

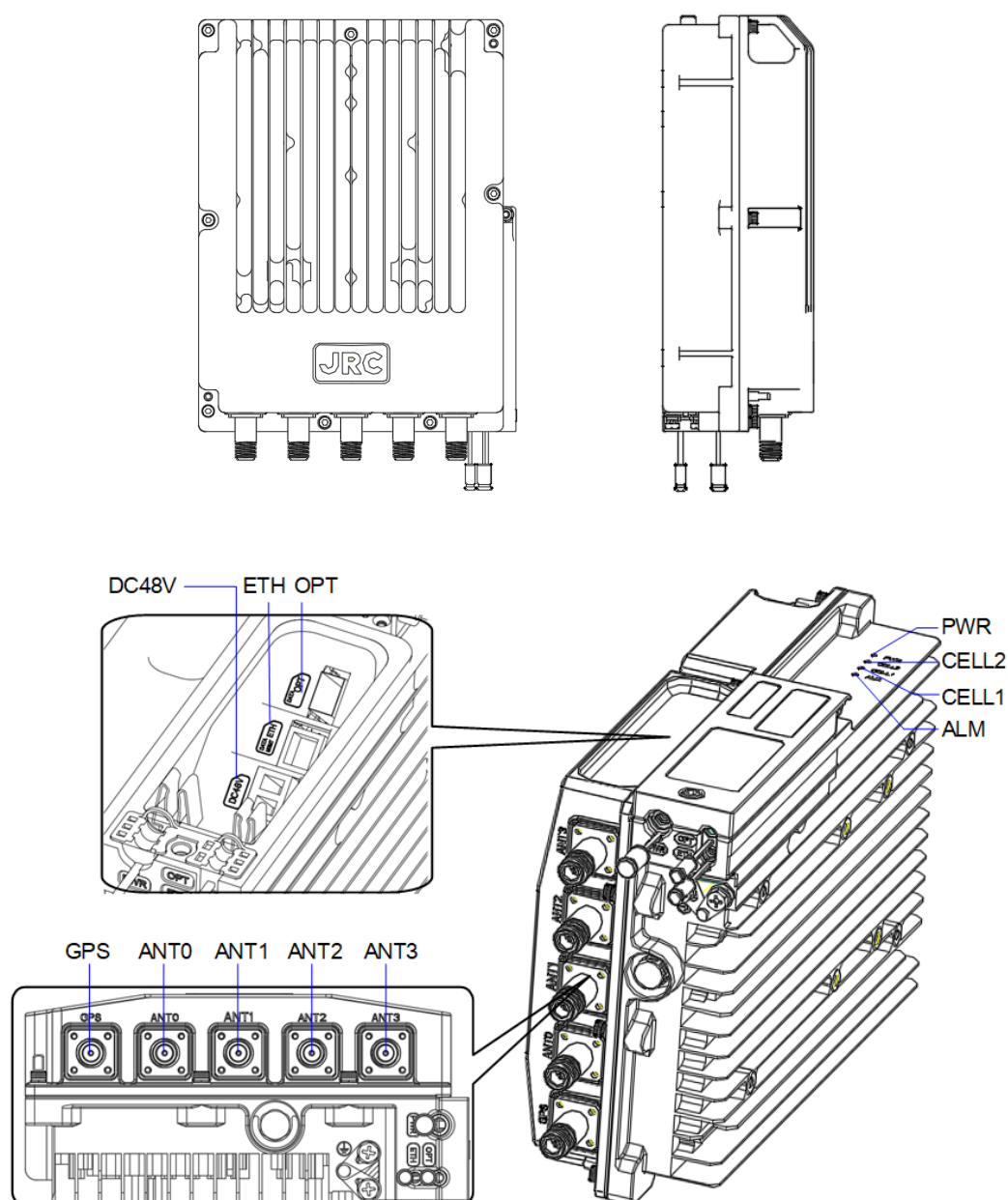


JRL-119

Outdoor Base Station

Quick Installation Guide

1.Appearance



Interface Description

DC48V	Power interface: -40VDC ~ -57 VDC, nominal -48VDC
OPT	Optical interface (SFP), connect to external transmission network, used for data backhaul.
ETH	RJ-45 interface (GE), used for debug or data backhaul.
GPS	External GPS antenna, N-female connector.
ANT0	External antenna 0, N-female connector.

