ER2035
Installation Instructions

ERxxx-xxxxxx-xxx Rev A

Legal Notice

Important Notice on Product Safety

This product may present safety risks due to laser, electricity, heat, and other sources of danger.

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1. Introduction

These are the installation instructions for the Eridan ER2035 radio.

It is intended for use by a certified professional installer in compliance with local safety regulations and building codes in the country of installation.

Specifications, pictures and/or sketches shown in this document may seem or look slightly different than the actual product due to continuous improvement and/or change in the design.

1.1 Important Safety

Read this document carefully and in full before attempting installation as important safety and regulatory information is enclosed.

Failure to do so may expose the user or service provider to legal and financial liability as well as injury or death.

Although tested and certified by relevant safety organizations, Eridan Communications, Inc. assumes no liability for injury, damage, or violation of regulations relating to the installation of the product.

Caution: any changes or modifications not expressly approved by Eridan Communications, Inc. could void the user's authority to operate the product.

1.2 Regulatory Compliance

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with the radiation exposure limits pursuant to part 15 of the FCC Rules. This device should be installed and operated with a minimum distance of 38 cm (15 inches) between the antenna and the individual when the device is radiating.

Note: Additional requirements for category B deployment.

(a) Category B CBSDs must be professionally installed.

(b) In the 3550-3650 MHz band, Category B CBSDs must be authorized consistent with information received from an ESC.

(c) Category B CBSDs are limited to outdoor operations.

(d) When registering with an SAS, Category B CBSDs must transmit all required information plus the following additional information: antenna gain, beamwidth, azimuth, down tilt angle, and antenna height above ground level.

1.3 Guidelines and Restrictions

- Before installation, read this guide in full and follow all safety and operations instructions. Failure to follow safety and/or operations instructions, including these guidelines and restrictions, voids all express and/or implied warranties of the product.
- Only trained qualified personnel should install, service, or replace the product. Trained qualified personnel is CPI-certified via WinnForum CPI Accreditation Standard.
- The product should not be modified in any way unless expressly approved in writing by Eridan or one of its authorized agents. Any modifications, misuse, or failure to comply with installation guidelines could compromise product safety and voids all express and/or implied warranties of safety and compliance of the product and under local and federal regulations.
- Install this product only in an approved location.
- Use caution against excess RF exposure when installing the product and ensure that the overall EIRP is within regulatory limits.
- Opening the product or breaking the tamper-evidence seal voids all express and/or implied warranties of the product.
- Sections of the product can exceed 70°C; use proper care during maintenance when handling the radio to avoid burns.
- Do not install the product in adverse environmental or weather conditions.
- Ensure proper grounding of the product to protect against power surges and static electricity; install the product in accordance with local electrical codes.
- When installation is completed, the product must comply with all the Safety Standards and regulatory requirements of the country in which it is installed.

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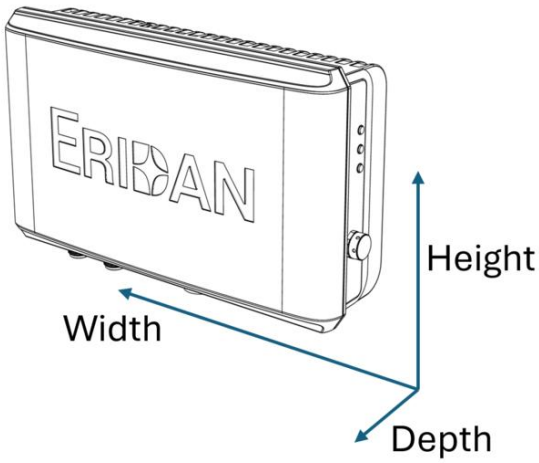
2. ER2035

2.1 ER2035 Description

Specification	Details
Standard	3GPP compliant ORAN Split 7.2a Radio Unit
Band	n48 (3550 – 3700 MHz)
Number of TX/RX	2T/2R
Instantaneous bandwidth (IBW)	150MHz
Occupied bandwidth (OBW)	20MHz or 40MHz
Modulation	256 QAM DL, 256 QAM UL
Output power	0.2W per TX
Dimensions	162 mm (H) x 259 mm (W) x 82 mm (D) 6.4 in (H) x 10.2 in (W) x 3.2 in (D)
Volume	3.4 liter
Weight	2.6kg / 5.7lbs (without mounting brackets)
Supply voltage / Connector type	DC -40V to -57V / 2 pole connector
Power consumption	40W
Antenna ports	2 x N-type female connector
Optical ports	1 x SFP+, 10G
Other interfaces	Ethernet RJ45
Operation temperature range	-40°C to +55°C
Cooling	Natural convection cooling
Installation options	Pole and wall mount options
Ingress	IP65

