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HUNTER series

100KM-Class Standard Edition Technical specification V1.0



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Introduction

Please read this article carefully to ensure proper use of the product, and failure to follow and operate in accordance with the instructions in this manual may damage the product. Do not disassemble or install the video& data transmission module by yourself. Due to our inability to control the specific use, installation, modification and improper use of users, our company will not bear the corresponding loss and compensation liability for the direct and indirect loss or damage caused by the above. We are not responsible for any indirect or direct loss or injury caused by the use of this product.

1. Packing list

Name×Number	Physical picture	Accessory
HUNTER 100KM-class standard edition × 2		
60cm 2.4G fiberglass antenna × 2		 or 
Sky end glue stick antenna × 2		
3pin test cable × 2	/	
TTL to USB configuration cable ×1	/	
Micro USB configuration cable × 1	/	

Optional*(One out of three)

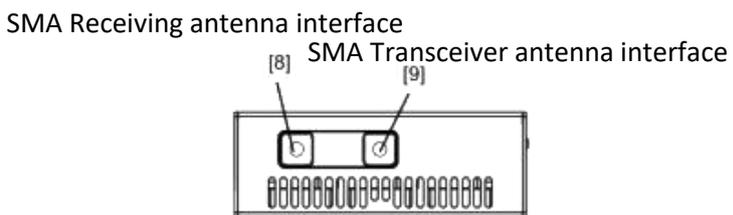
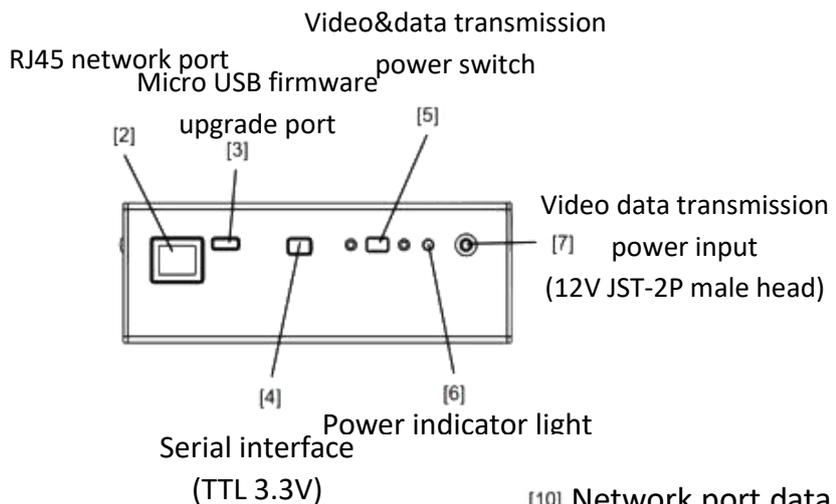
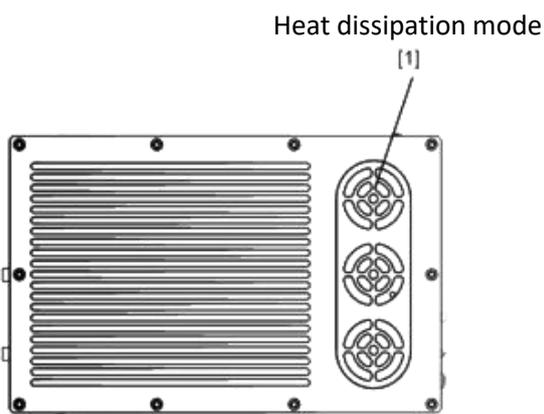
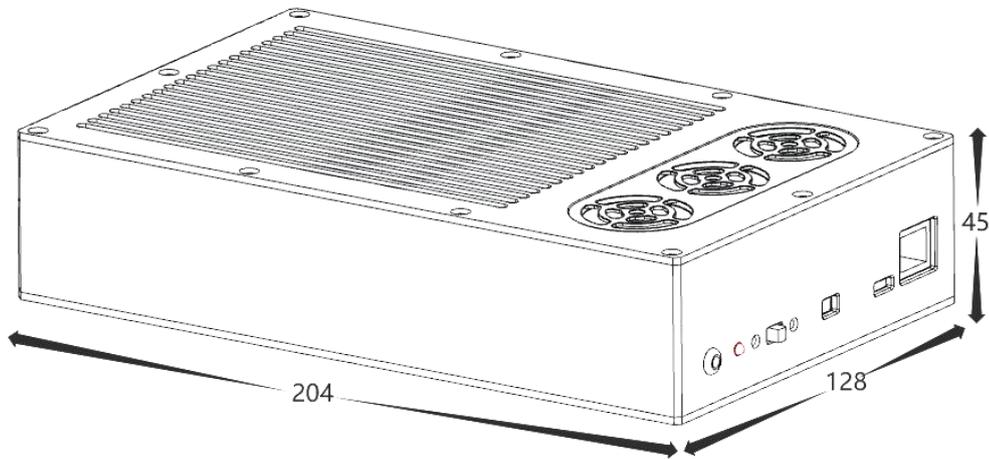
Name×Number	Physical picture	Accessory
1.25m fiberglass omnidirectional antenna x 1		
1.5m fiberglass omnidirectional antenna x 1		
1.8m fiberglass omnidirectional antenna x 1		 and 