ANT1	External antenna 1, N-female connector.
ANT2	External antenna 2, N-female connector.
ANT3	External antenna 3, N-female connector.

LED Indicators

PWR	Green	Steady On	Power On
		OFF	No Power Supply
CELL2	Green	Fast flash: 0.125s on,0.125s off	CELL 2 inactivated
		Slow flash: 1s on,1s off	CELL 2 activated
CELL1	Green	Fast flash: 0.125s on,0.125s off	CELL 1 inactivated
		Slow flash: 1s on,1s off	CELL 1 activated
ALM	Red	Steady On	Hardware alarm, e.g., VSWR alarm
		OFF	No alarm

2.Installation

2.1 Installation Material

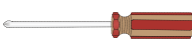
In addition to industry standard tools, you will need the materials described in Table 2-1 during the installation.

Table 2-1 Supporting Materials

Item	Description
AC cord	The cross section of power cable must be AWG13 or greater (such as AWG12). The cord is three cores cable and the length is less than 100 meters.
DC cord	A DC power cable is provided with the device. If the length is insufficient, the customer needs to prepare it. It is suggested that AWG13 is used. The cord is two cores cable and the length is less than 100 meters.
RF antenna cable	50 ohm feeder, 1/2 jumper
Optical fiber	Optical fiber (armor) It is suggested that the diameter of the cable is 7 ± 1 mm.
Ethernet cable	Outdoor CAT6, shorter than 100 meters (~109 yards) It is suggested that the diameter of the cable is 7 ± 1 mm.
RF antenna	Omni or directional dual polarized antenna When selecting an RF antenna, be sure to match the frequency

Item	Description
	range of the antenna with the eNB.
Ground cable	If the length of lead is more than 10 meters, a ground cable with 16mm ² cross section should be used. If the length of lead is less than 10 meters, a ground cable with 10mm ² cross section should be used.
Pole	The diameter of the pole is between 40mm to 100mm of hot-galvanized steel pipe. Channel steel and equal angle steel installation are also supported. The width of the channel steel is 50mm to 100mm; the length of side of the angle steel is 63mm to 80mm.
Distribution box	AC Air switch, socket, power grounding point, broadband access is all in the distribution box, which must be waterproofed.

2.2 Installation Tool

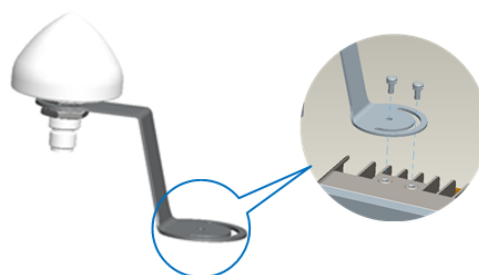
				
Leveling instrument	Marker pen	Knife	Vise	Wrench
				
Percussion drill	hammer	Cross screwdriver	Cable vice	Tape measure

NOTE: Other accessories have been packed in the packing box.

2.3 Install GPS Antenna

Read the following GPS antenna installation requirements before installing it on the base station.

- No major blocking from buildings in the vicinity. Make sure the space atop is at least 45 degrees unblocked by any buildings.
- Avoid installing the GPS antenna in the vicinity of any other transmitting and receiving devices, to avoid interference.
- The GPS antenna should be installed within 45 degrees to the lightning rod.



The GPS antenna system is assembled in manufacturing before packing. The only

installation step is to fix the GPS mounting bracket on the base station with the M4*14 screws.

NOTE: The base station may adopt different models of GPS antenna, so the GPS antenna may not be the same as above figure. But the installation steps that fix it on the base station is the same.

2.4 Weatherproofing

To protect the connection points from weather and climate, clean each connection point before installing cold shrink tubes, per the following figure.

1. Insert the cable into the cold shrink tube.
2. Tighten the connector.
3. Push the cold shrink tube to the top joint, then pull out the strip.
4. Ensure the cold shrink tube is tightly fitted with the connection.

