



Features & Applications:

-  5-in-1 combo antenna
-  2xMiMo 5G-FR1 (4G compatible)
-  2xMiMo WiFi 6E/7
-  Active GNSS L1 RHCP Patch antenna
-  LNA Gain 30dB
-  High out of band rejection filters
-  ESD protected
-  Adhesive mount, ideal for plastic and glass surface installation
-  Optional plastic bracket included

ELECTRICAL SPECIFICATIONS

General Specifications – 5G FR1 / WiFi 6E/7

Antenna type	Nominal Impedance	Polarization	Radiation pattern	Power withstanding	DC Ground
Monopole ¹	50Ω	Vertical / Linear	Omni	2W	No

5G FR1 Antennas: 617 – 7125MHz

Port	Frequency (MHz)	617-960	1710-2700	3300-7125
Port 1, 2	VSWR	2.5:1	2:1	2:1
	Avg. Peak Gain (dBi)	2.5	5.5	5.1
	Avg. Efficiency (%)	48	62	60
Isolation ²	Port 1-2 (dB)	10	20	30

WiFi 6E/7 Antennas: 2400-2500 / 5150-7125MHz

Port	Frequency (MHz)	2400-2500	5150-7125
Port 3, 4	VSWR	2:1	2:1
	Avg. Peak Gain (dBi)	4.5	3.3
	Avg. Efficiency (%)	60	58
Isolation ²	Port 3-4 (dB)	13	25

GNSS Antenna: 1560-1610MHz

Antenna type	Nominal Impedance	Polarization
Patch antenna	50 Ω	RHCP

Frequency (MHz)	1561.098 ± 2.046/ 1575.42 ± 1.023/ 1602.5625 ± 4
Return Loss (dB)	<-7 dB
LNA Gain	30dB ± 2 dB
Current consumption	<10 mA
DC voltage in via GNSS RF cable	3.3-5 Vdc ± 0.5V

Notes:

1. 5G-FR1 and WiFi 6E/7: Multi-Band Monopoles with built in ground plane, Independent from external ground plane
2. Minimum Isolation (dB)

MECHANICAL SPECIFICATIONS

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Dimension (Length x Width x Height)	Weight	Color	Fixing System	Housing Material
178 x 60x19 mm (7.01" x2.36"x 0.75")	575 g	Black	Adhesive Mount / Bracket (3M VHB 4959)	PC (UV-stabilized)
Wireless Technology	No. of Port	Cable Length	Cable Type	Connector Type
5G FR1/LTE	2	10FT (3.048M)	LMR195	SMA Male
GNSS	1	10FT (3.048M)	LMR100	SMA Male
WiFi 6E/7	2	10FT (3.048M)	LMR195	RP SMA Male

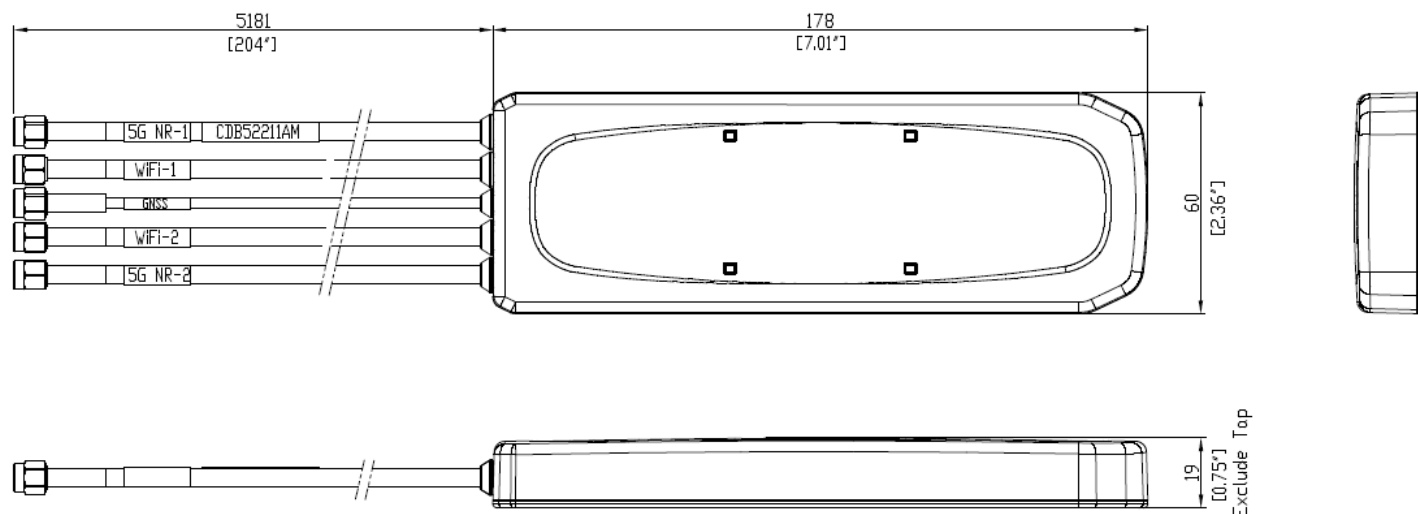
ENVIRONMENTAL SPECIFICATIONS

CDB52211AM			
Storage Temperature	Operating Temperature	Ingress Protection	RoHS Compliant
-40 / +85° C	-40 / +85° C	IP67	Yes