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2. Connection guide

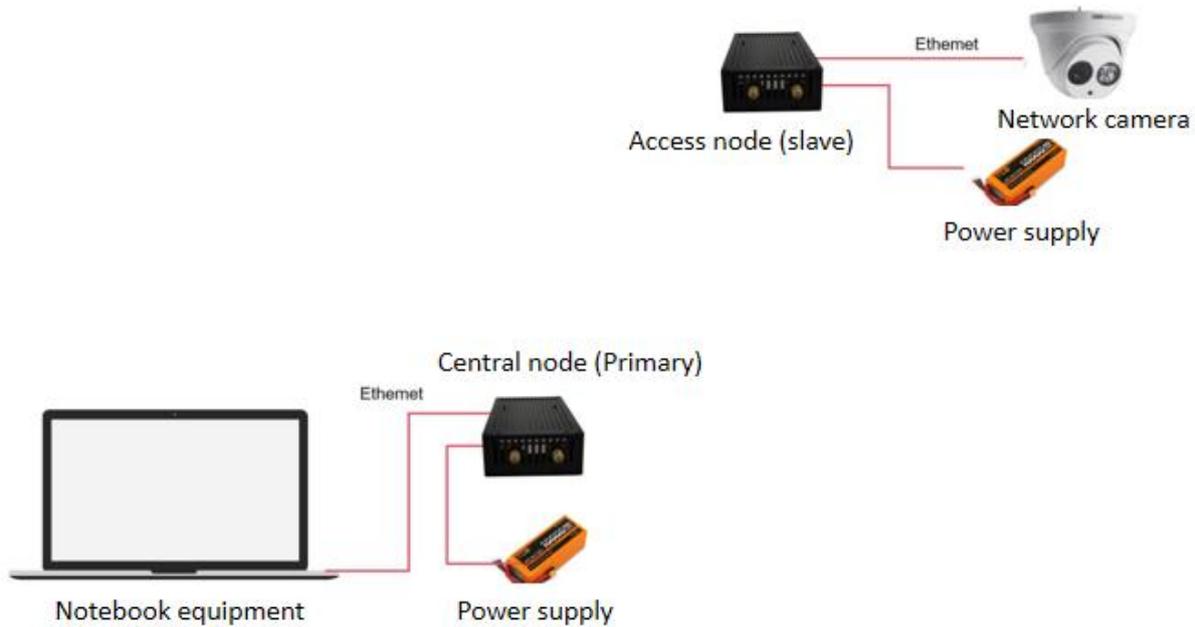
2.1 Dimension diagram and interface definition