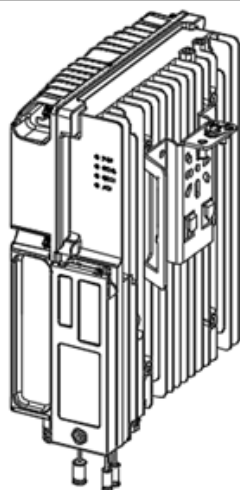


2.5 Pole Mounting

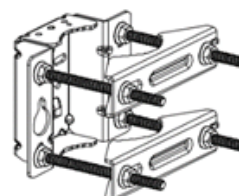
Check to ensure the diameter of the pole is in the range of 1.6 inches to 3.9 inches (40mm to 100mm). The position of the base station on the pole should be at least 47 inches (120cm) in height.

The mounting brackets include two components. The bracket mounting on the base station side has been pre-assembled on the back of the device. The other component is used for pole mounting.

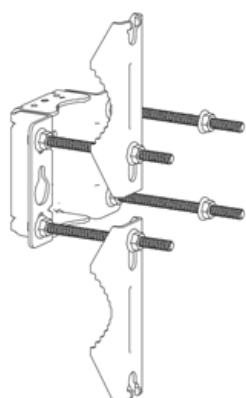
Mounting Bracket on the Back of the gNB



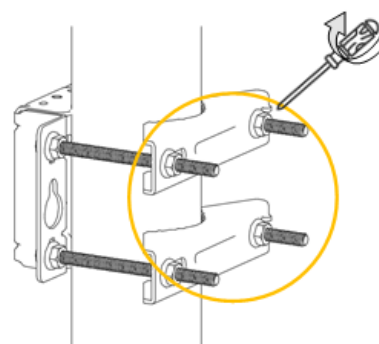
Pole Mounting Bracket



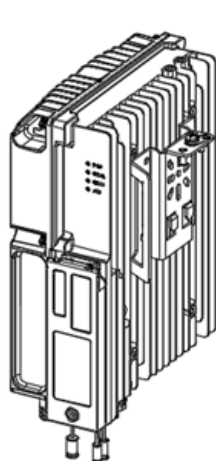
Following steps introduce how to fix the pre-assembled base station on a pole.



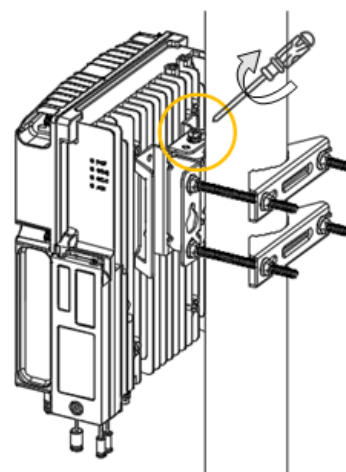
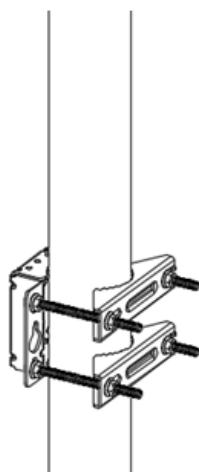
- 1 Unscrew 4 screws on the assembled Pole bracket. Slide the two omega clamps to the left, and then turn them up or down.



- 2 Put the pole mounting bracket against the pole, turn the clamps to the horizontal position, and then slide the pole clamp to right, and finally re-tighten the four screws.



- 3 Align the two pins on the eNB bracket with the pin holes on the pole mounting bracket and vertically put the eNB from top to bottom until the hook on the eNB is stuck firmly into the corresponding slot on the pole mounting bracket.

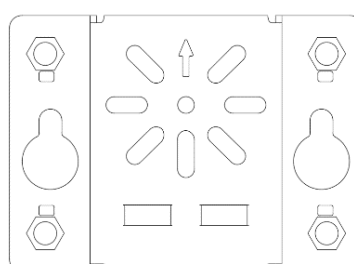


- 4 Tighten the screw on the top of the bracket with a cross screwdriver.