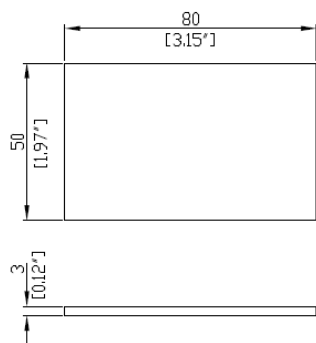
Mechanical Drawing

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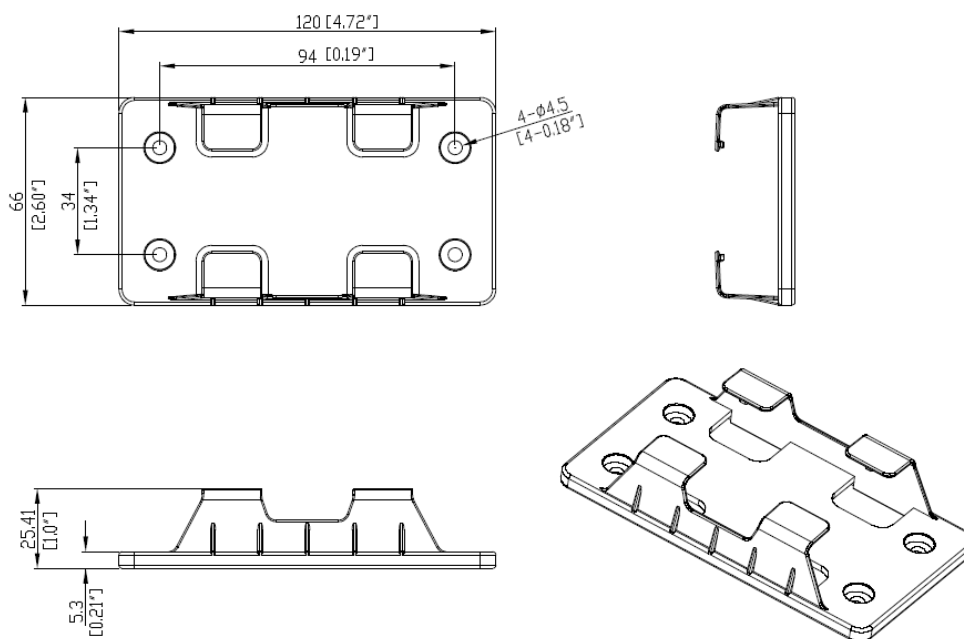
Antenna



