

# Chapter 6

## Post-Installation Check

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Item	No.	Description
Equipment Installation	1	Install the equipment according to the site survey's design drawing and ensure that the equipment is within 45° protection of the lightning arrester.
	2	Ensure that the installation sequence of RRU parts is correct and install the main equipment securely.
	3	Ensure that the crimping clip closely presses the naked part of the power cable's shielding layer in the maintenance window.
Grounding and Waterproofing	4	Ensure that the RRU, outdoor power cable, and feeder's grounding point comply with relevant requirements.
	5	Check the antenna feeder's "1+3+3" waterproof protection and ensure that the maintenance window is securely installed to avoid water penetration.
	6	Ensure that the grounding card's cable is routed downwards, the angle between the grounding lead and the feeder is not larger than 15°. Remove the rust on the terminal of the grounding cable before it is connected.
Cable Routing	7	Ensure a 20 cm vertical cable routing for RRU connectors and antenna connectors, and that the protection caps of all unused RRU connectors are tightly screwed.
	8	Ensure that the remaining antenna feeders are wound into "S" or "8" shape and the remaining fibers are wound on the wire spool and stored in a proper place.
	9	Ensure that a water trap is made for the cable that is led into the equipment room and the lowest point of the water trap is 10 to 20 cm lower than the bottom edge of the inlet port at the feeder window.
	10	Ensure that outdoor cables are bundled by using black ties and a section of 2 - 3 threads (3 - 5 cm) is reserved.
	11	Ensure that all cables are connected securely and labels are hanged properly at both ends.
	12	Ensure that cables are routed properly and straightly, without any crossing, obvious ups, downs and skews, or fly wire.

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# Chapter 7

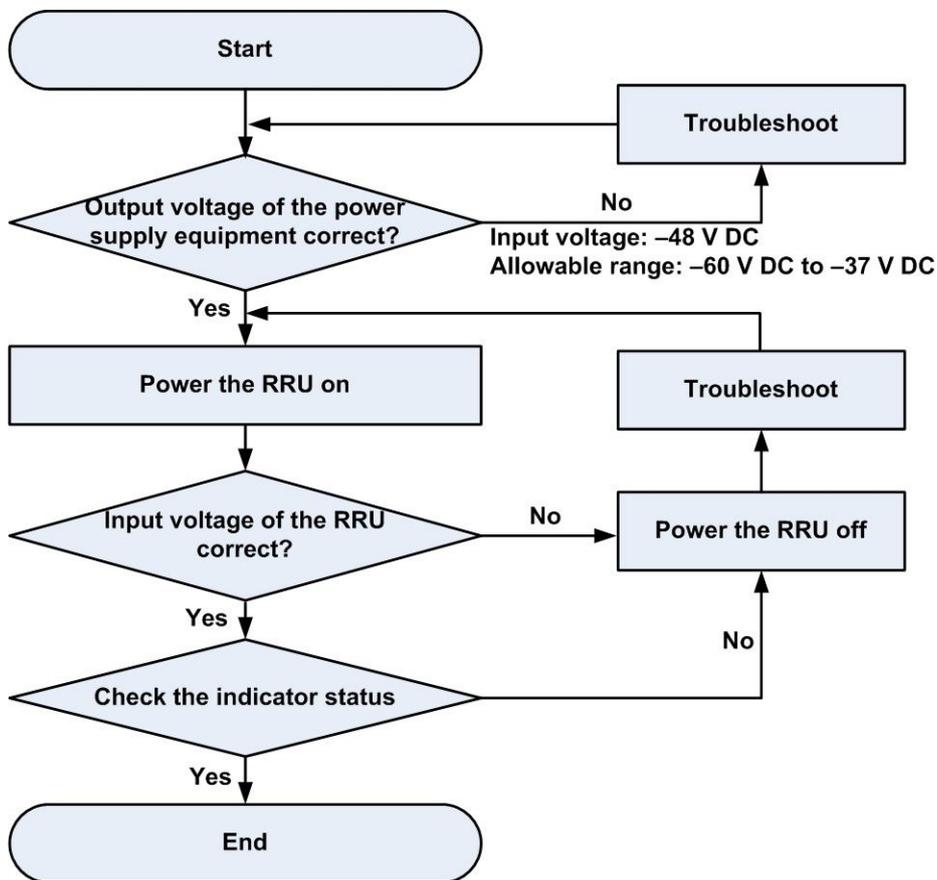
## Power-on Inspection

The ZXSDR R8854 is powered on after installation. If any errors are found, you must troubleshoot the ZXSDR R8854.

