

# VDU2503LP Instructions for use

## Document information

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## 1 Product Introduction

VDU-2503LP is a high-precision positioning base station based on UWB (Ultra Wide Band) technology. The white curved surface design can be perfectly integrated with the indoor environment, and the unique waterproof structure also has the same performance outdoors; enhanced RF transmission and reception performance, so that the VDU-2503LP has wider coverage and higher positioning accuracy; POE power supply reduces the layout of the power cord and reduces Construction difficulty.

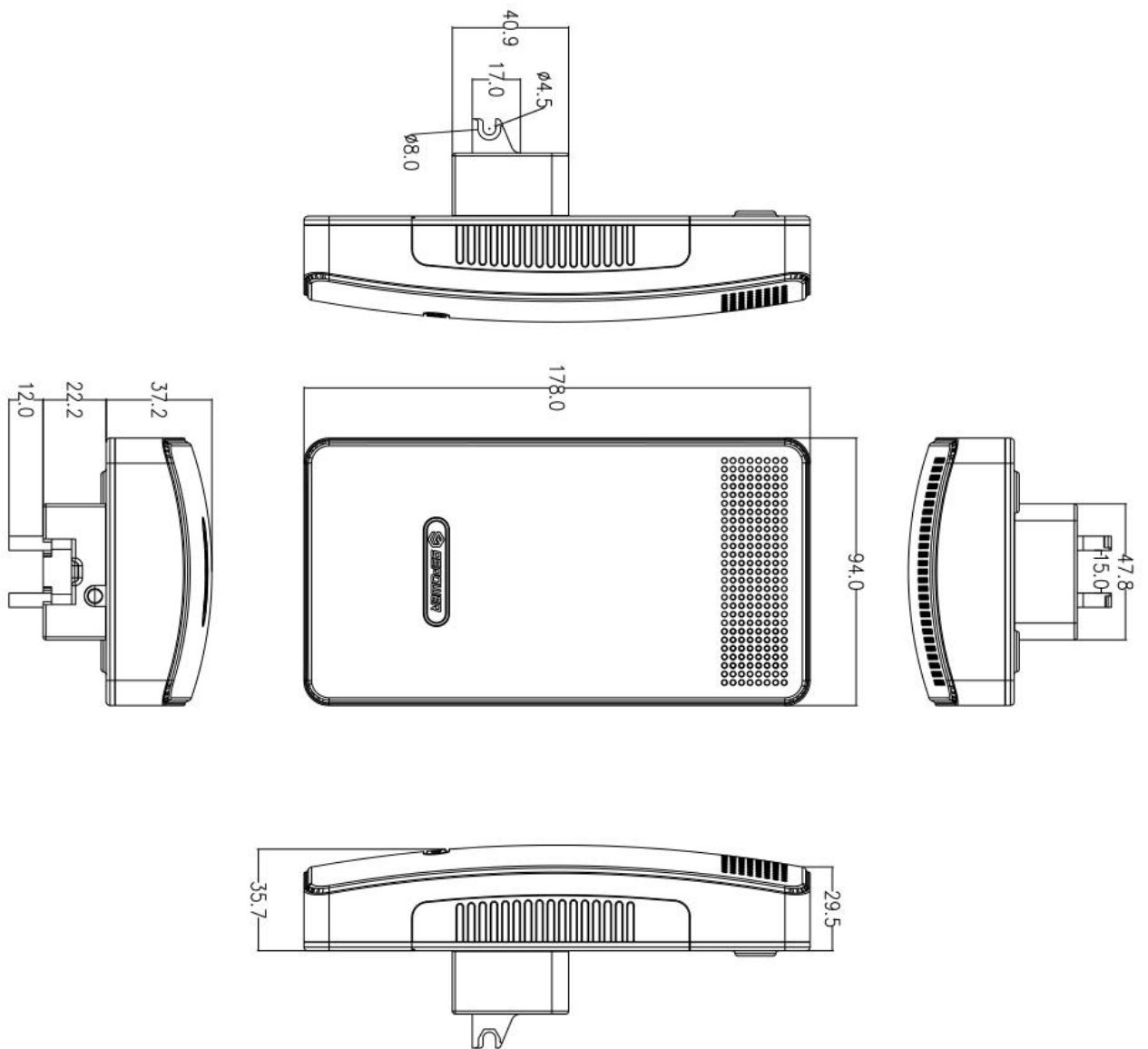


VDU-2503LP

## 2 Basic parameters

<b>power supply</b>	
POE power supply	standard: Cat.5 and above (POE output power is greater than 1W)
DC power supply	input voltage 5.0V (4.5 ~ 5.5V), input power greater than 1W
<b>UWB wireless parameters</b>	
Support protocol	compatible with IEEE802.15.4-2011 UWB protocol