3M VHB Tape



Plastic Bracket



*Tape and bracket package separately

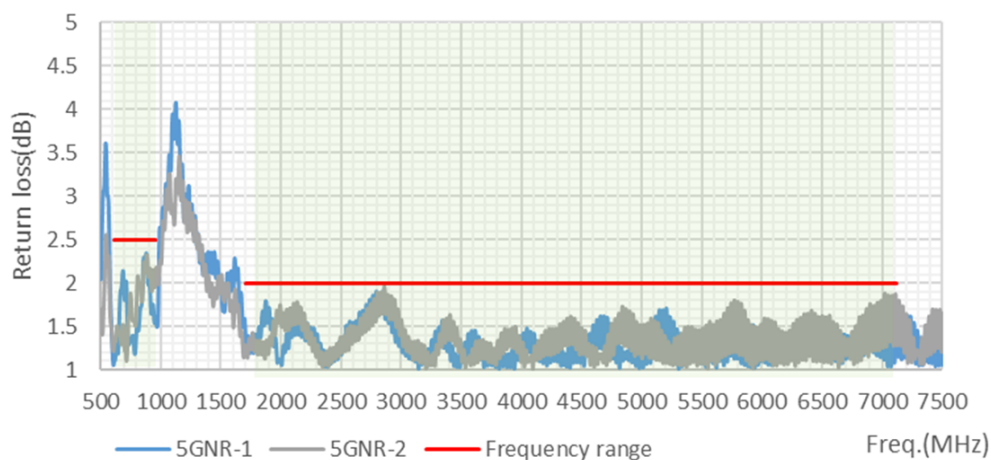
Unit: mm/ inches

Charts

Test data
5G NR Antennas

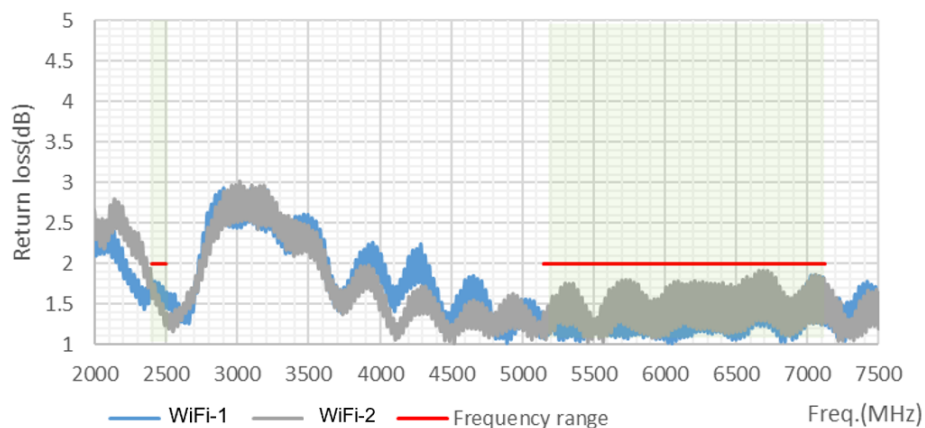
VSWR vs Frequency

Measured in PSU 20230510



VSWR vs Frequency

