19dBi antenna professional installation instructions

1 Technical Parameters

19dbi antenna mainly apply to outdoor application scenarios, connect to outdoor AP 5GHz RF port by using a MCX type connector.

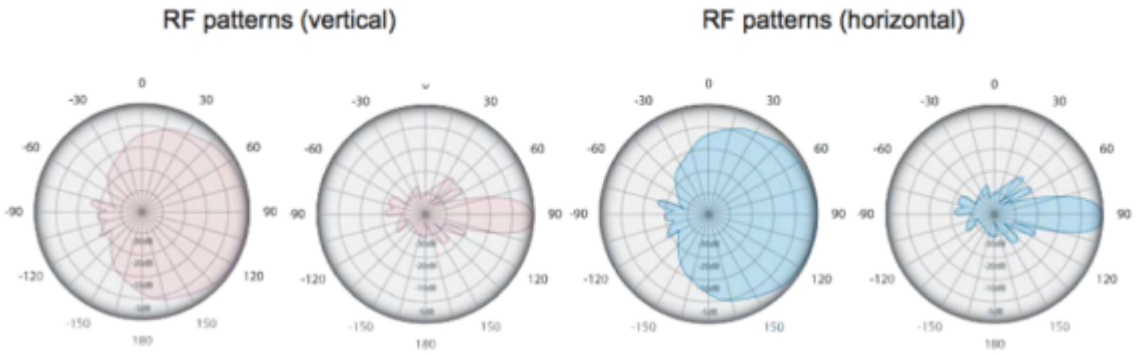
Fig.1-1 19dbi antenna appearing diagram

Chart 1-1 Technical Parameters

Electrical Specifications

Frequency range	5.150 - 5.915 GHz
Gain	19dBi
Polarization	Dual linear
Cross-pol Isolation	25 dBi
Max VSWR	1.7:1
H-pol Beamwidth	(6 dB) 90 deg
V-pol Beamwidth	(6 dB) 90 deg
Elevation Beamwidth	20 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

19dbi 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 19dbi antenna.