Frequency	default 3774~4243.2MHz, Support channel ch1-5, positioning system can switch frequency channel
Typical transmit power	-6dBm/500MHz (CH2)
Receive sensitivity	-105dBm(packet loss rate 10%, CH2)
Data transmission rate	Default 6.8Mbps Support 110Kbps, 850kbps
<b>Positioning performance</b>	
Positioning accuracy	<30cm (no obstruction between base station and Tag)
Recommended base station layout interval	<50m
Data upload method	100Mbps Ethernet
Base station clock synchronization method	UWB wireless synchronization
<b>Product weight</b>	285g(±10g)
<b>Operating environment</b>	
Working temperature	-30°C~70°C
Storage temperature	-40°C~85°C
<b>Waterproof rating</b>	IP67
<b>Structure size</b>	178.0mm long, 94mm wide, 58.0mm thick (except the thickest part of the bracket) Dimension error ± 2mm

### 3 Product size



3-1 Dimension drawing of main body (unit: mm)

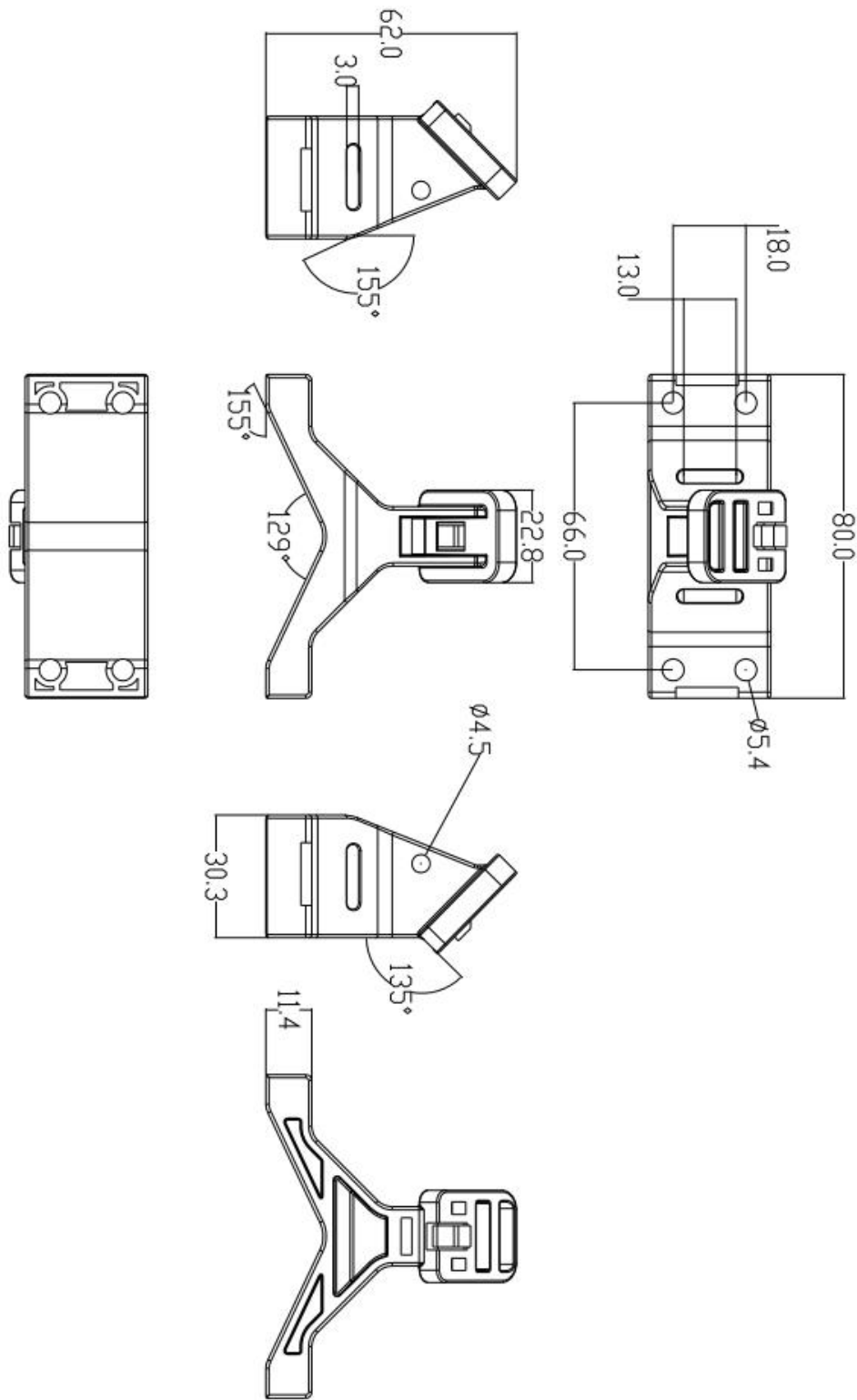
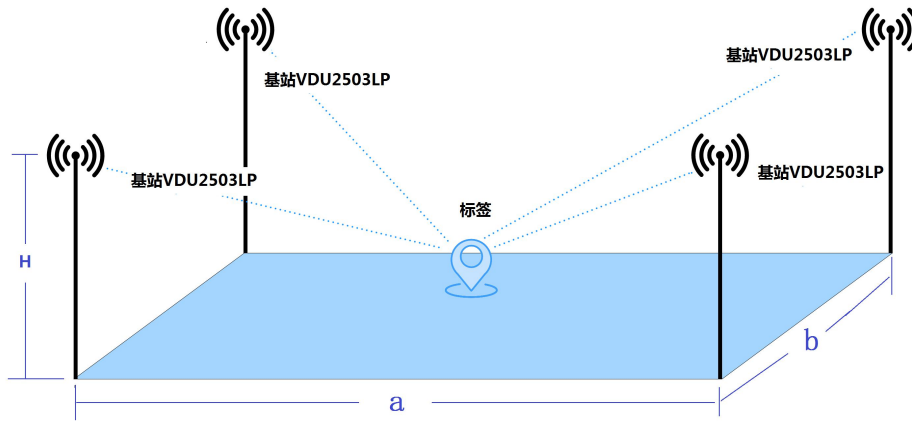