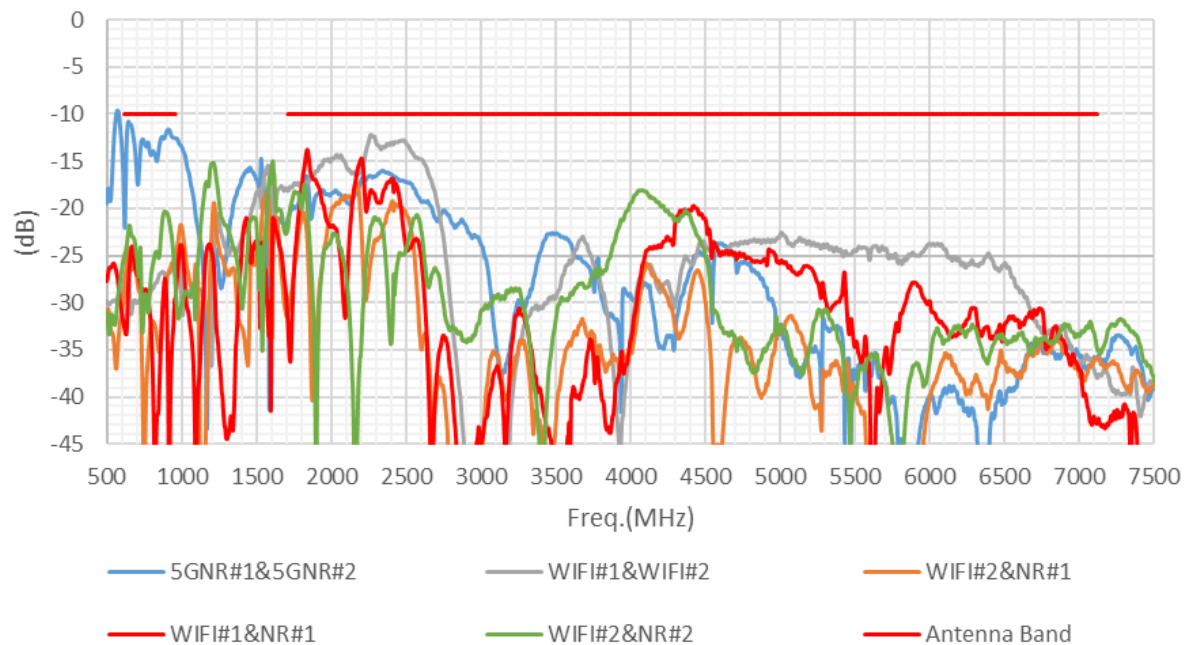
Measured in PSU 20230510



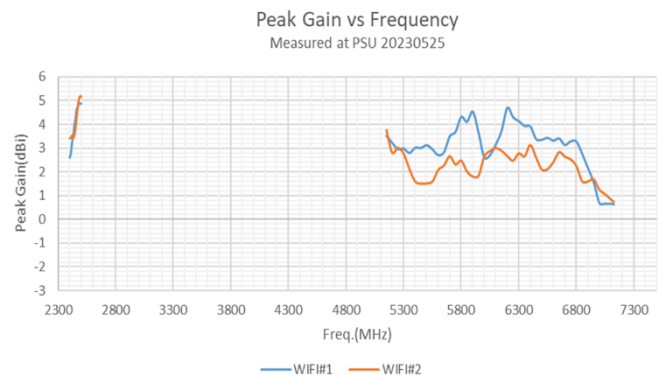
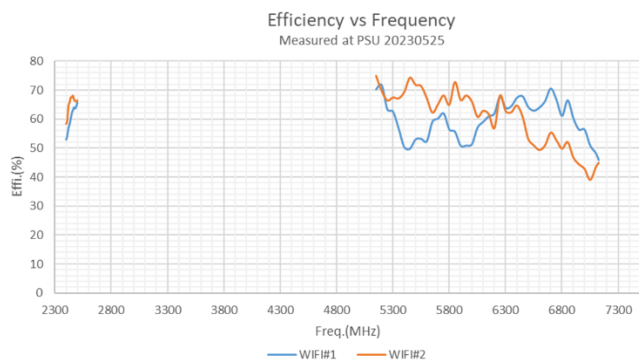
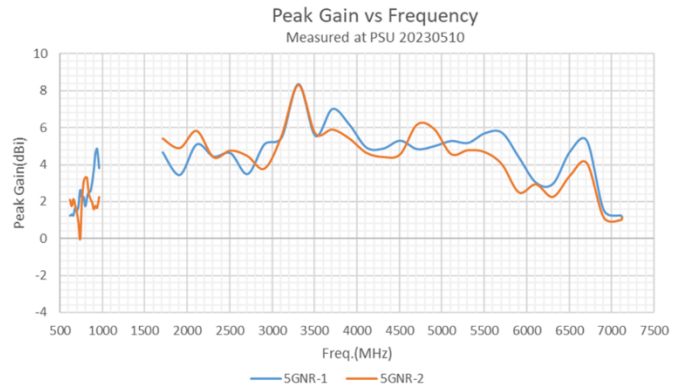
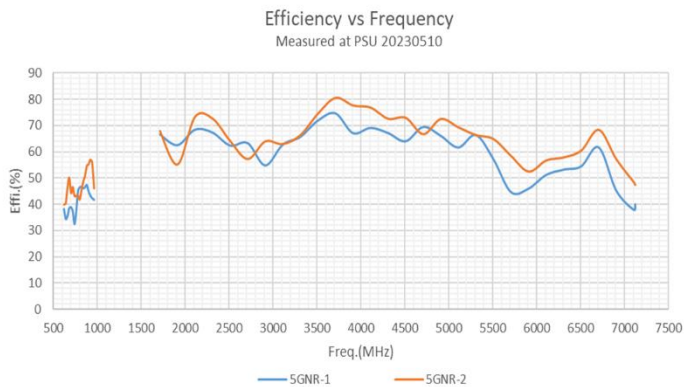
*antenna VSWR test in free space and 10-ft cables