Table 1 Description of the ER2035

2.2 ER2035 Dimensions

Property	Value	Dimensions Orientation
Height (H)	162 mm (6.4 in)	 *Figure 1 Radio Dimensions Orientation*
Width (W)	259 mm (10.2 in)	
Depth (D)	82 mm (3.2 in)	
Weight	2.6kg / 5.7lbs (without mounting brackets)	
Volume	3.4 liter	

2.3 ER2035 Installation Clearances

The minimum clearances around the ER2035

Property	Value
Front space	600 mm (23.6 in. maintenance space)
Back space	76 mm (3.0 in. airflow space)
Top space	305 mm (12 in. airflow space)
Space on both sides	100 mm (3.9in)
Bottom space	305 mm (12 in. maintenance and airflow space)

2.4 ER2035 connector interfaces

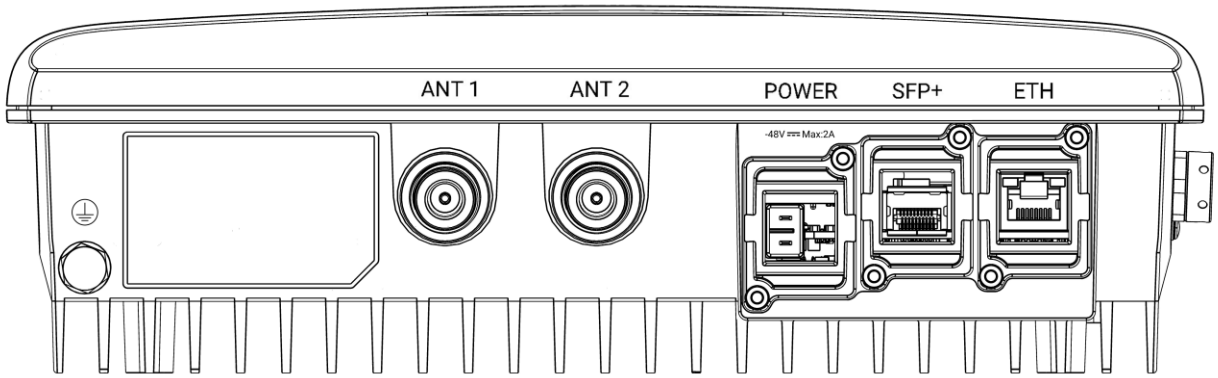


Figure 2 Bottom view - radio interfaces

2.5 ER2035 content of delivery

Qty.	Item	Notes
1	ER2035	
1	Ground lug with screw	
2	Mounting bracket w. clamp incl. Hex screws (50 – 200 mm diameter pole mount)	Optional
2	SFP transceivers	Optional
1	OCTIS Power connector	Optional
1	OCTIS fiber connector	Optional
1	OCTIS LAN connector	Optional

Table 2 Content of Delivery

3. Installation

3.1 RF Exposure safety

Use caution against excess RF exposure when working in and around external antennas and ensure that the overall EIRP is within regulatory limits.

3.2 Installation tools

	Description
1	Lifting bag/bucket
2	Digital level or Inclinometer
3	Measure tape
4	Permanent marker pen
5	Electronic label maker
6	Terminal lug crimper w/die set up to 6AWG
7	Multimeter AC/DC w. Amp Clamp
8	Philips screwdriver
9	Flat Head screwdriver
10	Side cutters
11	Cable cutter
12	Torque screwdriver T15
13	Torque spanner M25 5 - 10 Nm
14	Torque spanner M30 5 - 10 Nm
15	Cleaning tools for optical cables
16	Cleaning tools for SFP connectors

17	Fiber optic video inspection scope/microscope for LC type connectors
18	Fiber optic visible light source
19	SM & MM LC type fiber patch cable/adaptor
20	Fiber optic power meter for LC type connector
21	Fiber optic power source for LC type connectors
22	Cell site/tower personal safety equipment
23	Hardhat
24	Safety glasses