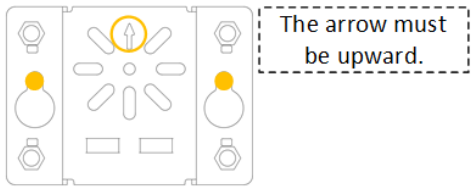
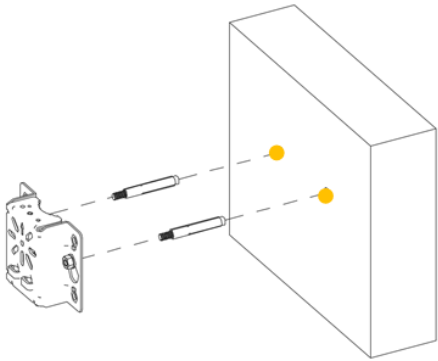
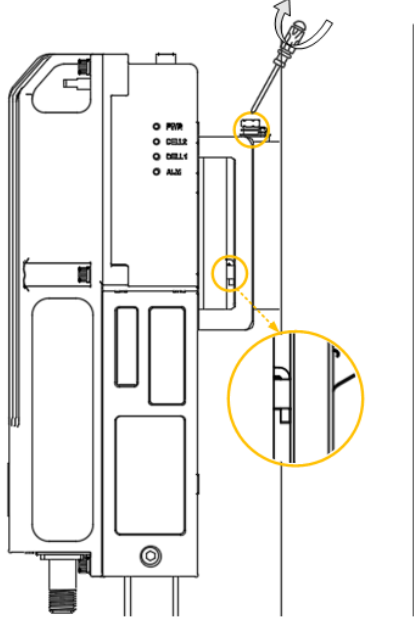
2.6 Wall Mounting

Ensure that the wall can bear at least four times the weight of the base station. If the wall mounting is adopted, the wall mounting bracket is shown in Figure 2-1.

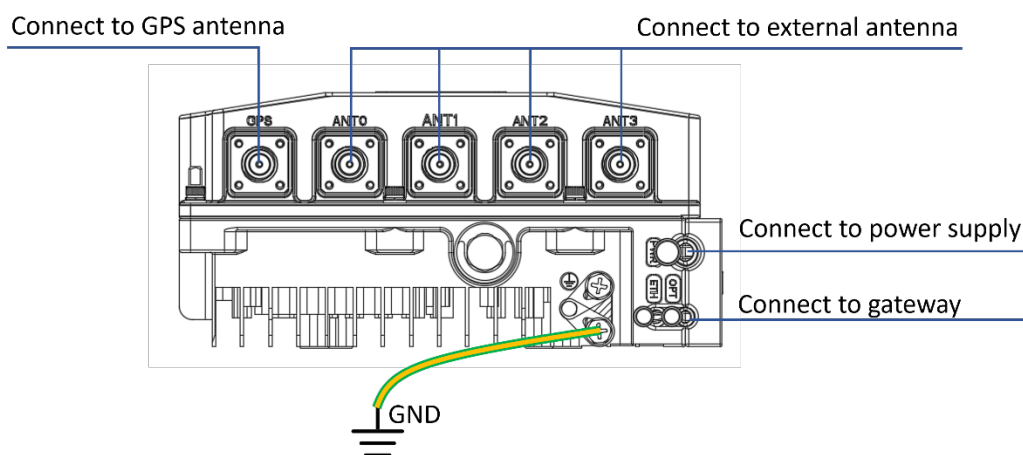
Figure 2-1 Wall Mounting Bracket



Following steps introduce how to fix the pre-assembled base station on a wall.

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- The arrow must be upward.
- 1 Put the wall mounting bracket against wall and mark the drilling locations with a marker pen. Drill two holes at the marked locations.
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- 2 Insert expansion bolts, and then hang the wall mounting bracket on the expansion bolts, fasten with flat washers, spring washers and nuts.
- 
- 3 Align the two pins on the eNB bracket with the pin holes on the wall mounting bracket and vertically put the eNB from top to bottom until the hook on the eNB is stuck firmly into the corresponding slot on the wall mounting bracket. Finally tighten the screw on the top of the bracket with a cross screwdriver.

2.7 Connect Cable



ATTENTION: If the eNB input is DC and the power supply is AC, the power cable must connect to a DC-AC power adaptor first.

2.8 Power ON

Power on the base station, then wait a few minutes while the base station boots up. Per the previous figures, check that the LED indicators are lighting as expected.

Appendix A Regulatory Compliance

FCC 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.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Warning

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 70cm between the radiator & your body.