图 3-2 Bracket size

## 4 Installation

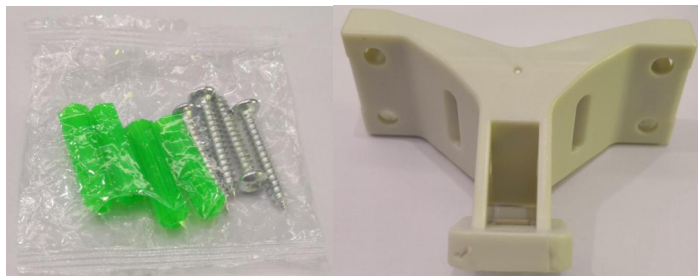
The installation height needs to be more than 2.5m above the ground. The power supply can use the POE power supply of the network port or the DC power supply. If the network port is used for power supply, please seal the DC power port.



basic requirements  $1m < a < 50m$  ,  $1m < b < 50m$  ,  $3.5m > H > 2.5$

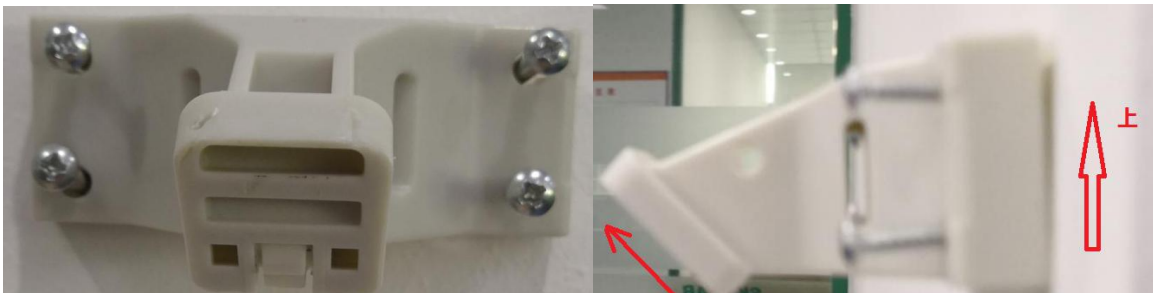
### 4.1 Actual installation steps:

(1) Fix the bracket on the wall with the screw sleeve material package (The actual situation can flexibly choose screws according to the wall material)



Screw bag

Mounting brackets





(2) For cylindrical installation, pass the iron hoop through the elliptical slot of the bracket and install as shown in the figure. (Note: The hoop needs to be prepared by yourself)



(Note: The length of the hoop is determined by the size of the column to be installed, and the thickness of the hoop is less than 3mm and the width is less than 13mm)

(3) After fixing the bracket, the main body of the base station can be moved down from the top to the main card slot.