Table 3 Installation tools

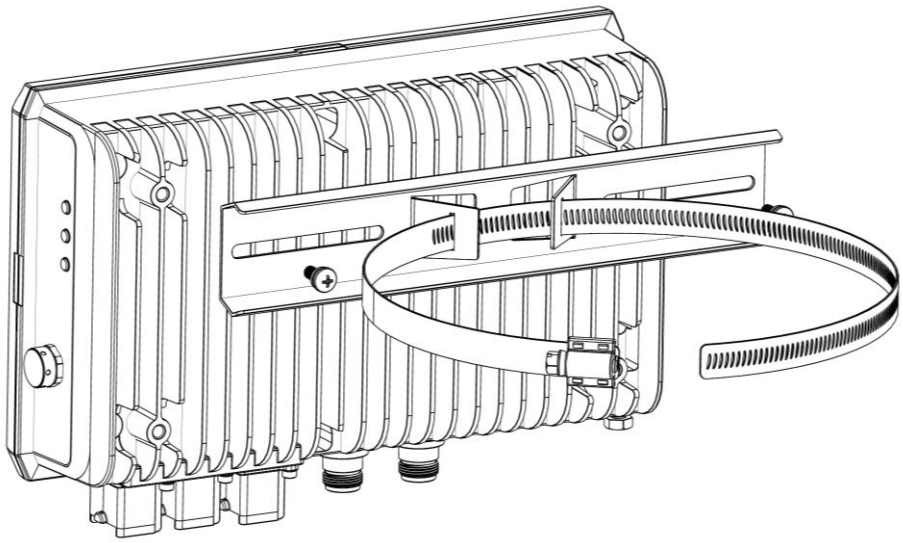
3.3 Cable Considerations

Usage	Description
Power	AWG14, UV Resistant, Shielded
Grounding	Minimum AWG 14, UV Resistant
Optical	Armored and UV shielded

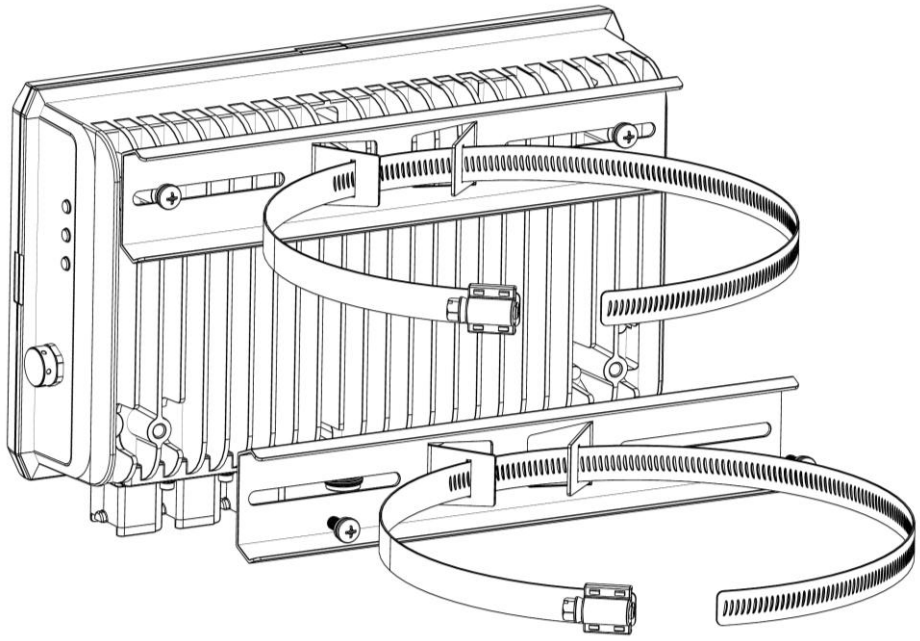
Do not cable the ETH port.

3.4 Pole/Wall installation

1. Affix the pole mounting bracket to the upper two screw holes on the radio



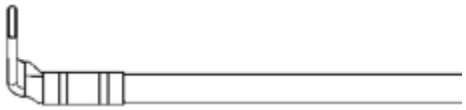
2. Affix the pole mounting bracket to the lower two screw holes on the radio



