
Nut
Flat Washer
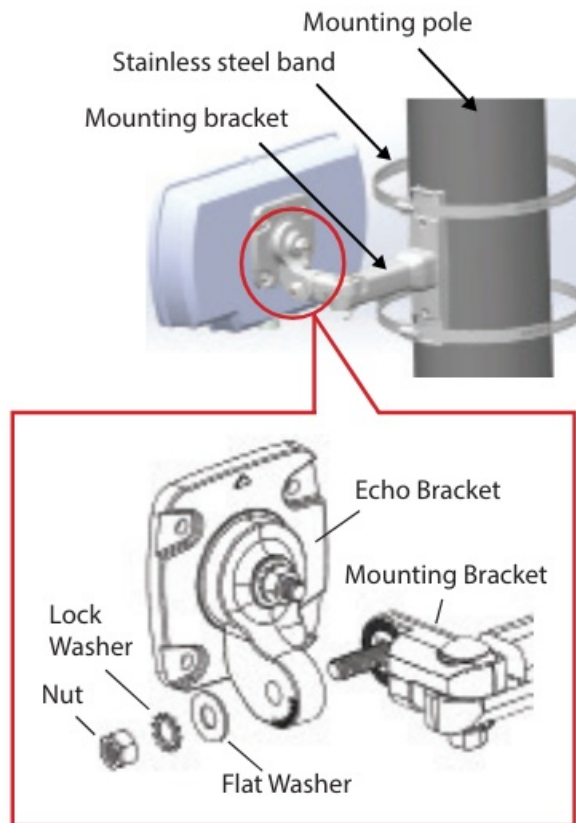
4. Tilt the RTMS Echo so that the sensor is aimed at the farthest monitored zone. The tilt recommended in section 2 can be fine tuned in section 5.

5. Hand tighten the nuts for the moment. Final tightening will be done after the aiming process (section 5).
   CAUTION: Make sure the mains are turned off prior to connecting the wires.

6. Undo the protective cap on the sensor's connector.

7. Insert the RJ-45 connector from the cable to the RJ-45 receptacle on the bottom of the sensor.

8. Tighten the cable's locking collar by turning it a quarter turn to the right.
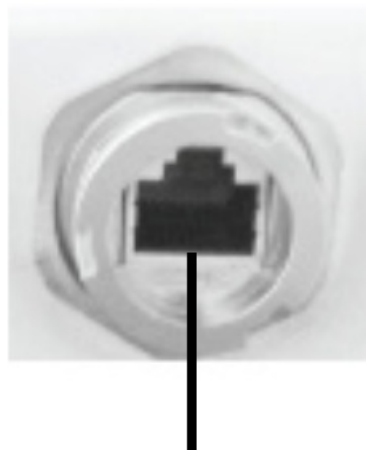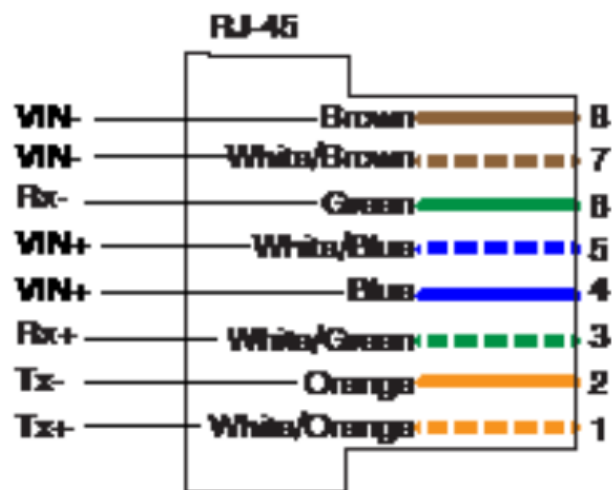

RJ-45 receptacle on the
bottom of the sensor

Cable RJ-45 connector

Cable locking
collar

9. Connect the other end of the cable to 12-24VDC power and communications in the breakout box according to the pinouts shown below. In addition, the silver (non-colored) wire must be connected to Earth ground.

RJ-45

VIN-	Brown	8
VIN-	White/Brown	7
Rx-	Green	6
VIN+	White/Blue	5
VIN+	Blue	4
Rx+	White/Green	3
Tx-	Orange	2
Tx+	White/Orange	1

NOTE: Surge suppression is recommended and filtering may be required (see the help system for details).

Connect to the Echo Web App

NOTE: If connecting through Wi-Fi, the wireless network for Echo is "echo-xxxx" (xxxx is the device ID) and the password is "echo123456".