After the base station is installed, the network port indicator lights up, indicating that the power supply is normal.

## 4.2 Installation Precautions:

In order to achieve the best positioning effect, the following items should be noted when installing the base station:

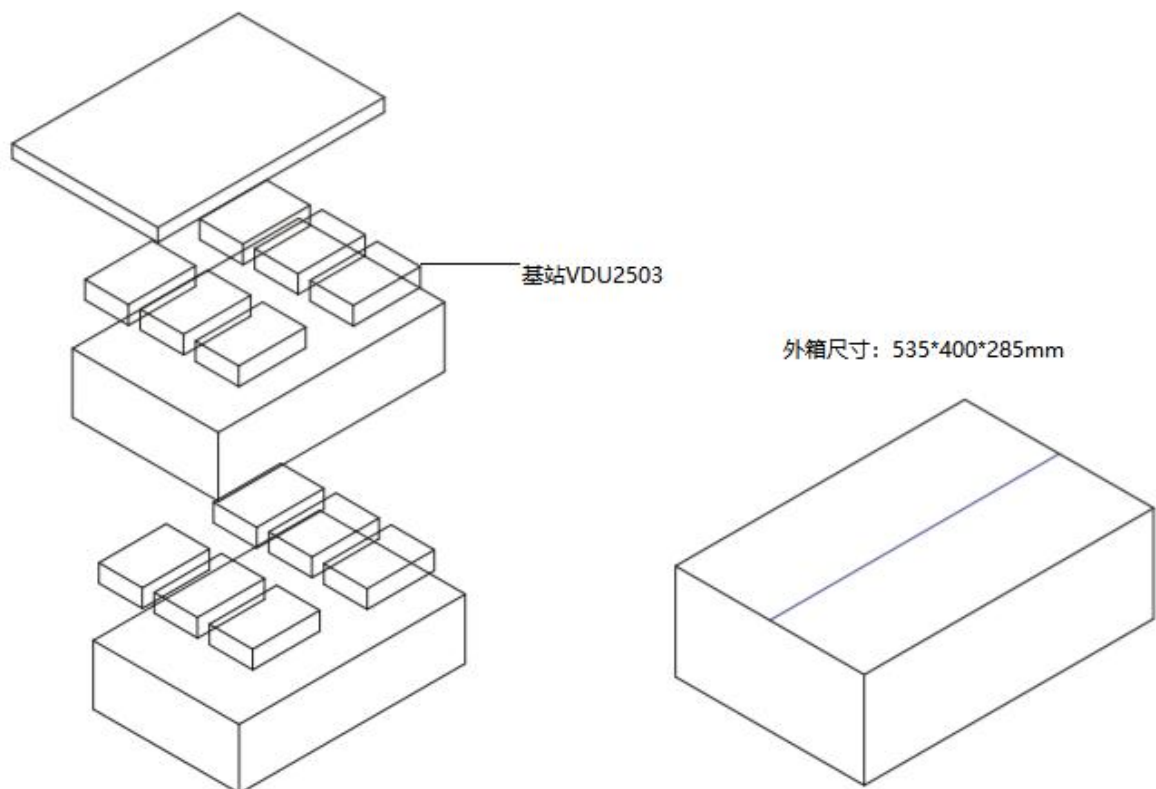
For accurate positioning, at least 4 base stations must be installed.

The installation distance of the base station under unobstructed conditions should not exceed 50 meters. In the case of obscure conditions, the distance should be properly reduced.

3) The installation height of the base station must be higher than the height of the human body (about 2.5 meters is recommended).

4) The antenna is at least 15 cm away from the wall, and there should be no shielding around.

## 5 Packaging



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Accessories	Quantity	Remarks
DC power supply	12 pcs / box (each base station / 1 pcs)	No need to choose, if the customer chooses POE power supply
Mounting screws	12 packs (each base station / 1 pack)	Essential
Plastic bracket	12 pcs (each base station / 1 pcs)	Essential
Instructions for use	12 pcs (each base station / 1 pcs)	Essential

## 6 Contact Information

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