23dBi antenna professional installation instructions

1 Technical Parameters

23dbi antenna mainly apply to outdoor application scenarios, connect to outdoor AP 5GHz RF port by using a MCX type connector.

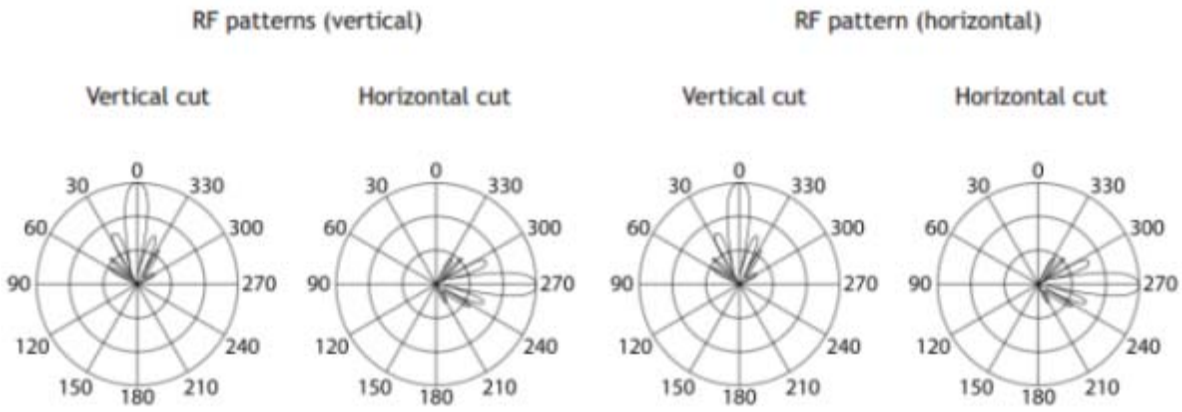
Fig.1-1 23dbi antenna appearing diagram

Chart 1-1 Technical Parameters

Electrical Specifications

Frequency range	5.150 - 5.915 GHz
Gain	23 dBi
Polarization	Dual linear
Cross-pol Isolation	28 dB
Max VSWR	1.8:1
H-pol Beamwidth	8 deg
V-pol Beamwidth	8 deg
Elevation Beamwidth	8 deg
Impedance	50 ohms
Connector type	MCX

Below is the far-field pattern in horizontal direction and in vertical direction.



2 Safety Precautions

 Warning!

Antenna installation is dangerous to some extent, please read over the below safety precautions before installation, so to avoid unnecessary injuries and deaths.

Please set the antenna location far away from electricity such as power supply wire, street lamp or power supply box. Installer must pay attention not to touch the power supply wire, otherwise it may cause severe casualty.

To choose a safe location where get far away from the power line or other cable. This is to avoid electric shock and danger caused by cable winding.

To avoid install the antenna by just one installer. The install location and steps need to be confirmed by several installer before installation.

When need to erect poles, pay attention to cooperation between installers.

Must pay attention to: Do not use metal ladder; Not to install in wet or wind weather, in the mean time, isolative cloths, shoes and glove must be wear-on by installer.

If the antenna, RF cable or other spare parts falling from the high place, please elude as quickly as you can, so as to avoid unnecessary injury and deaths.

When the antenna need to power up, please let the professional to do it, do not connect by yourself.

Any emergency such as electric shock must seek help at once.

3 Installation Precautions

23dbi antenna is outdoor fan-shape covered and suitable for using at fan-shaped overlapping region. So we suggest it should be used at top of the building or mountain. No restraining mass should be place before the location of 19dbi antenna.

4 Proper location to install 23dbi antenna.

23dbi antenna mainly used in outdoor such as top of building or top of the mountain. Generally speaking, the higher it be, the more area it will cover, so the more effective it will be.

5 Antenna Installation

23dbi antenna is packed with all kinds of spare parts, while other tools such as monkey wrench, cross screw driver and “-” type screw driver need to be prepared by yourself.