Unit: mm



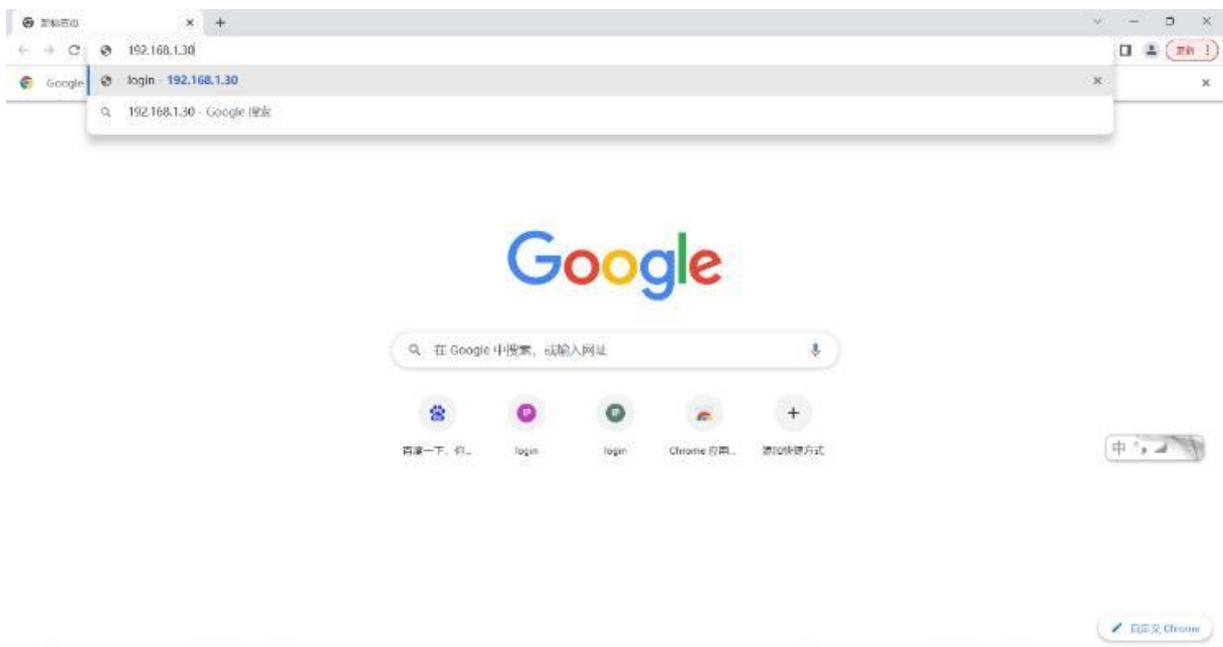
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2.2 Connection diagram



3. Modify settings on the web page

3.1 Open the browser web page and enter the IP address of the video transmission module



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3.2 Log with an administrator ID and password

Account number: admin123 Password: admin123

Log in

Account number

Password

[Change password](#)

[Administrator login](#)

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Administrator Login

Administrator account

Administrator password

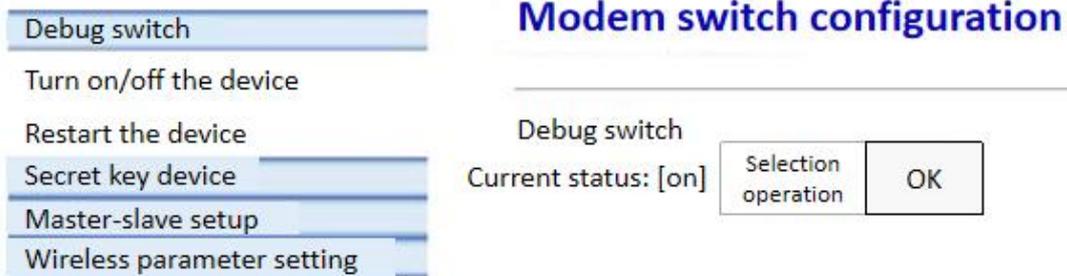
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3.3 Debug switch