Isolation vs Frequency

Measured at PSU 20230510

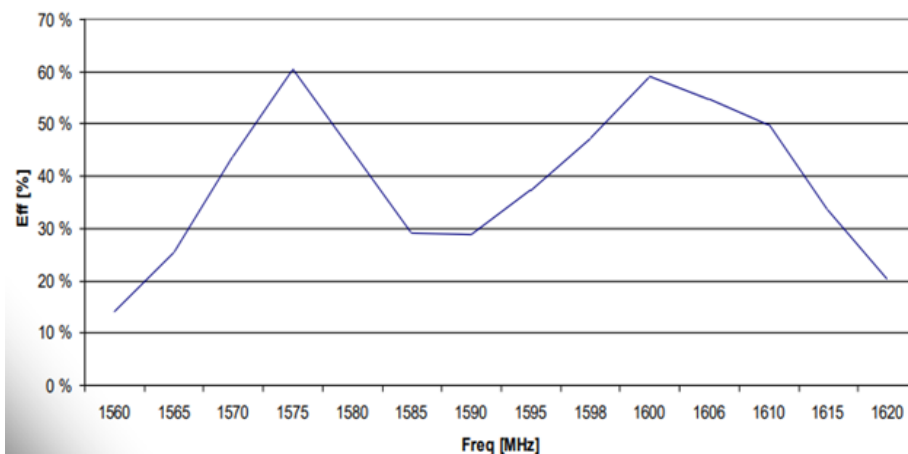


Charts

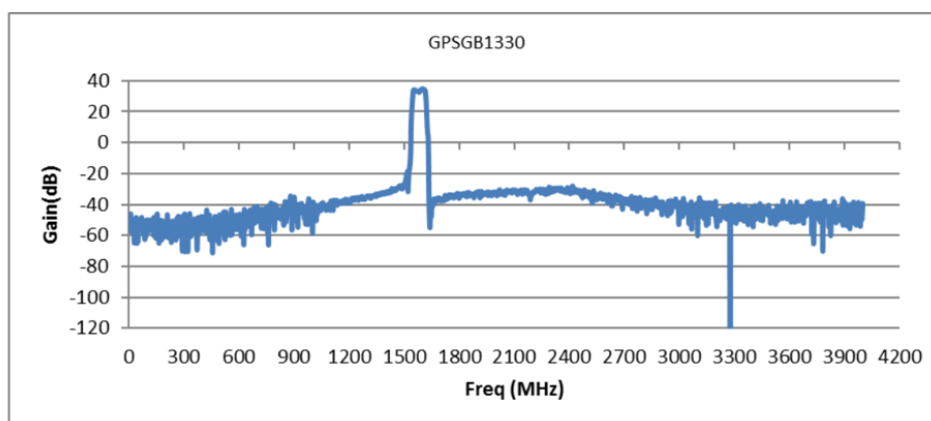
Test data
5G NR Antennas

* antenna test in free space and 1-ft cables

Charts

Test data
GNSS Antenna

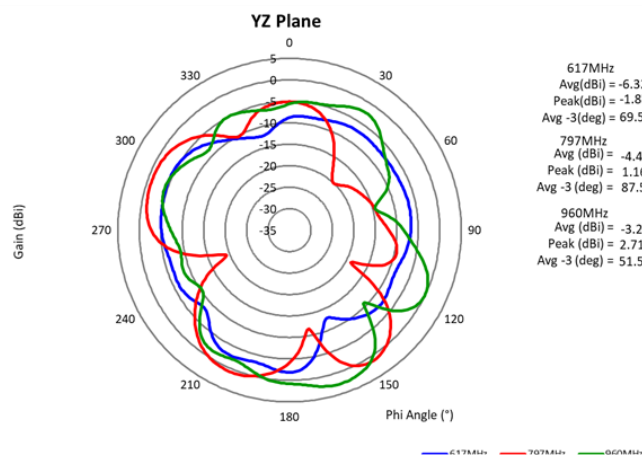
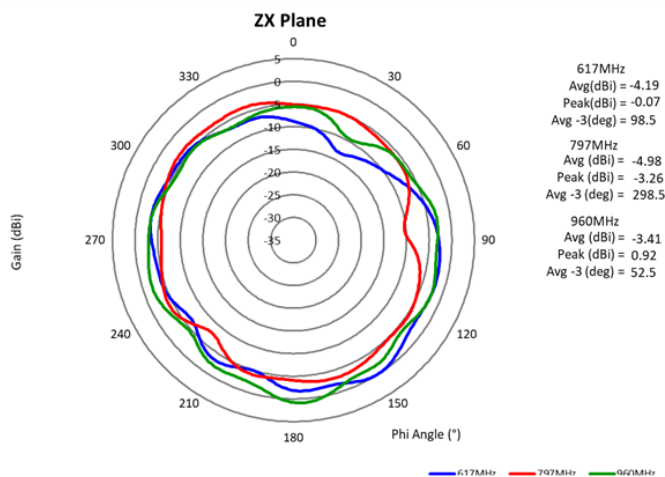
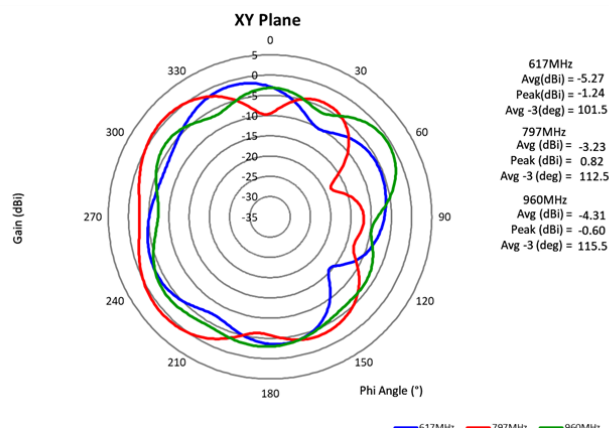
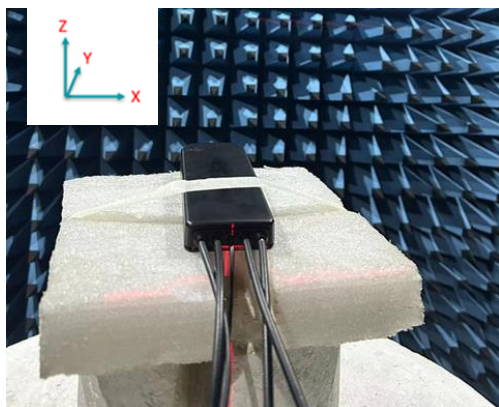
LNA Gain and out-of-band rejection