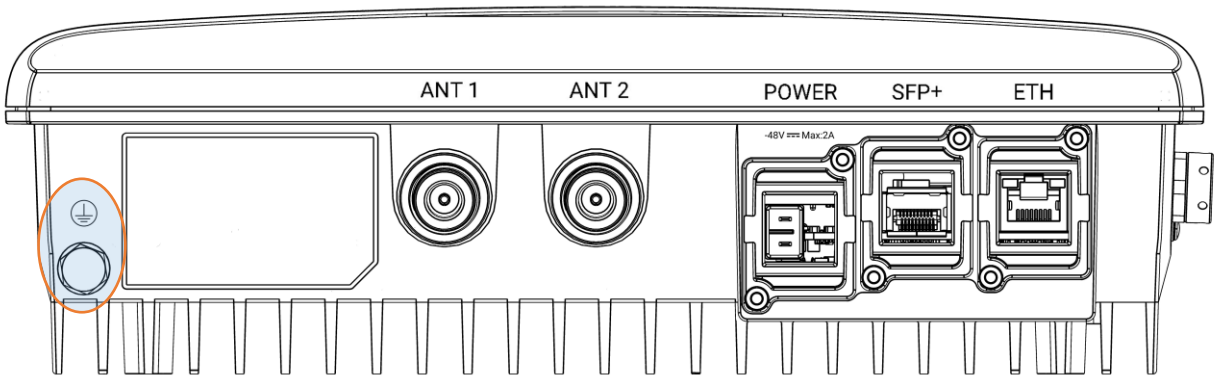
3. Affix the two clamps around the pole and tighten the adjustable screws until there is a secure hold

3.5 Grounding

1. Insert the grounding cable (AWG 6) into the provided ground lug and crimp

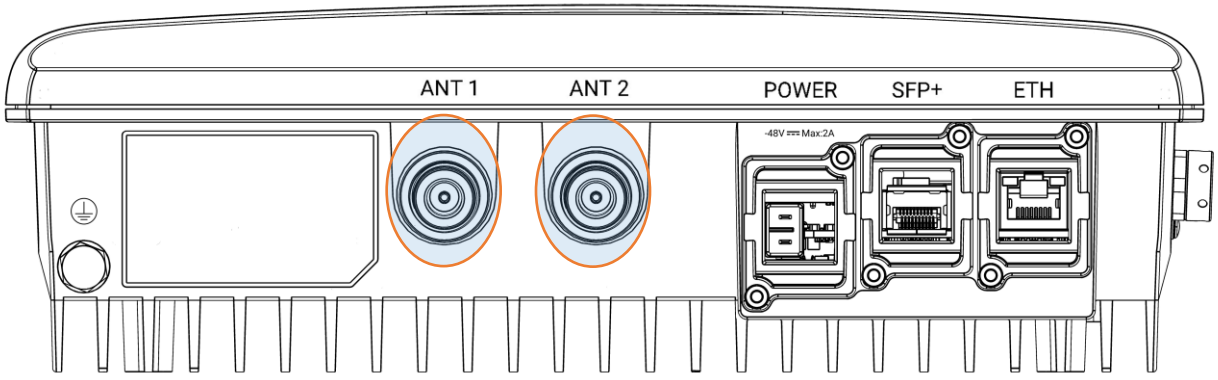


2. Screw the ground lug in place on the radio



3.6 RF Cabling

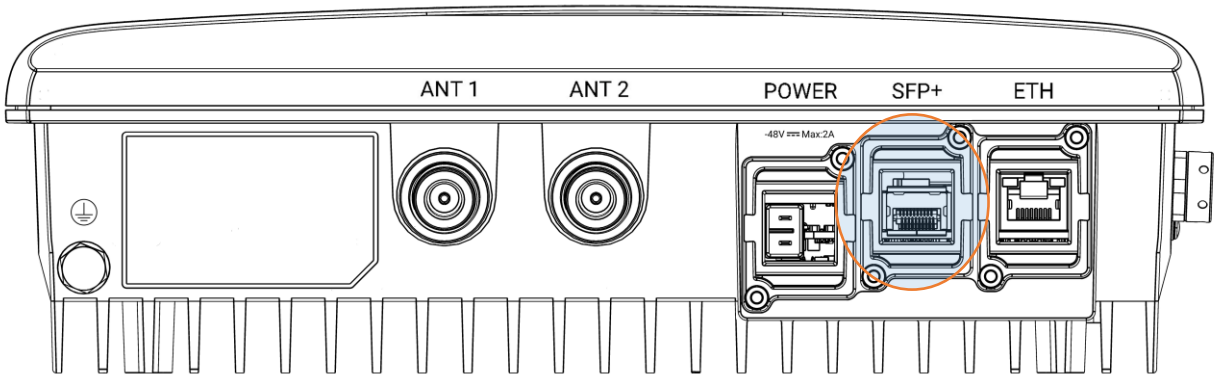
1. Remove protective caps from ANT 1 and ANT 2