3.3.1 Turn on/off the device



3.3.2 Restart the device

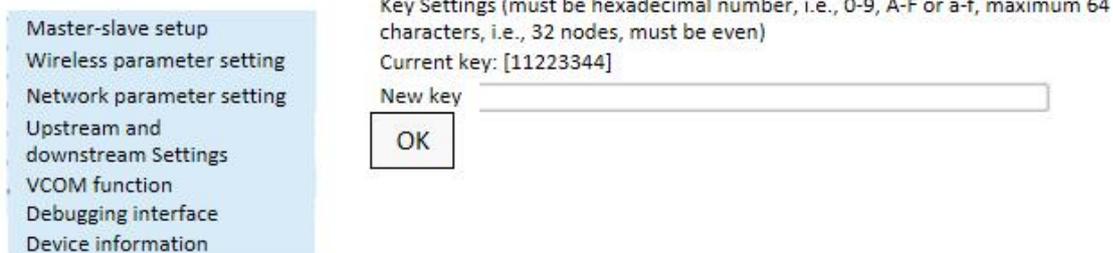


3.4 Secret key setting

Set the central node and access node to be connected with the same key, and the default key is 11223344. Generally, users are not advised to change the key, and the pair has been made before delivery. It should be noted that if a user

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changes the key of one device, the corresponding device needs to be changed to the same key before chain building decryption. Click the input window, enter the customized key, and click OK. Wait about 3 seconds, restart the device, and enter the screen again to verify whether the change is successful.



3.5 Master-slave setup

Set the central node and access node. There can only be one central point in a LAN, but there can be multiple access points. The center point

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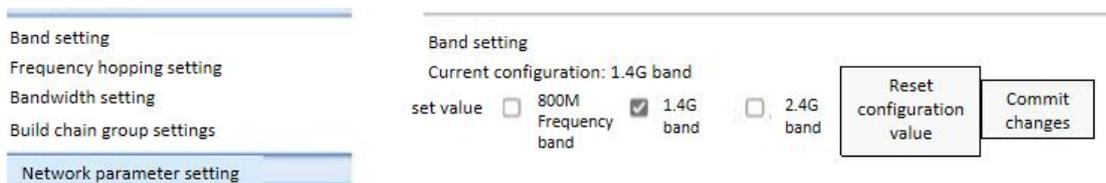
and all the access points can communicate with each other, and the access points and the access points can also communicate with each other.



3.6 Wireless parameter settings

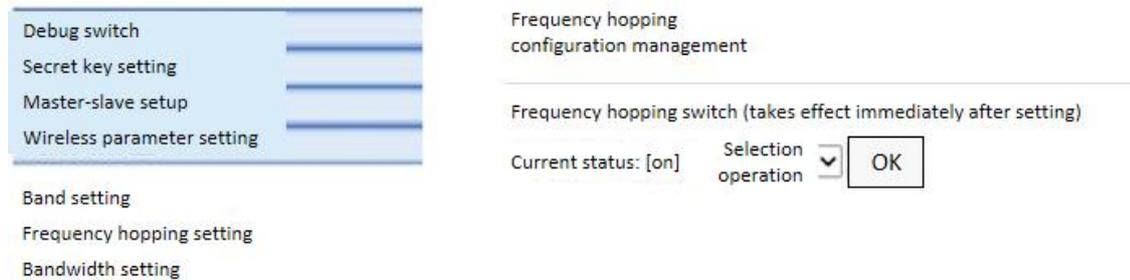
3.6.1 Frequency band setting

The frequency band cannot be changed for the time being



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3.6.2 Frequency hopping setting



3.6.3 Bandwidth setting

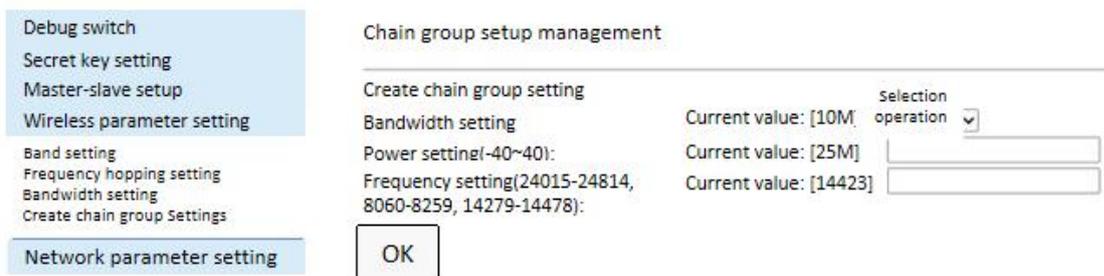
3M, 5M, 10M, 15M, 20M(The 15M bandwidth cannot be changed). Adjust the channel bandwidth based on transmission requirements. Wider bandwidth can provide higher transmission rates, but may increase interference and packet loss rate.