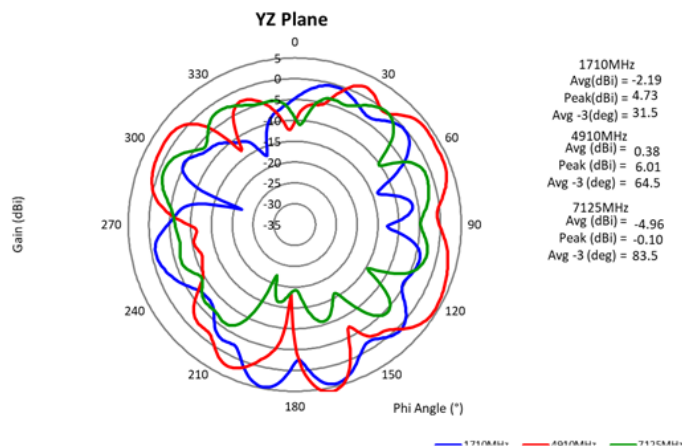
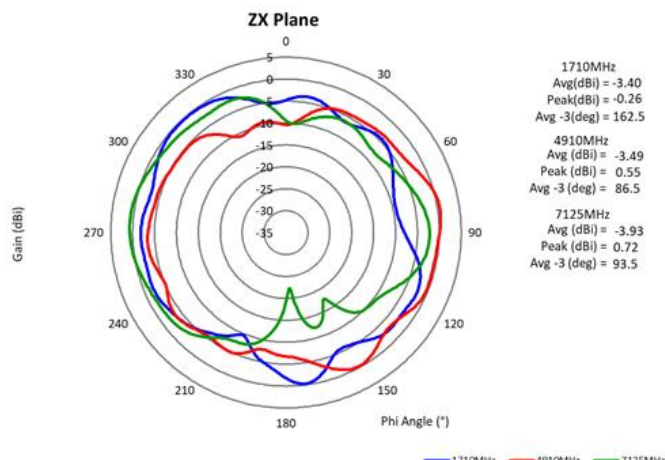
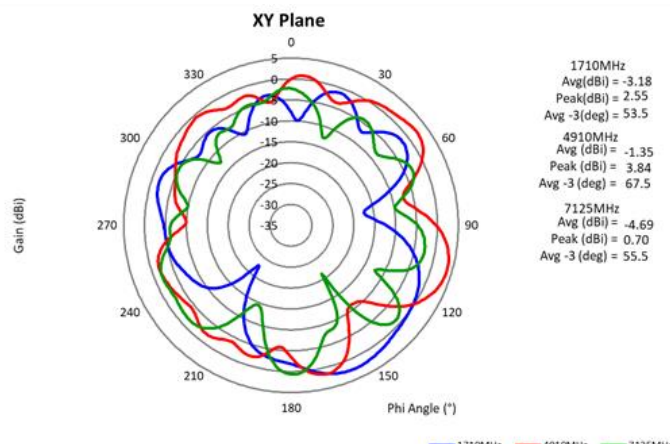
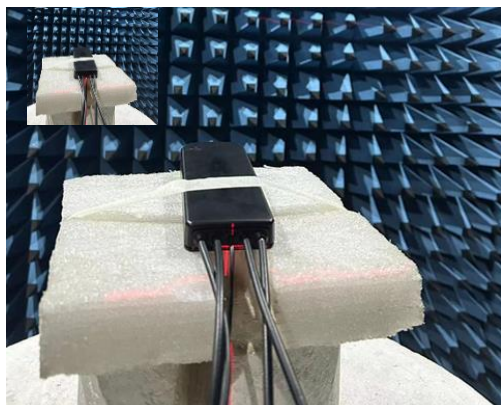
Charts

