

KINGSAT

Maritime Antennas

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Quick Installation 4G Antenna Z3/Z6



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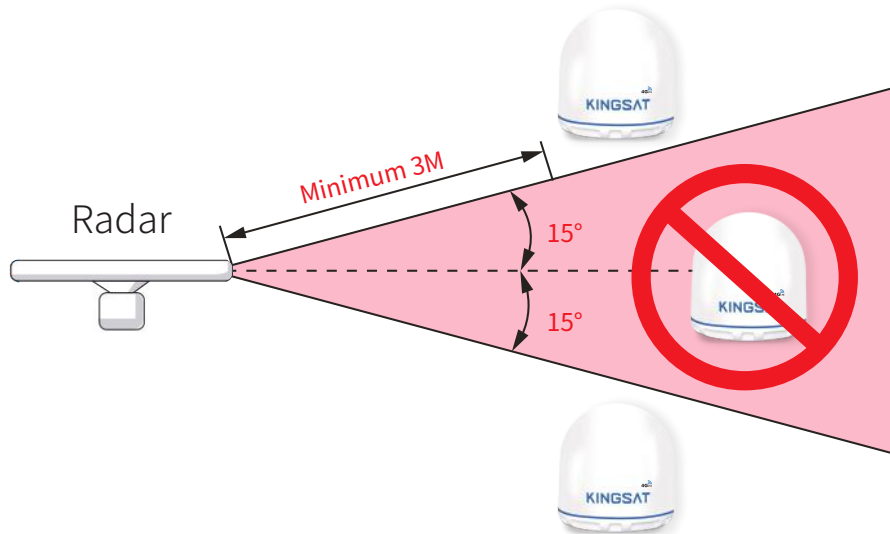
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Antenna Installation Site

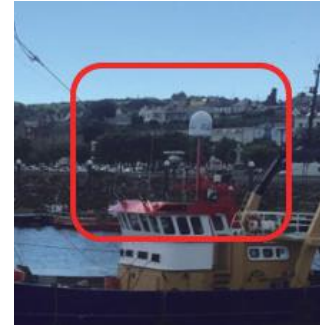
Check mounting mast site. The optimized site has

- (1) Minimum vibration(better far from engine).
- (2) Free of obstruction(better far from boom on dock).
- (3) Keep safe distance to Radar or other RF transmitter(avoid fan beam $\pm 15^\circ$ of Radar, keep distance to Radar **minimum 3m**).



Antenna Installation Site

The following installation cases are the optimal sites.



Material Check

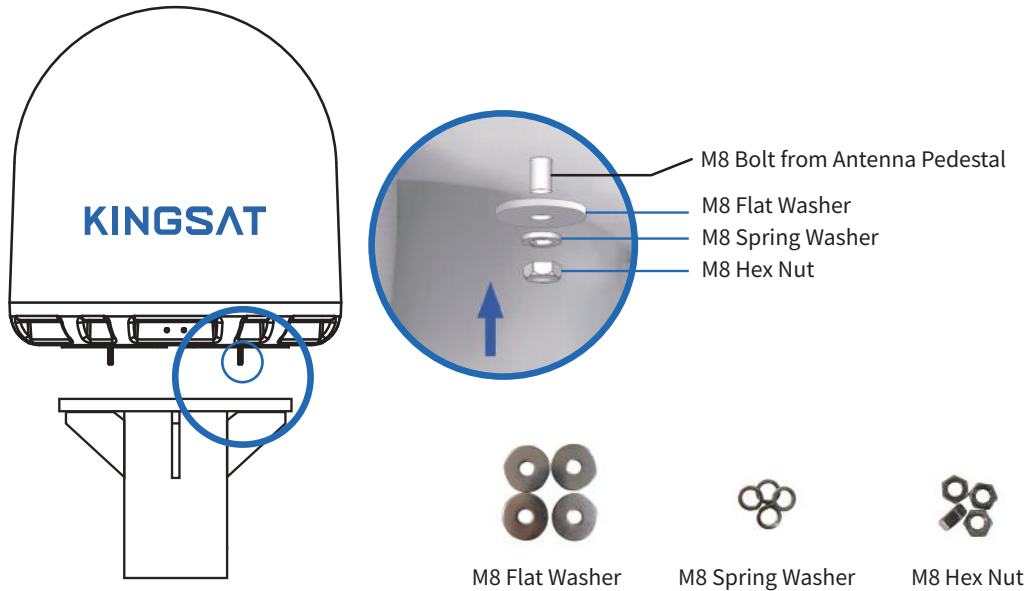
Unpack the carton and check whether the materials in the carton are matched with Material Check List.