5.1 Installation Tools

1、monkey wrench

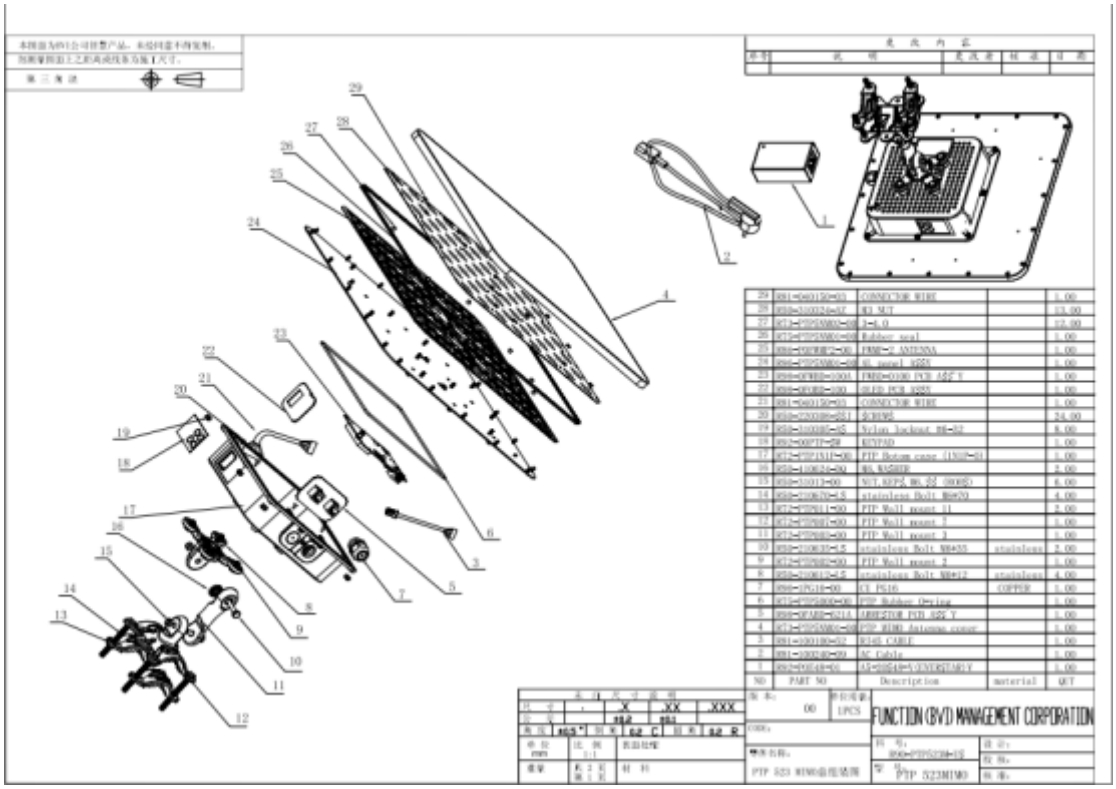
2、“+” type screw driver and “-” type screw driver

5.2 RF cable requirements

Generally we adopt the RF cable as short as possible. We suggest adopting high quality and low loss RF cable. The wastage of coaxial-cable will be magnified if to increase the frequency, the signal will also be decay in a large amount. So the length

of cable should be as shorter as it can be, so to avoid unnecessary wastage.

5.3 Antenna installing steps.



Mounting the LigoPTP 5-23 PRO

Mounting bracket of LigoPTP 5-23 PRO unit is designed to make installation on a wall or a pipe easy. The unit is attached and its position is fixed with the single bolt.

Mounting on a Pole

The PTP units are supplied with mounting hardware for pole with diameters in the range 10mm to 70mm installations. Follow the steps for LigoPTP 5-23 PRO installation on a pole:

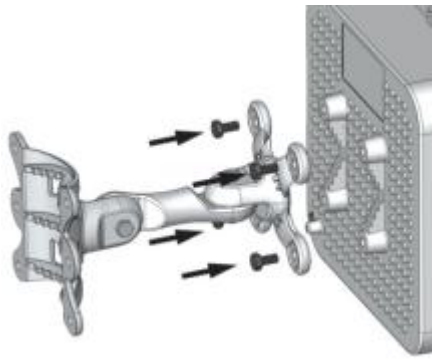
Step 1. Make sure that the unit is powered-off.

Step 2. Ground the unit. The unit must be properly grounded to protect

against lightning. The grounding wire must be attached to the grounding stud on the unit.

If the unit is attached to a metal pole which is earth-grounded, no further grounding is required.

Step 3. Connect the unit to the bracket together and tighten up with the screws:



It is recommended not to tighten the unit’s mounting bracket details until the alignment process of the antenna is complete.

Step 4. Attach the mounting bracket and the pole clamp with the bolts and nuts. The clamp’s orientation will differ according the pole’s diameter as displayed below:

Step 5. Power-up the unit.