1. Start a web browser on the device (i.e., computer, tablet, phone) used to configure the Echo sensor.
2. In the URL field enter:
    - For Wi-Fi connections: 10.99.50.1
    - For Ethernet connections: 192.168.0.10
3. Enter the login credentials. Defaults are: admin/rtmsecho

Aim the Sensor

1. Select the Aim tab.
2. Rotate the sensor left or right to align the sensor perpendicular to the road. This is the roll setting, which is normally 0; however, it should be adjusted to the road angle if the road is not level.
3. Move the sensor forward and back to adjust the tilt according to the table in Section 2.
4. Swivel the sensor left or right to adjust the azimuth until it shows OK. After each azimuth adjustment, wait for about 20 vehicles to pass the sensor.
5. Once the roll and tilt are set, tighten the nuts securing the sensor.
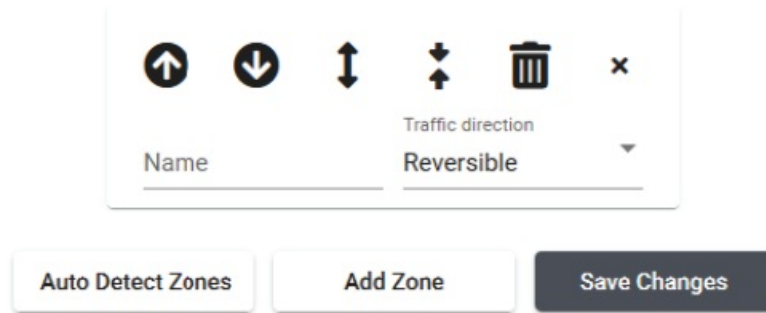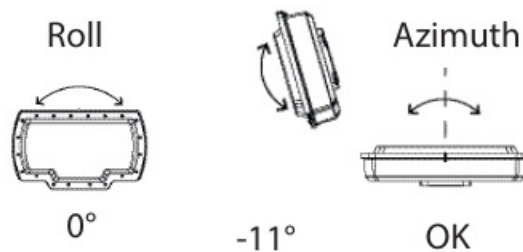

Detect Zones

1. Select the Zones tab.
2. Click Auto Detect Zones. There will be about one and a half minutes of prep time before detection begins. As objects are detected, the detection heat map appears in the radar beam image. Zones will appear when the system has determined that the detected objectsare vehicles instead of stationary objects (i.e., barriers, etc.). The full process including prep time, takes approximately 8 and a half minutes; however, if all zones in the detection area appear, you can click All zones found to stop the process.
3. Click on a zone to display the zone controls.
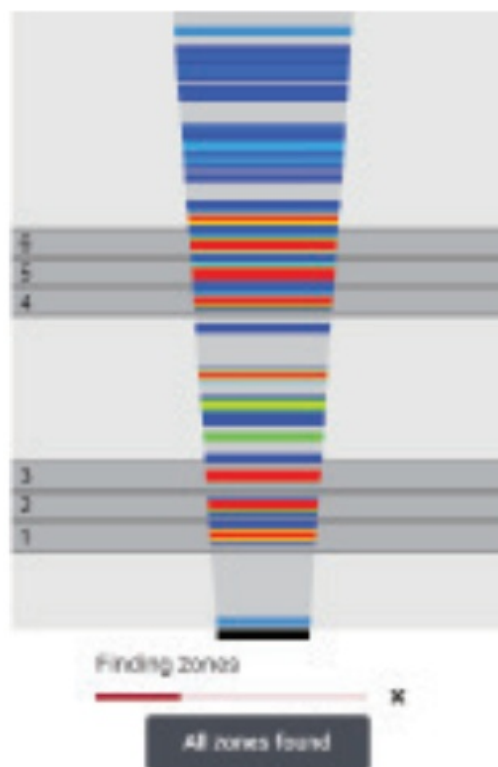
4. If desired, enter a name for the zone (25 characters maximum).

5. Verify that the selection under Traffic direction is correct for the direction of traffic in the zone.

6. Repeat steps 3-5 for the other zones.

7. When complete, click Save changes.

Verify Vehicle Counts

1. Select the Calibrate tab.

2. Select the checkbox for each zone for which counts will be verified. If more than one zone is selected, there should be one person with a hand-held counter monitoring each zone.

3. Click Start and immediately begin counting vehicles as the cross the RTMS Echo beam. Keep track of the count for each zone. When at least 50 vehicles for each selected zone have been counted, click Stop and enter the count for each zone in the Manual count column.

Vehicle counts	Speed calibration	Length calibration			
Zone	Sensor Count	Manual Count	Diff	% Diff	
Zone 6	61	61	0	-	
Zone 5	62	61	1	2	
Zone 4	55	55	0	-	
Zone 3	61	61	0	-	
Zone 2	55	55	0	-	
Zone 1	62	62	0	-	

NOTE: If any of the percentages are over 5 percent (plus or minus) corrections should be made before continuing (see the Troubleshooting section in the User Guide or Online Help).

Configure Sensor Settings

1. Select the Settings tab.

2. In the Local area network section, click Change. Enter the IP address, Subnet mask and Gateway to be used for the sensor. Click Save changes.

3. In the Date and time section, click Change. To set date/time automatically: Check the Automatically set via GPS check box. To set date/time manually: In the Clock section, enter the date/time by typing it in, or click the calendar icon and select the date/time. Use the drop-down to select the time zone in which the sensor is installed. Confirm the system date/time is correct.Click Save changes.

4. Return to the main Settings page and make any additional changes necessary.

Documents / Resources
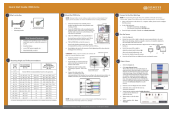
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FLEX Repeater Votre Source Pour, Repeater Votre Source Pour, Votre Source Pour, Source Pour, Pour

References

- **User Manual**