4G Antenna-Z6-Dual Router Material Check List					
No.	Material	Quantity	Image	Factory Check	Remark
1	Quick Installation	1			
2	4G Antenna and Built-In 4G Router	1			
3	POE Adapter	1			
4	20m Network Cable	1			
5	1m Network Cable	1			
6	Nano Card Set	1			
7	4mm Hex Key	1			
8	M8 Spring Washer	4			
9	Waterproof Tape	1			
Amount		12	Check man :		

Step 1 Mounting antenna

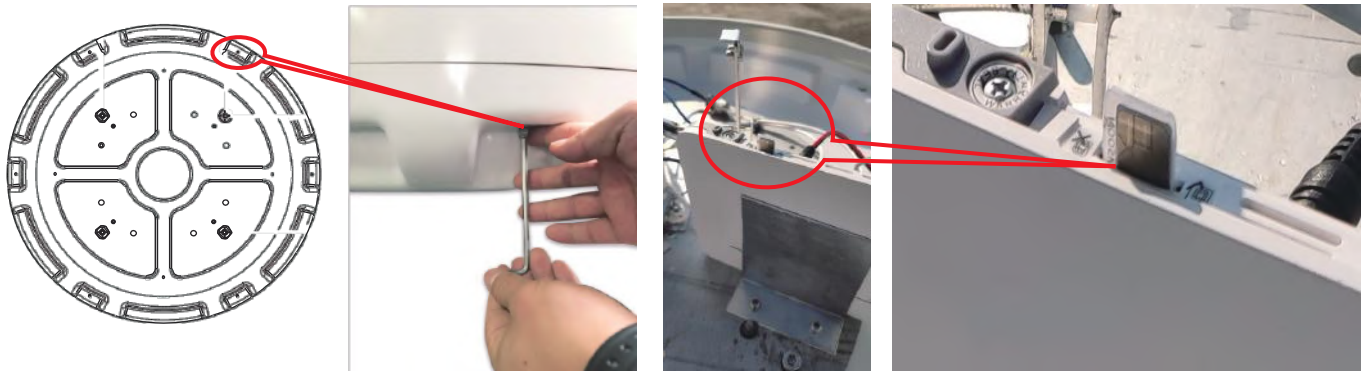
Mounting antenna with below accessories on the pedestal of mast.



Step 2 SIM Card Installation

Step 1. Unscrew six screws of the radome and take off the radome.

Step 2. Insert the activated SIM card into the 4G router card slot(Pay attention to the direction of SIM card while inserting).