### Context

Figure 7-1 shows the power-on inspection flow of the ZXSDR R8854.

Figure 7-1 Power-on Inspection Flow



### Steps

1. Connect the power supply equipment to the ZXSDR R8854, or switch on the air circuit breaker of the lightning protection box.

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2. Power the device on at 30-second intervals in order of cells to avoid current surge. Check whether or not the fiber cables in a cell are connected properly through the indicators on the [BBU](#).

**– End of Steps –**

# Chapter 8

## Closure

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After installation, perform the following operations:

- Put tools in order.

Put the tools used during the installation back in right positions.

- Collect unexpected materials.

Collect unexpected materials and hand them over to the customer.

- Remove waste materials.

Remove waste materials and clean the environment.

- Complete the installation report.

Complete the installation report and submit the installation report to the person in charge.

If the site is operating properly, notify the operation and maintenance engineers that the installation is completed.

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# Chapter 9

## Installing the DC Junction Box

This procedure describes how to install the DC junction box (ODCPD1).

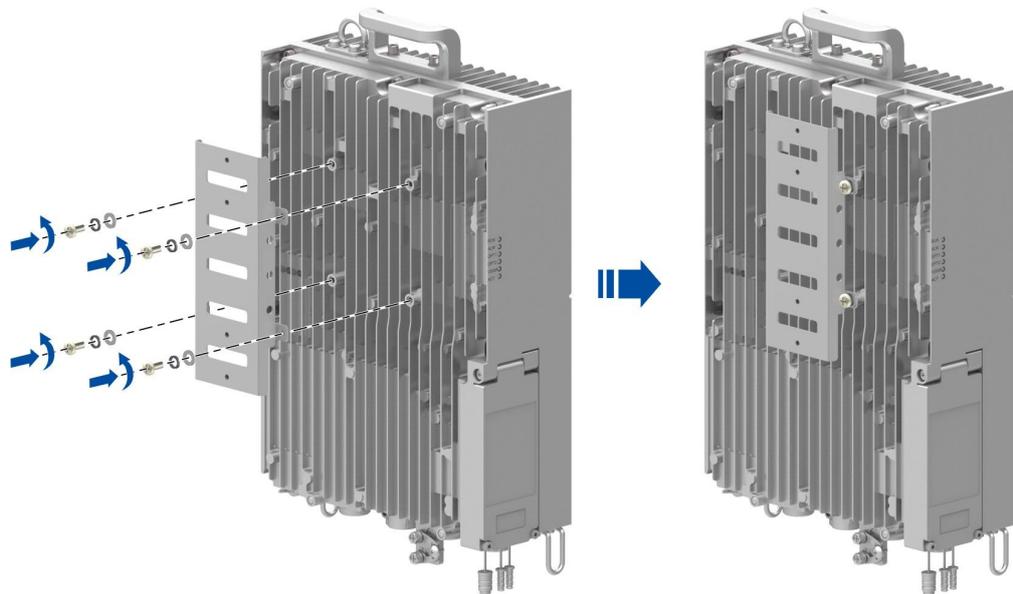
The ZXSDR R8854 DC power connector cannot be connected to the power cable with the sectional area of 10 mm<sup>2</sup> or 16 mm<sup>2</sup>. If the power cable with the sectional area of 10 mm<sup>2</sup> or 16 mm<sup>2</sup> must be used because the distance between the ZXSDR R8854 and an external power supply is too long, a DC junction box (ODCPD1) is needed to connect the power cable to that with the section area of 4 mm<sup>2</sup> or 6 mm<sup>2</sup>.