Test data
5G NR-1 Antennas

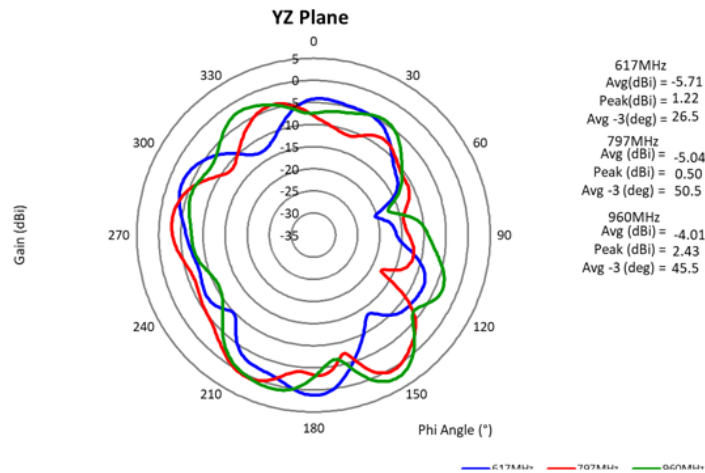
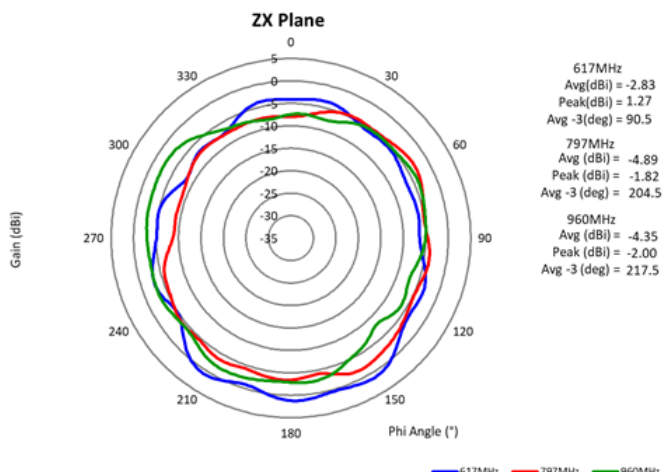
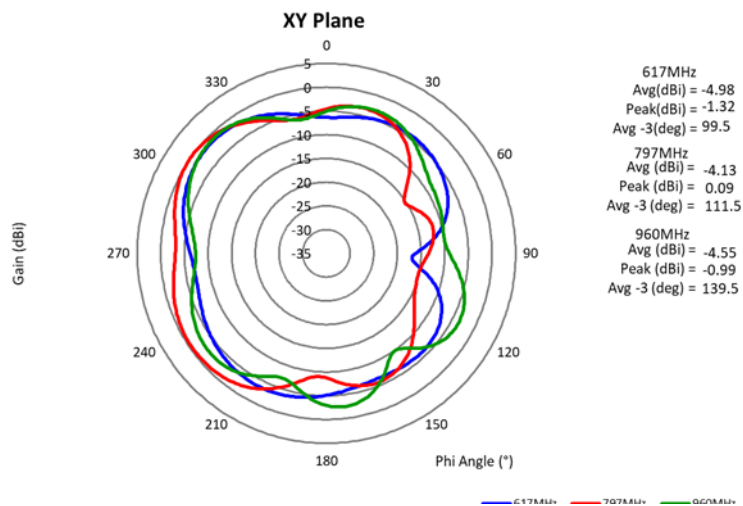
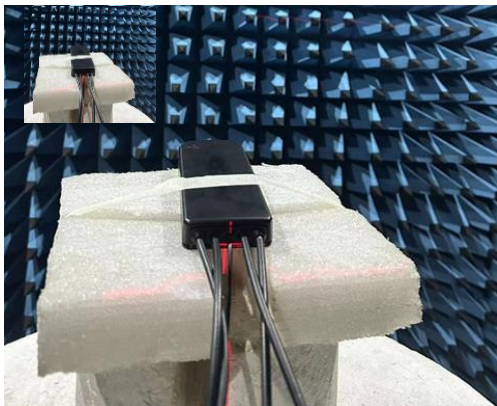
Radiation Pattern