19dbi 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

19dbi 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

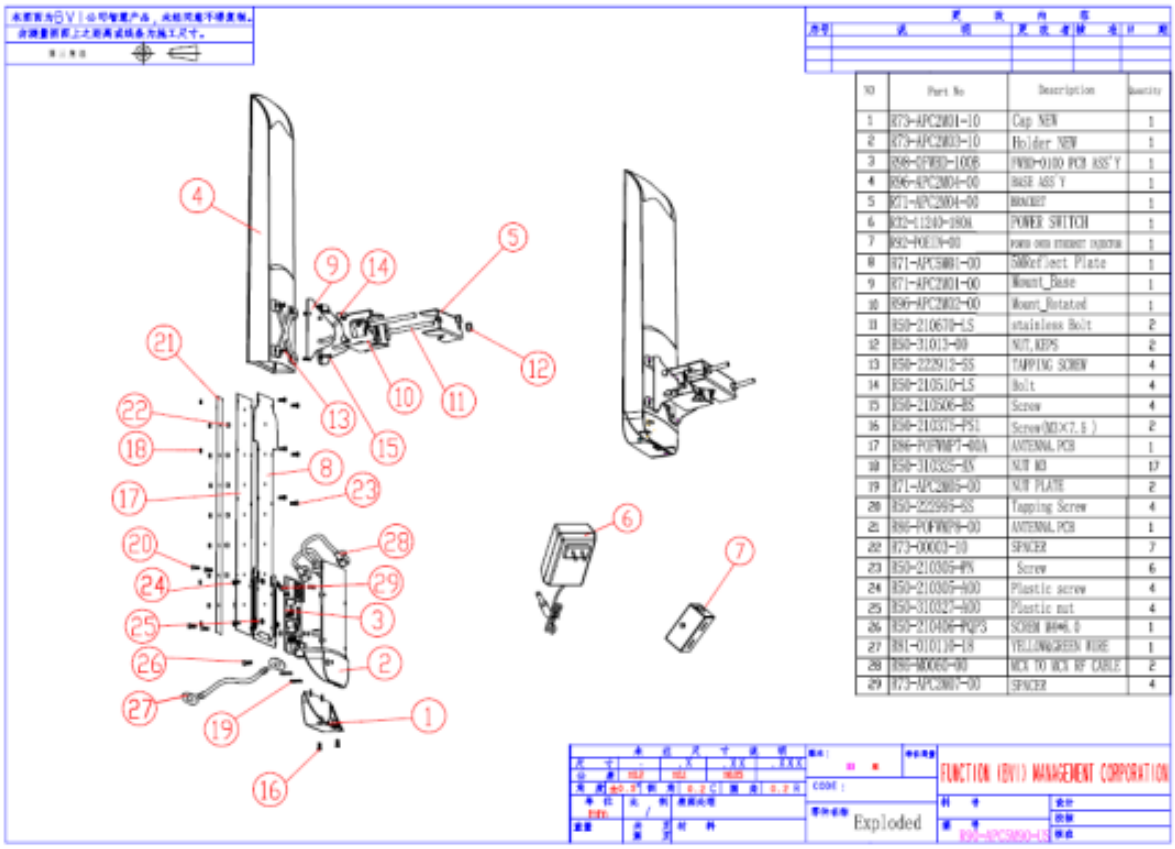
1、monkey wrench

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.

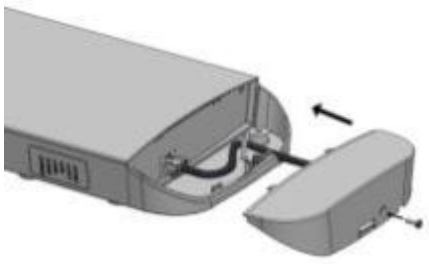


Assembling and Mounting the APC

The APC 5M-90 units are supplied with mounting hardware for pole with diameters in the range 30mm to 55mm installations. Follow the steps for APC assembling:

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

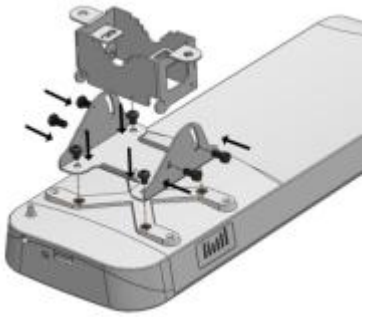
Step 2. Open the unit’s cover and insert the UTP cable into the unit’s ETH port as displayed in the picture below:



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

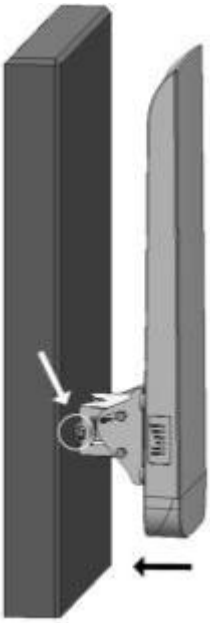
Step 3. Close the unit’s cover and fix it with the cover’s bolt:

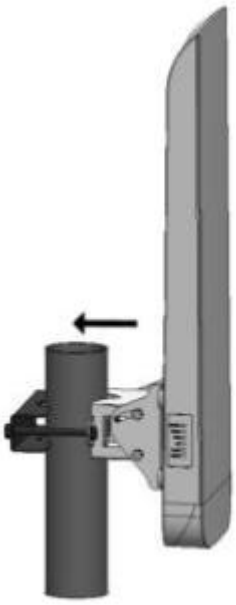
Step 4. Attach the mounting hardware to the device: first fix mounting hardware part 1 with four Hex bolts M4x5 (items C and L in the *Figure 1 - Package Contents*), then attach the mounting hardware part 2 and fix it with four Hex bolts M5x10 (items D and K in the).