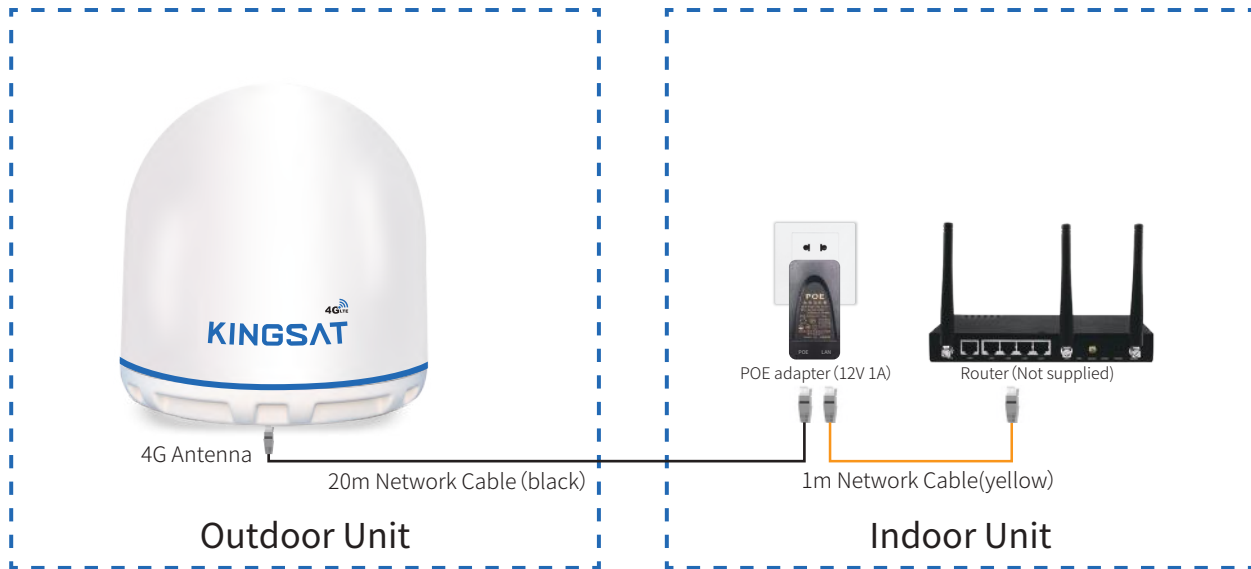


Step 3 Connection Diagram

The cable connection of the 4G antenna is as follows:

Step 1. Connect the 4G antenna and POE adapter with 20m network cable.

Step 2. Connect the POE adapter and PC / router with 1m network cable.



Step 4 Z3 Antenna Connection

Z3 Antenna Connection Step

Step 1 FIG 1, from the hole of base plate, insert RJ45 connector of 20m network cable into radome.

Step 2 FIG 2&3&4, secure RJ45 connector and waterproof connector as below shows.

Step 3 FIG 5&6, fastern the connector on base plate with cable ties.

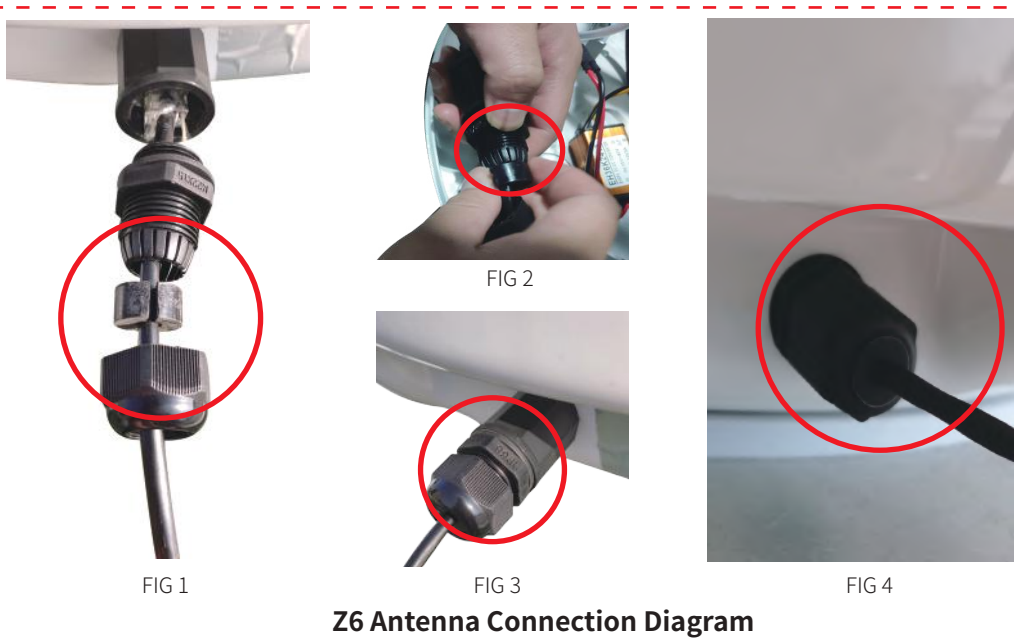


Step 5 Z6 Antenna Connection

Z6 Antenna Connection Step

Step 1 FIG 1, RJ45 connector insert through water proof connector.

Step 2 FIG 2&3&4, secure RJ45 connector and waterproof connector as below shows.



Step 6 Indoor Unit Connection

Indoor Unit Connection Step

Step 1 Connect RJ45 of 20m network cable to POE port of POE adapter.

Step 2 LAN port is for local network. You can connect to PC or router for testing.



Step 7 Surf Internet

HOW to test?