### Steps

#### Installing the ODCPD1

1. Fix the mounting bracket of the ODCPD1 to the ZXSDR R8854 with four screws, see Figure 9-1.

Figure 9-1 Fixing the Mounting Bracket of the ODCPD1

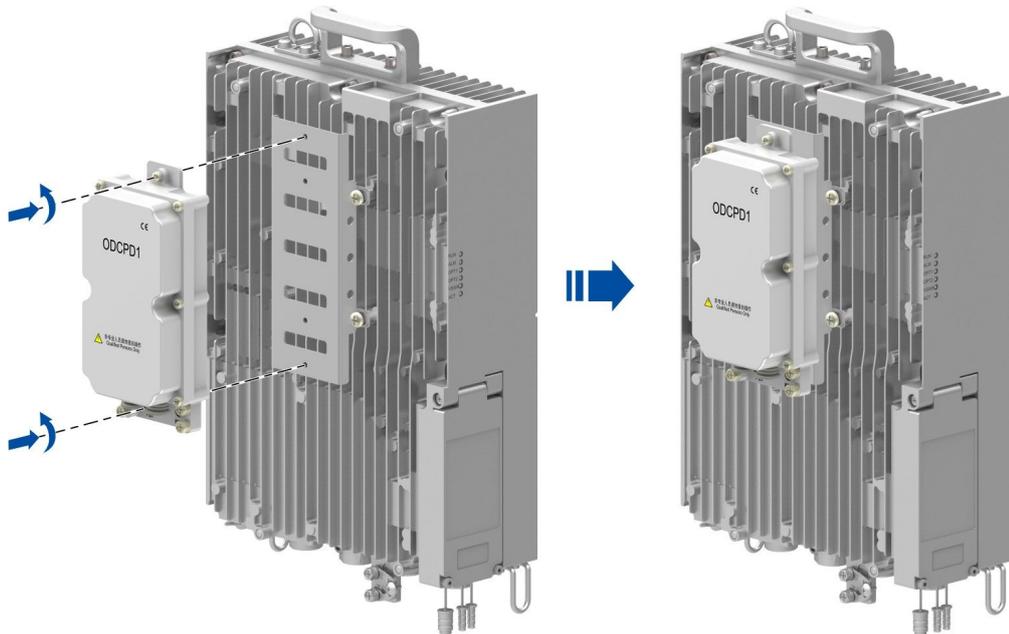


**Caution!**

The ODCPD1 can be installed by the back or the side. The installation position of it should ensure that it can be opened at a 90° angle at least for easy maintenance.

2. Fix the ODCPD1 to the mounting bracket with two screws included with the ODCPD1, see [Figure 9-2](#).

**Figure 9-2 Fixing the ODCPD1 Junction Box**

**Installing the Power Cable**

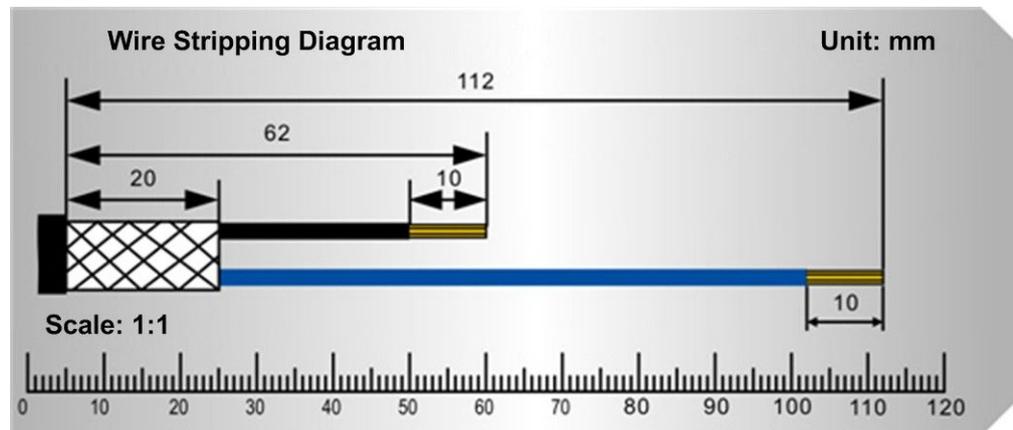
3. Open the cover plate of the ODCPD1, see [Figure 9-3](#).