2. Connect the antenna cables to ANT 1 and ANT 2
3. Tighten the antenna cables according to the cable supplier specifications

3.6 Optical cabling and handling

1. Remove dust cap from SFP+ port on the radio

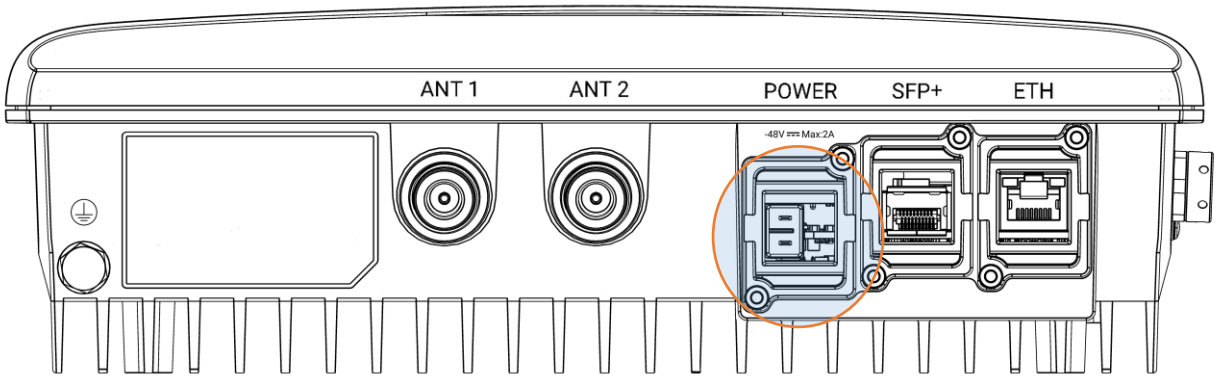


2. Assemble the OCTIS Fiber Connector using the SFP+ transceiver and optical cable (clean the ferrule of the optical cable before inserting into the SFP+ transceiver) following the instructions included with the OCTIS Fiber Connector.

3. Connect the assembled OCTIS Fiber Connector to the radio SFP+ port.

3.7 Power cabling

1. Remove dust cap from POWER port on the radio



2. Assemble the OCTIS Power Connector with the power cable following the instructions included with the OCTIS Fiber Connector.

3. Connect the OCTIS Power connector to the POWER port on the radio

3.8 SAS Portal Update

Upon installation complete, the Certified Professional Installer must update the SAS portal with the installation information.

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4. ER2035 LED indicators

Description	LED color indication				
	Off	Green, blinking at 1Hz	Green, solid	Green, blinking at 5Hz	Red, solid
No power supplied to the unit	PWR NET STAT				
Unit is booting up and initializing PTP sync. Sync state is “synchronizing”	STAT	NET	PWR		
Unit is fully booted and initializing PTP sync. Sync state is “synchronizing”	STAT	PWR NET			
Unit is ready for operation and synced with PTP source. Sync state is “synchronized”	STAT	PWR	NET		
Unit lost sync source, still synced. Sync state is “holdover”	STAT	PWR		NET	
Unit has no valid sync source. Sync state is “free”	STAT	PWR			NET

Table 4 Description of LED indicators

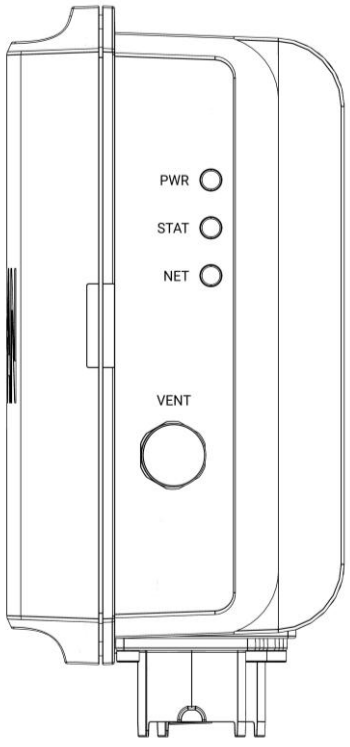

Figure 3 Side of radio with LEDs