Wireless

Default SSID: **KINGSAT_4G_WIFI**

Default WIFI password: **4G12345678**

Wired

1. PC/Laptop directly connects to LAN of POE adapter.
2. Or use WIFI router for signal coverage of below deck room.



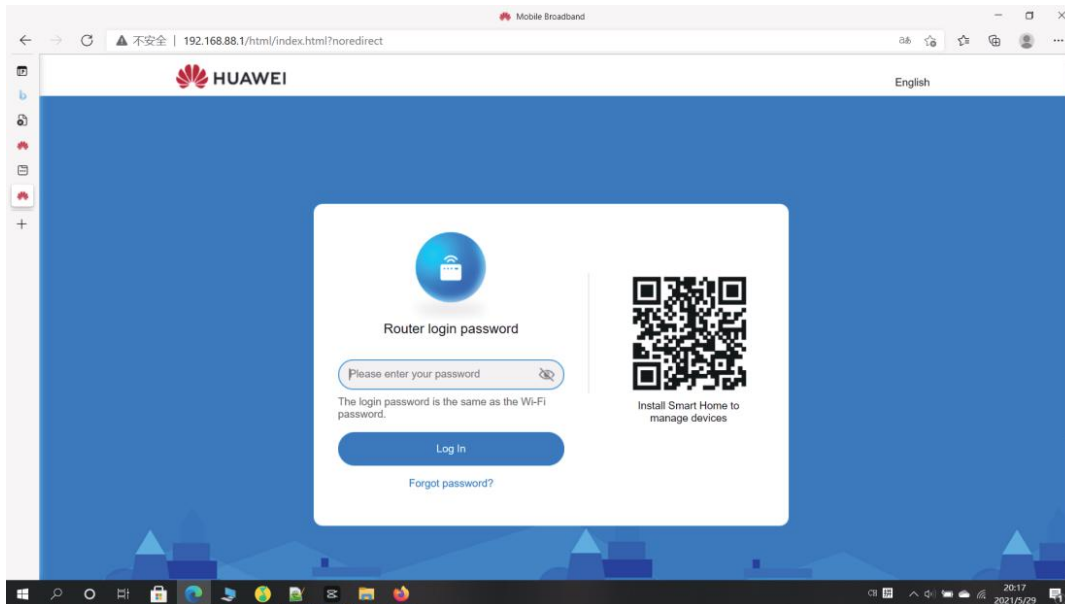
Appendix 1 Network Troubleshooting

If CAN'T access network , please follow below steps.

Step 1. Access 4G router to check router status.

4G router default IP: **192.168.88.1**

Default password: **4G12345678**



Appendix 1 Network Troubleshooting

Step 2. Check 4G network status of router.

FIG1 shows NORMAL, working well. FIG2 shows ABNORMAL, means no signal or bad signal or SIM card out of service.