It is recommended to use shielded Ethernet cable to reduce exposure of the electromagnetic noise.

Step 6. Run the **Antenna Alignment** tool on Web management interface or on OLED display and move the antenna in the horizontal and vertical planes until the maximum RSSI visible on the Antenna Alignment graph is achieved.

Avoid standing directly in front of an operating antenna while aligning.

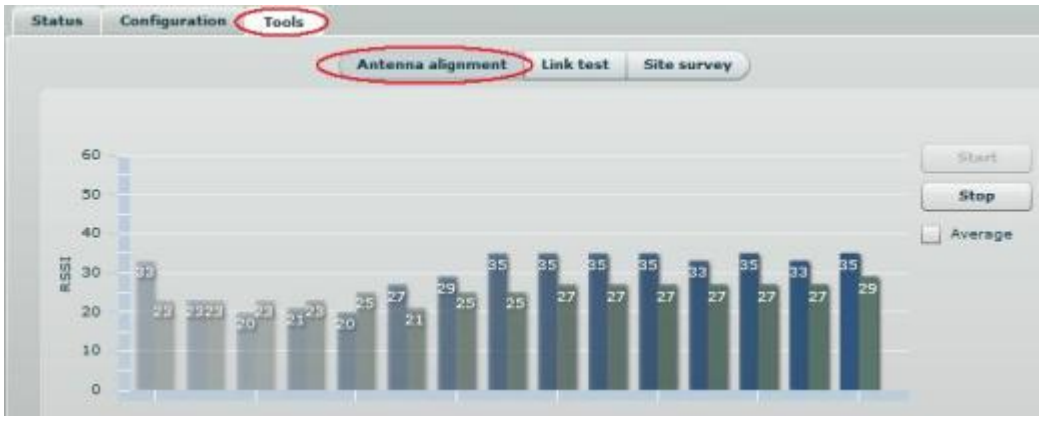


Figure 1 - Antenna Alignment Tool on Web

Figure 2 - Antenna Alignment Tool on OLED

Step 7. After the maximal RSSI is reached, tighten the unit's bracket in the optimum position.

Mounting on a Wall

The mounting bolts for unit installation on the wall are not included in the package.

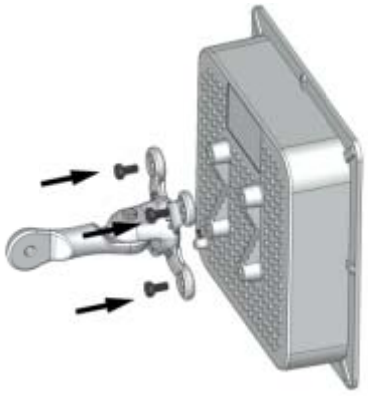
For mounting LigoPTP 5-23 PRO unit on the wall, first mount one half of the bracket to the wall and then connect the two halves of the bracket together and tighten the nut and bolt.

Step 1. Make sure that the unit is powered-off.

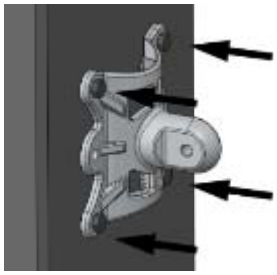
Step 2. Ground the LigoPTP 5-23 PRO unit. The unit must be properly grounded to protect against lightning. The grounding wire must be attached to the grounding stud on the unit.

Step 3. Dismantle mounting bracket into the two parts for easier attachment to the wall:

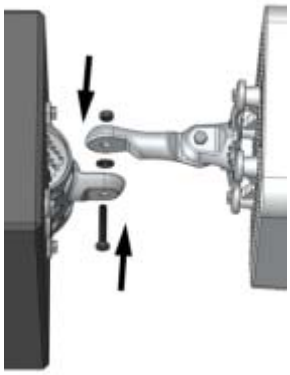
Step 4. Attach the following part of the mounting bracket to the unit with 4 screws as displayed below:

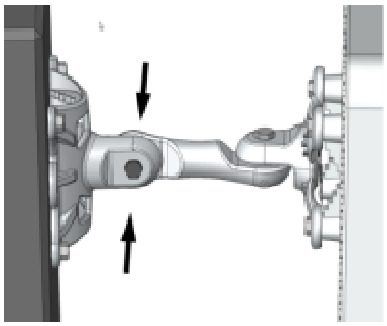


Step 5. Attach the second part of the mounting bracket to the wall using screws (not included) as displayed below:



Step 6. Connect the mounting bracket together as displayed below and tighten up:





It is recommended not to tighten the units to its mounting brackets until the alignment process of the antenna is complete.