**Figure 9-3 Opening the Cover Plate of the ODCPD1**



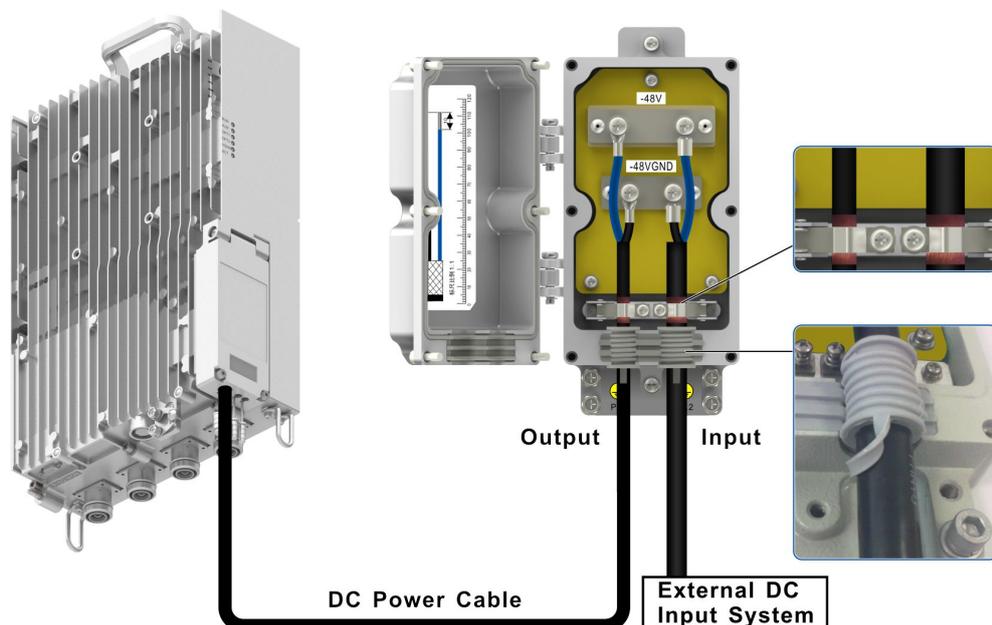
4. Make the ends of the power cable according to the diagram on the inner side of the cover plate, see [Figure 9-4](#). Crimp the OT terminals of the external DC power input cable and the DC power cable connector of the RRU. The part between the shielded layer and the OT terminal must be wrapped with insulation tape.

**Figure 9-4 Making a DC Power Cable Connector**



5. Pass the DC power cable through the waterproof plug of the ODCPD1 and fix it to the correct terminal, see [Figure 9-5](#).

**Figure 9-5 Securing the DC Power Cable**



6. Close the cover plate of the ODCPD1 and evenly tighten the six waterproof screws on the cover plate, see [Figure 9-6](#).

**Figure 9-6 Closing the Cover Plate of the ODCPD1****Caution!**

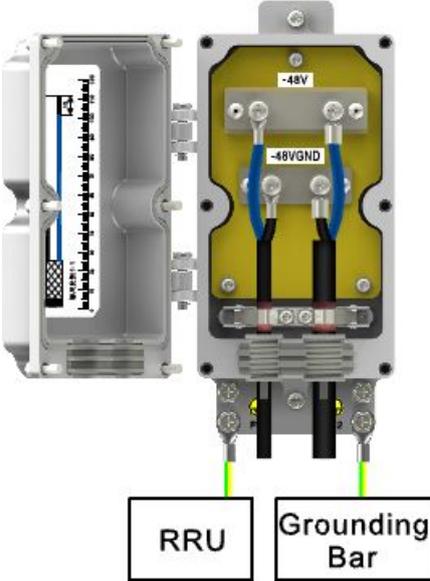
The screws must be fastened to prevent water intrusion.