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

Step 5. For wall mounting simply fix the unit’s mounting hardware on the wall with bolts (not included in the package).
For pole mounting attach mounting hardware part 3 (item E in the) and the unit on a pole and fix them with M6 bolts and nuts (items I and J in *the*):





Step 6. Ground the APC unit. The unit must be properly grounded to protect against lightning. The grounding wire must be attached to the grounding stud and tightened with the nut (item H in *the*):

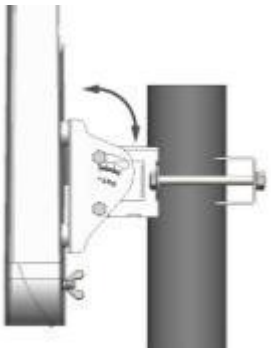
Step 7. Connect PoE and power cord (items F and G in *the)* together with UTP cables as displayed in the picture below:

IMPORTANT: Deliberant APC 5M-90 maximum input voltage is 24V.

Step 8. Power-up the unit. The green power LED must be on (refer at the respective section). Depending on link quality, up to four yellow LEDs will switch on, indicating that link between two units was established

successfully.

Step 9. After the link was established, align antenna for the maximum performance: loosen bolts on unit’s frame, run the **Antenna Alignment** tool in the Web management interface (or observe the RSSI LEDs) and move the unit in the vertical and horizontal panes until the maximum RSSI visible on the Antenna Alignment graph is achieved. After the maximum RSSI level is reached, tighten down frame’s bolts in the optimal position.



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

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

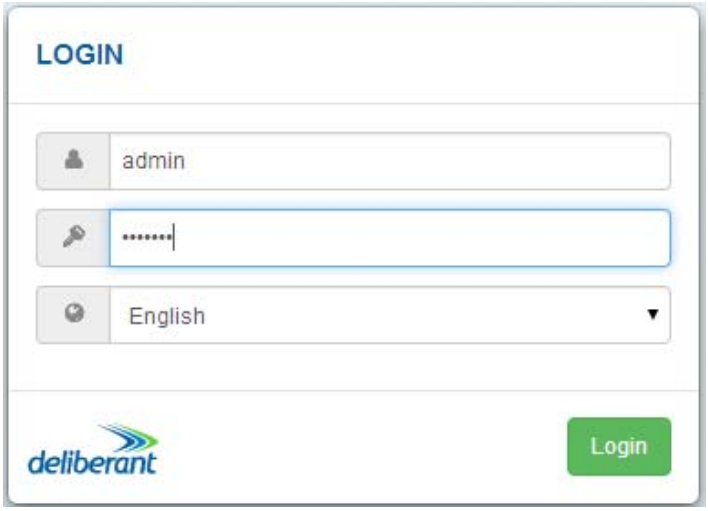
1.LOGIN

he default product address is 192.168.2.66.

The default administrator login settings are:

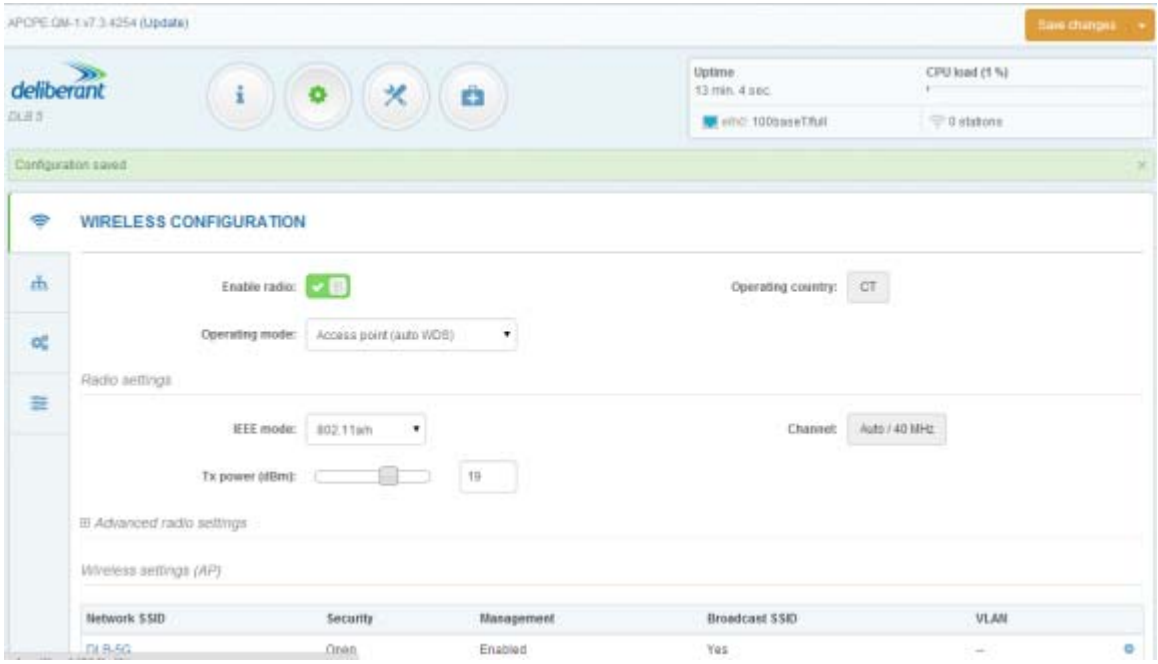
User：admin

Password：admin01



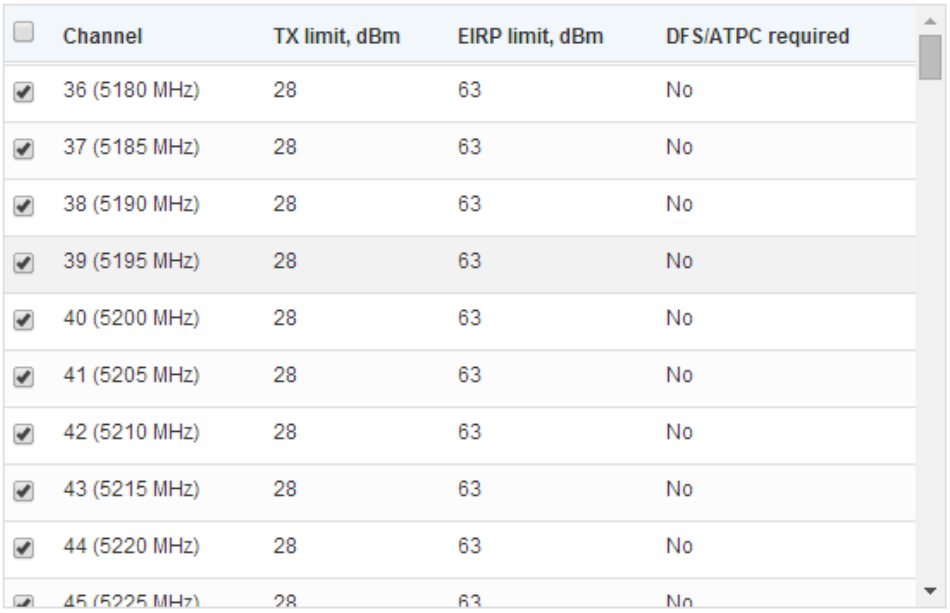
2 Radio Power

Tx Power（dBm）:19dBi



3 Different Frequency of the power setting

5150-5250MHZ:15dBi



Channel	TX limit, dBm	EIRP limit, dBm	DFS/ATPC required
36 (5180 MHz)	28	63	No
37 (5185 MHz)	28	63	No
38 (5190 MHz)	28	63	No
39 (5195 MHz)	28	63	No
40 (5200 MHz)	28	63	No
41 (5205 MHz)	28	63	No
42 (5210 MHz)	28	63	No
43 (5215 MHz)	28	63	No
44 (5220 MHz)	28	63	No
45 (5225 MHz)	28	63	No

Select Cancel

5725-5850MHZ:23dBi

☑	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.