FIG 1

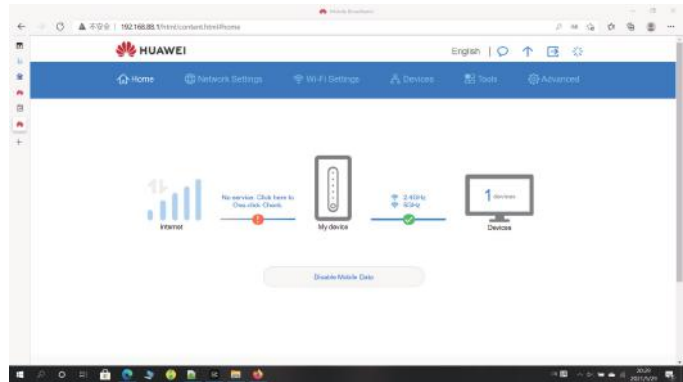


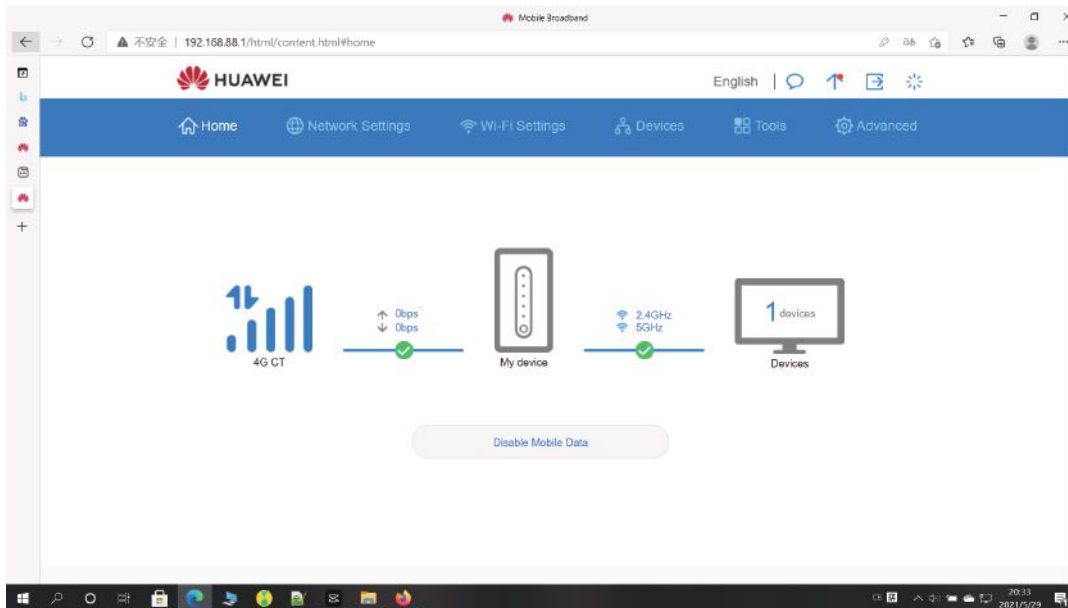
FIG 2

Appendix 1 Network Troubleshooting

CASE 1

If speed of 4G router shows 0bps, what does it mean?

In this case, firstly check SIM card service if it is out of charge.

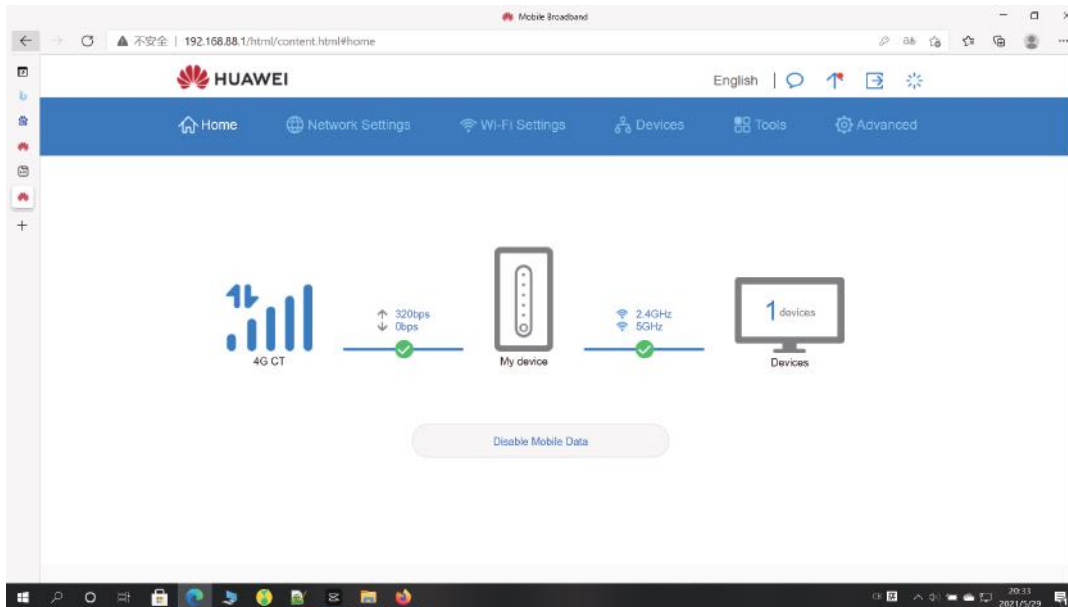


Appendix 1 Network Troubleshooting

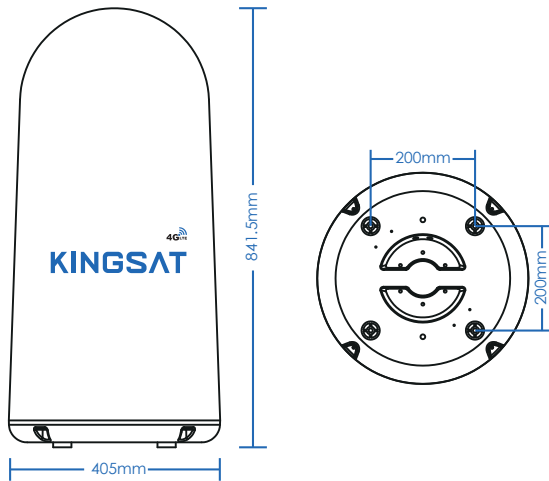
CASE 2

If 4G signal goes weak, it will show as below. How can we do ?