7. Connect the other end of the DC power cable to the RRU and the external power supply equipment respectively.
8. Bundle and label the cable.

**Installing the Protective Grounding Cable**

9. Install the grounding cable from the RRU to the ODCPD1, and the grounding cable from the ODCPD1 to the grounding bar, see [Figure 9-7](#).

**Figure 9-7 Connecting the Protective Grounding Cable to the Grounding Busbar (ODCPD1)**



- End of Steps -

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# Chapter 10

## Waterproofing Outdoor Connectors

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Waterproofing outdoor connectors is a "1+3+3" process, that is, wrapping one layer of PVC insulating tape, three layers of waterproof insulating tape, and three layers of PVC insulating tape around a connector.

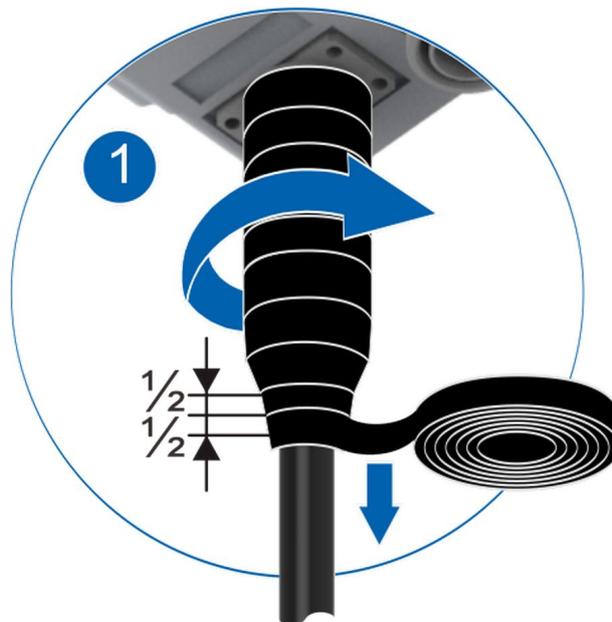
The PVC insulating tape is used to prevent connectors from damage, ageing, and water ingress.

### Steps

1. Clean the cable connector and ensure that no dirt or oil stain exists on the connector.
2. Wrap a layer of electric insulation tape.

After a cable connector is connected, wrap the connector with the insulation tape downwards in the direction that the connector is tightened, with each round covering half of the previous round, see [Figure 10-1](#). Ensure that the part about 10 mm to the connector end is wrapped with the insulation tape. When wrapping the connector, stretch the tape with proper force.

**Figure 10-1 Wrapping a Layer of Electric Insulation Tape**



3. Wrap three layers of waterproof tape.

Extend the waterproof tape until its width is 50% to 75% of the original width.

Wrap three layers of waterproof tape in the direction that the connector is tightened to prevent the connector from loosening. Wrap the connector upwards for the first layer, downwards for the second layer, and then upwards again for the third layer, with each round covering about one third of the previous round to prevent the ingress of rainwater, see [Figure 10-2](#). Do not cut off the tape before the connector is fully wrapped with three layers. Ensure that the part wrapped with the waterproof tape is more than 20 mm in length.

After wrapping the connector with the waterproof tape, grip and pinch the wrapped part repeatedly with both hands to make the waterproof tape securely stuck to the cable and the cable connector.

**Figure 10-2 Wrapping Waterproof/UV Resistance Tape**



**Caution!**

The outermost layer of tape shall be applied from the bottom up to avoid water penetration.

4. Wrap three layers of UV resistance tape.

Wrap the connector with three layers of UV resistance tape in the same direction of wrapping waterproof tape, see [Figure 10-2](#). Pay attention to the following when wrapping a cable:

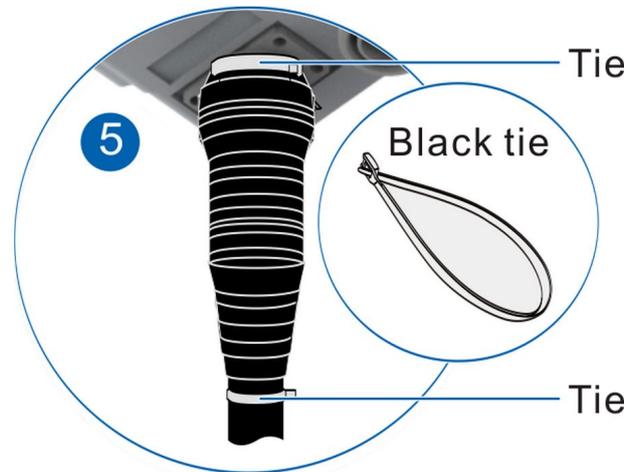
- The UV resistance tape should be stretched and wrapped with proper force to prevent it from being stretched too much.
- The upper-layer tape covers 1/2 the bottom-layer tape in length.
- The wrapping length of the UV resistance tape must be 10 mm longer than that of the waterproof tape. Wrap three layers.

After wrap three layers, grip and pinch both the UV resistance tape and waterproof tape to ensure that they are securely adhered.

5. Secure the tape's two ends.

After applying the tape, use black ultraviolet-proof ties to securely bundle the tape's two ends, as shown in [Figure 10-3](#). Use the diagonal pliers to cut off the excessive ties and reserve a section of 3 mm at the mouth. This avoids tape expansion under high temperature.

**Figure 10-3 Fixing Both Ends**



– End of Steps –

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# Chapter 11

## Installing a Gantry

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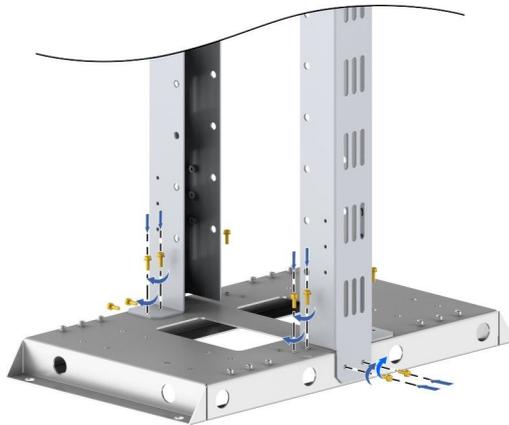
This procedure describes how to install a gantry.

### Steps

#### Assembling a Gantry

1. Fix two posts to two sides of the base frame with 12 M5 × 16 screws, see [Figure 11-1](#).

**Figure 11-1 Assembling the Post and Base Frame**



2. Fix the top beam to the posts with four M5 × 16 screws, see [Figure 11-2](#).

**Figure 11-2 Tightening the Post and Top Beam**



3. Install the two supporting plates with six M5 × 16 screws respectively, see [Figure 11-3](#).

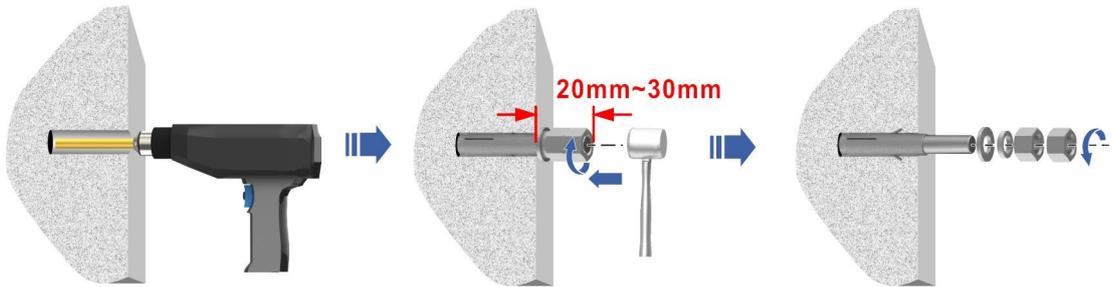
**Figure 11-3 Assembling the Supporting Plate**



**Drilling Holes and Installing Expansion Bolts**

4. Mark the hole positions with a drilling template and marker pen.
5. Drill holes at the marked positions with an electric percussion drill (12 mm in diameter) and remove the chippings with a vacuum cleaner, see [Figure 11-4](#).