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3.6.4 Create chain group settings

The web side does not support power change.



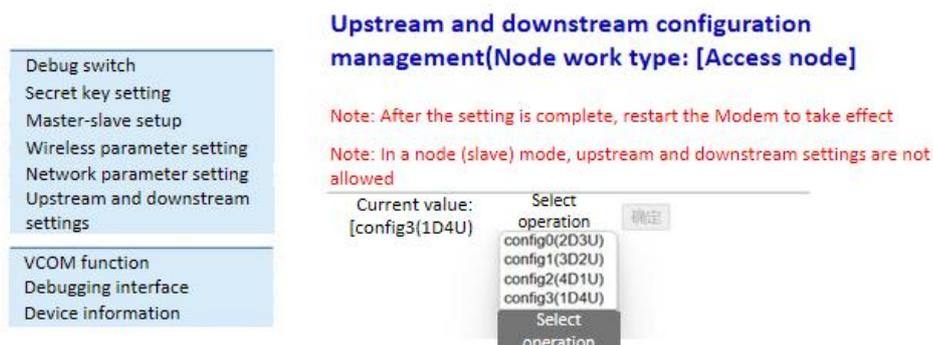
3.7 IP address setting

Set an IP address for video & data transmission. The IP addresses of the two devices must be different. The PC and the device can communicate only on the same network segment. It is not recommended to change the IP address that has been configured before delivery. If you want to change the IP address yourself, remember the new IP address.

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3.8 Upstream and downstream settings

Set the ratio of uplink and downlink data transmission to optimize transmission performance. D is Download, U is Upload, and the ratio of D to U is 1:4, indicating that the upper and lower ratio of 1:4 is configured according to the current bandwidth. In this mode, the upload speed will be increased while the download speed will be reduced accordingly. You can switch between 1D4U/2D3U/3D2U/4D1U based on the actual environment.



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3.9 VCOM function

The factory defaults to the closed state, You are not advised to change the value unless required.

- Debug switch
- Secret key setting
- Master-slave setup
- Wireless parameter setting
- Network parameter setting
- Upstream and downstream settings
- VCOM function**
- Debugging interface

VCOM function configuration management

Note: The settings take effect after a power failure and restart

Current value: Off

Select operation

Off

On

Select operation

OK

4.0 Debugging interface

4.0.1 Active reporting and inspection

- Debug switch
- Secret key setting
- Master-slave setup
- Wireless parameter setting
- Network parameter setting
- Upstream and downstream settings
- VCOM function
- Debugging interface**

Proactively report information collection

On Off

Proactively report for inspection and collection



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4.0.2 DRPR report

Debug switch
Secret key setting
Master-slave setup
Wireless parameter setting
Network parameter setting
Upstream and downstream settings
VCOM function
Debugging interface

Aactivate
Pause

RSRP极差 < -124	SNR极差 < 0
RSRP差 -124~-104	SNR差 0~6
RSRP低 -103~-85	SNR低 7~12
RSRP中 -84~-65	SNR中 13~18
RSRP高 > -64	SNR高 > 19

IP	RSRP	SNR	DISTANCE
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4.0.3 Shell debugging interface

Debug switch
Secret key setting
Master-slave setup
Wireless parameter setting
Network parameter setting
Upstream and downstream settings
VCOM function
Debugging interface

Shell command debugging

Enter the shell command

OK

Output result

4.0.4 AT debugging interface

Debug switch
Secret key setting
Master-slave setup
Wireless parameter setting
Network parameter setting
Upstream and downstream settings
VCOM function
Debugging interface

Debug with the AT command

Enter the AT command

OK

Output result

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5.0 Version information

- Debug switch
- Secret key setting
- Master-slave setup
- Wireless parameter setting
- Network parameter setting
- Upstream and downstream settings
- VCOM function
- Debugging interface
- Device information