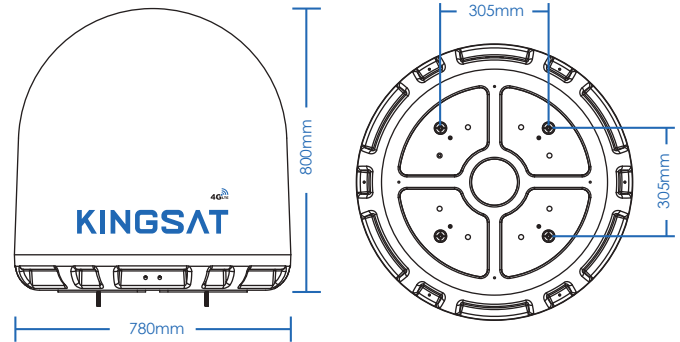
In this case, vessel is sailing out of signal coverage. Signal is too weak to setup link. So 4G signal come back stronger , 4G router will automatically work to access internet.



Appendix 2 Radome Dimension



Z3 Radome Dimension



Z6 Radome Dimension

Appendix 3 Specification-Z3

Mechanical Specification	
Radome Size:	41 X 42 cm (16" X 16.5")
Weight:	16.5Kg(Includes 4G router&20m network cable)
Antenna Type:	4G cluster omnidirectional antenna
Radome Material:	ASA
Radome Color:	White

Electrical Performance	
Frequency Range:	698-960Mhz/1710-2700Mhz
Beamwidth:	H:360° / (65°X6 Omnidirectional)
	E:12° ±2°
Gain:	Low Band≥7dBi & high Band≥5dBi
Third-order Intercept:	≤ 107dBm(2x33dBm)
Roundness:	±3dB
VSWR:	≤2/≤1.7
Polarization:	Vertical
Connector Type:	N Type
Input Resistance:	50Ω
Lightning Protection:	DC ground

4G Router parameters	
LTE Category:	3GPP Release 11, LTE CAT7(300Mbps/100Mbps)
LTE FDD Bands:	B1/B3/B7/B8/B20/B28/B32/B38
3G Bands:	B1/B8
Theoretical bandwidth:	LTE CAT4 standard speed 150MHz max
WIFI:	IEEE 802.11a/b/g/n/ac WLAN speed 1.2Gbs max
LAN Port:	1 access indoor
SIM Card Port:	Only supports micro-SIM(3FF)(Provide Cato)
POE Power Adapter:	AC110-220V to POE Adaptor
	Output 24V/1A

Working Environment	
Operating Temperature :	-22°~+55°
Storage Temperature:	-30°~+85
Humidity:	Up to 95%@40°C
Wind Speed:	60 m/sec max from any direction
Waterproof:	IP65

Appendix 4 Specification-Z6

Mechanical Specification

Radome Size:	78 X 80 cm (31" X 31.5")
Weight:	38Kg(Includes 4G router&20m network cable)
Antenna Type:	4G cluster omnidirectional antenna
Radome Material:	ASA
Radome Color:	White

Electrical Performance

Frequency Range:	698-960Mhz/1710-2700Mhz
Beamwidth:	H:360° / 360° E:20° / 32°
Gain:	Low Band \geq 7dBi & high Band \geq 5dBi
Third-order Intercept:	\leq 107dBm(2x33dBm)
Roundness:	\pm 3dB
VSWR:	\leq 2/ \leq 1.7
Polarization:	Vertical
Connector Type:	N Type
Input Resistance:	50 Ω
Lightning Protection:	DC ground

4G Router parameters

LTE Category:	3GPP Release 11, LTE CAT7(300Mbps/100Mbps)
LTE FDD Bands:	B1/B3/B7/B8/B20/B28/B32/B38
3G Bands:	B1/B8
Theoretical bandwidth:	LTE CAT4 standard speed 150MHz max
WiFi:	IEEE 802.11a/b/g/n/ac WLAN speed 1.2Gbps max
LAN Port:	1 access indoor
SIM Card Port:	Only supports micro-SIM(3FF)(Provide Cato)
POE Power Adapter:	AC110-220V to POE Adaptor Output 24V/1A

Working Environment

Operating Temperature :	-22°~+55°
Storage Temperature:	-30°~+85
Humidity:	Up to 95%@40°C
Wind Speed:	60 m/sec max from any direction
Waterproof:	IP65

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