**Figure 11-4 Drilling Holes and Installing Expansion Bolts**



**Fixing the Gantry**

6. Fix the gantry in one of the following ways:

If...	Then...
Install the gantry on a concrete baseplate	Fix the gantry with M10 × 100 expansion bolts, see <a href="#">Figure 11-5</a> .
Install the gantry in a shelter	Fix the gantry with M10 × 40 self-tapping screws, see <a href="#">Figure 11-6</a> .

Figure 11-5 Fixing the Gantry to a Concrete Baseplate

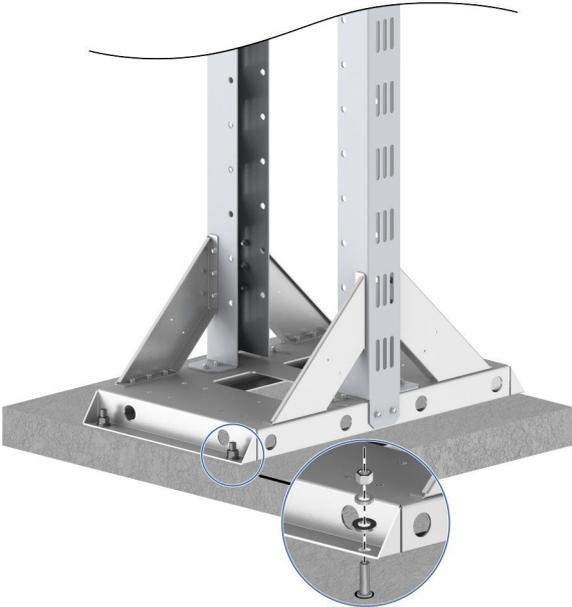
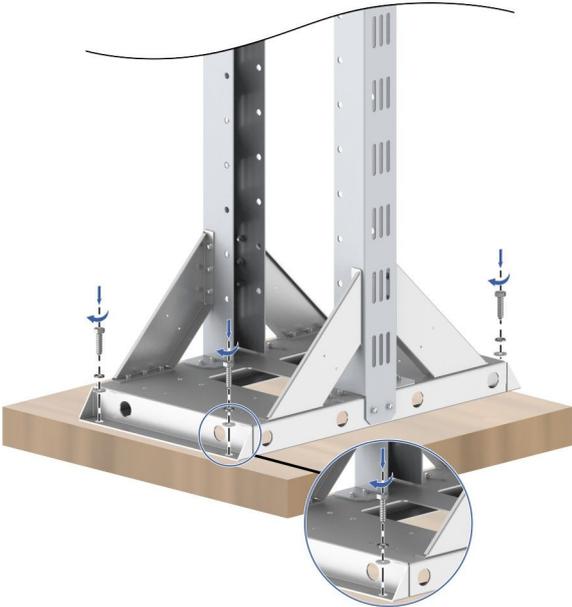


Figure 11-6 Fixing the Gantry to a Shelter



- End of Steps -

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# Chapter 12

## Labeling Specifications

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Labels include indoor and outdoor labels.

- Outdoor labels are hangtags that are delivered with the device.
- Indoor labels are the self adhesive paper-printed labels that may need to be produced at site if necessary.

Labels must meet the following requirements:

- The special paster of ZTE Corporation must be used for paper labels.
- Contents on rack row labels and column labels should meet the engineering design requirements.
- Boards should not be labeled and identifiers on a board should not be altered.
- All labels should be attached to face the same direction. The side that indicates where the cable is connected to should face upward or towards the operation and maintenance position for the convenience of being read.
- All cables such as the power cable, grounding cable, transmission cable, and feeder should be labeled at both ends.
- For optical fibers, network cables, and trunk cables, an indoor label should be pasted 20 mm away from the connector at both ends each.
- Outdoor labels should be secured with cable ties at the same height and direction.

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# Glossary

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**AISG**

- Antenna Interface Standards Group

**BBU**

- Base Band Unit

**DC**

- Direct Current

**MON**

- Monitor

**PVC**

- Polyvinyl Chloride

**RRU**

- Remote Radio Unit