Version information query

System-wide version
CX6602_1.00.00.R11_20200421

High level version
484C535F534F4E4D5F56322E31302E30305F5235305F32303230303430370000000000000000
◀──▶

Physical layer version
0D504C5F534F4E4D5F56322E31302E30305F5235345F32303230303431305F5041000A0A0A0A
◀──▶

2. List parameter



HUNTER 100KM-Class Standard Edition	
Transmission distance	100KM
Dimensions (L×W×H)	204×128×45(mm)
Weight	1469g
Enclosure	Aluminum alloy
RF frequency band	1427.9~1447.9MHz (Available customization: 806~826MHz/1427.9~1447.9 MHz/2401.5~2481.5MHz)
Power class	40dBm±2
Sensitivity	10MHz (-103dBm) /5MHz (-104dBm) /3MHz (-106dBm)
Transmission	Unicast, Broadcast, Roaming

mode	
Transceiver mode	Single antenna transmission and reception/ Single antenna transmission and dual antennas reception
Operating bandwidth	1.4MHz/3MHz/5MHz/ 10MHz/20MHz
Rate	30Mbps(One-way maximum rate), 45Mbps(Two-way maximum rate of single node supported)
Number of network nodes supported	Supporting $N \geq 2$ network nodes and up to 16 access nodes
Video transmission	Communicate with external terminals through ethernet port

Data transmission	Communicate with external terminals through RS232 port
Link establishment time	Cold start $\leq 20s$
Input voltage	12V
Anti-interference performance	Support frequency hopping across frequency bands
Air latency	Transmission delay from node to central node $\leq 50ms$
Peak power consumption	$450 \times 24v_{ma} \pm 15\%$ at the maximum rate
WEB configuration	Support basic configuration/reporting/query functions

Modulation mode	QPSK、16QAM、64QAM
Storage temperature	-40°C ~ +85°C
Operating temperature	-20°C ~ +75°C

60cm 2.4G fiberglass antenna		Model	TQJ-1400AT-7
		Frequency	1425~1450MHZ
		Gain	7dBi
		Length	62cm
		Diameter	1.85cm
		Radiation direction	360° omnidirectional
		Port	NK female /N male
Ground end antenna sucker base		Frequency range-MHz	0-6.0GHz
		Standing-wave ratio	≤1.2
		Nominal impedance-Ω	50
		Maximum bearing power	100
		Suction cup fixed joint	N Female socket N-K female socket
		Chassis diameter	11cm
		Lead length	46cm

Sky end glue stick antenna		Length	23.5cm
		Frequency	1425~1450MHZ

Optional

1.25m fiberglass omnidirecti- onal antenna		Model	TQJ-1400AT-11
		Frequency	1425 ~1450MHZ
		Gain	11dBi
		Length	1250mm
		Diameter	20mm
		Radiation direction	360° omnidirectional
		Port	NK female head
1.5m fiberglass omnidirecti- onal antenna		Model	TQJ-1400AT-12
		Frequency	1425 ~1450MHZ
		Gain	12dBi
		Length	1500m
		Diameter	20mm
		Radiation direction	360° omnidirectional
		Port	NK female head

1.8m fiberglass omnidirecti- onal antenna		Model	TQJ-1400G-14
		Frequency	1425 ~1450MHZ
		Gain	14dBi
		Length	1800m
		Diameter	44mm@max
		Radiation direction	360° omnidirectional
		Port	SMA-N connector
RG58 adapter		Line length	20cm
		Frequency band applied	6000MHZ
		Wire rod	RG58 line Outer diameter 5mm
		Interface type	SMA male needle /N male needle
		Attenuation	0.15db/m
		Resistance	50Ω

Glass fiber reinforced plastic antenna fixing kit		1.Fixed plate	
		Length	8cm
		Wide	6cm
		Hole diameter	0.9cm
		Hole center spacing	60.5m
		2.U-shaped part	
		Overall length	8.3cm
		Screw length	4.8cm
		Wide	6cm
		Nut	M8
		Shard	M8
		Gasket	M8