Step 7. Power-up the LigoPTP 5-23 PRO unit.

It is recommended to use shielded Ethernet cable to reduce exposure of the electromagnetic noise.

Step 8. Run the **Antenna Alignment** tool on Web management interface (*Figure 1 - Antenna Alignment Tool on Web)* or on OLED screen (*Figure 2 - Antenna Alignment Tool on OLED*) and move the antenna in the horizontal and vertical planes until the maximum RSSI visible on the Antenna Alignment graph is achieved.

Avoid standing directly in front of an operating antenna while aligning.

Step 9. After the maximal RSSI is reached, tighten the unit's bracket in the optimum position.

6 Antenna Power-level Setting

This document provides mandatory radio power-level settings that must be configured to ensure that your device complies with regulatory requirements in your region.

6.1 Radio power-level setting

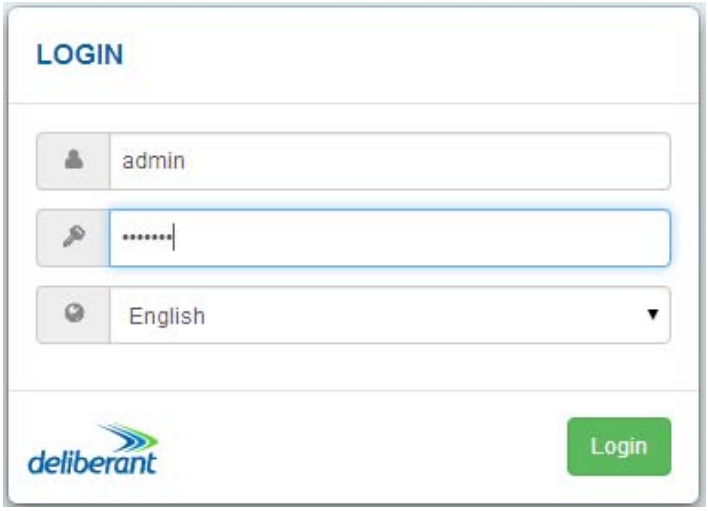
1.LOGIN

he default product address is 192.168.2.66.

The default administrator login settings are:

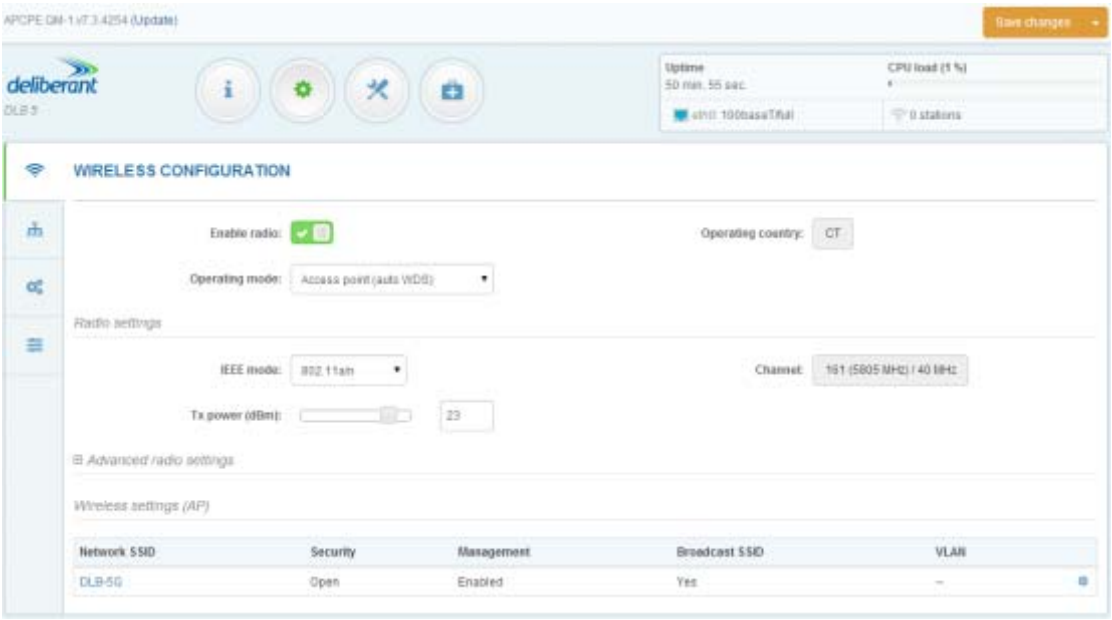
User: admin

Password: admin01



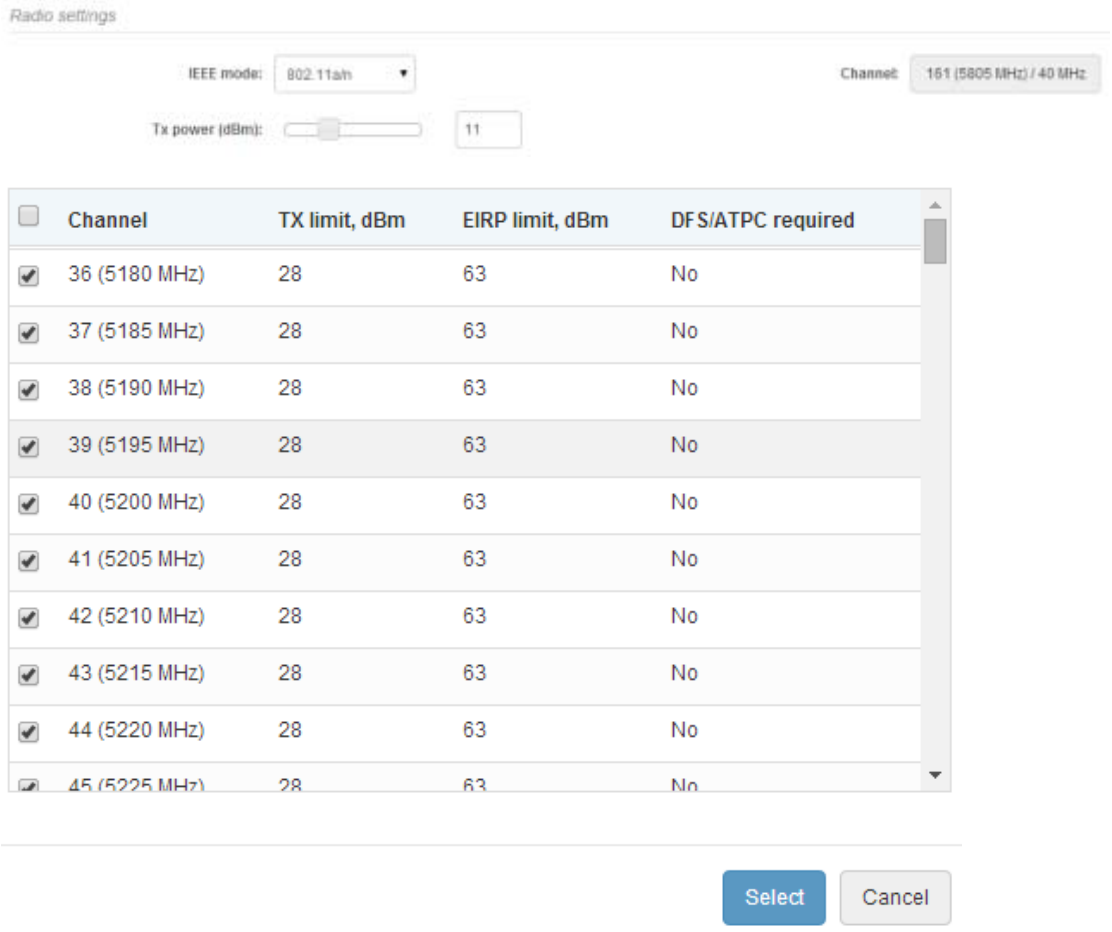
2 Radio Power

Tx Power（dBm）:23dBi



3 Different Frequency of the power setting

5150-5250MHZ:11dBi



5725-5850MHZ:22dBi

☑	147 (5735 MHz)	28	63	No
☑	148 (5740 MHz)	28	63	No
☑	149 (5745 MHz)	28	63	No
☑	150 (5750 MHz)	28	63	No
☑	151 (5755 MHz)	28	63	No
☑	152 (5760 MHz)	28	63	No
☑	153 (5765 MHz)	28	63	No
☑	154 (5770 MHz)	28	63	No
☑	155 (5775 MHz)	28	63	No
☑	156 (5780 MHz)	28	63	No
☑	157 (5785 MHz)	28	63	No

Select Cancel

4 Select save and apply

Click on the Save changes and apply.