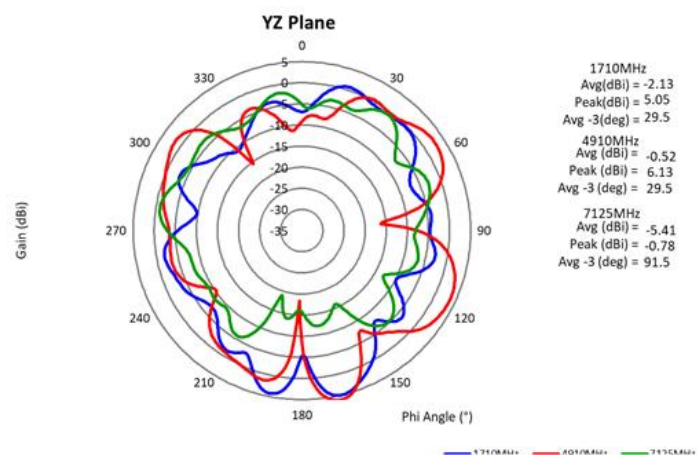
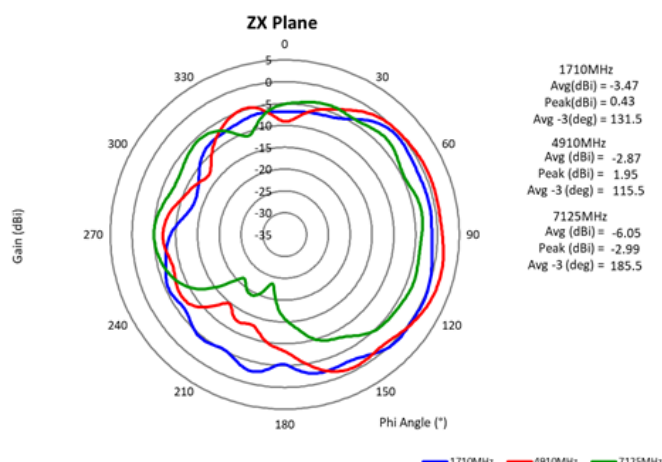
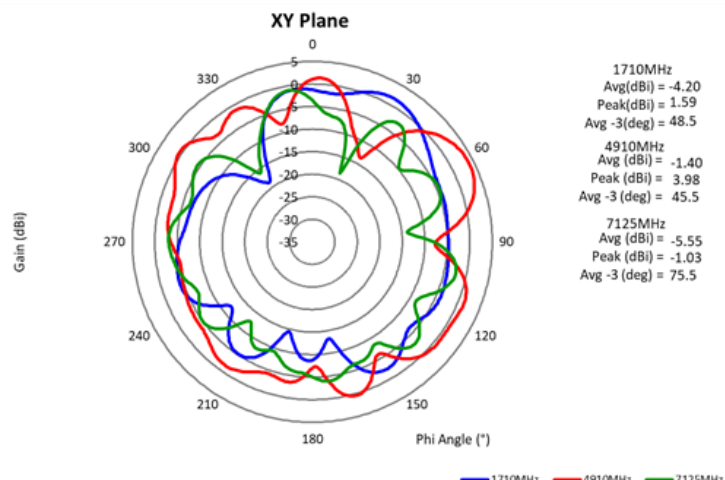
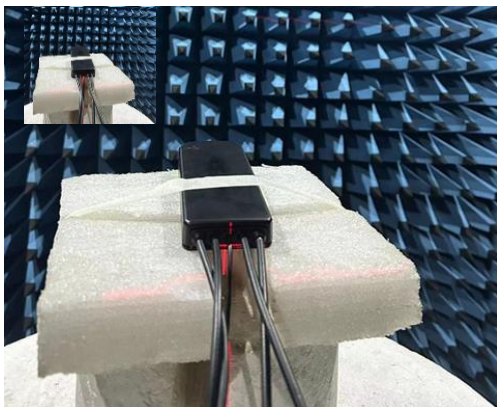
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Test data
5G NR-1 Antennas

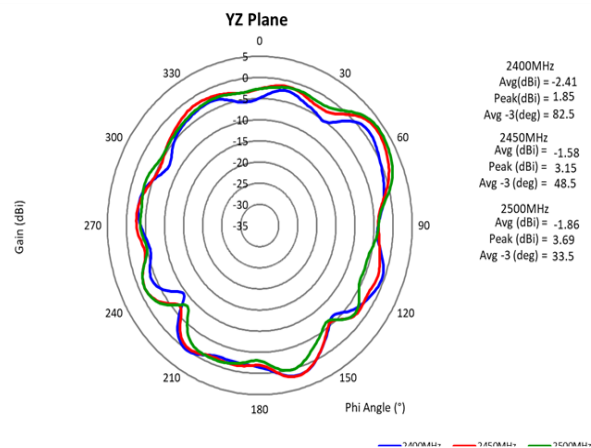
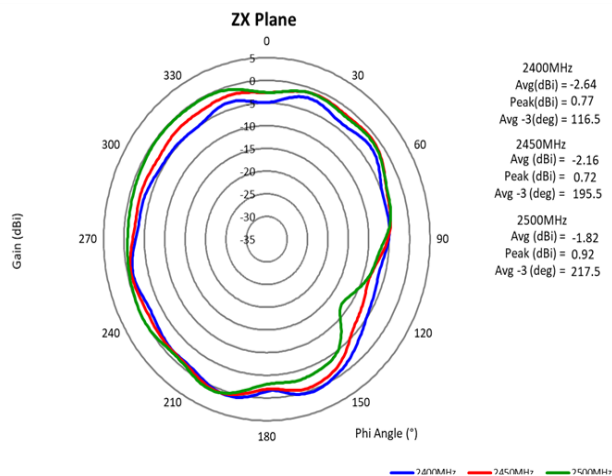
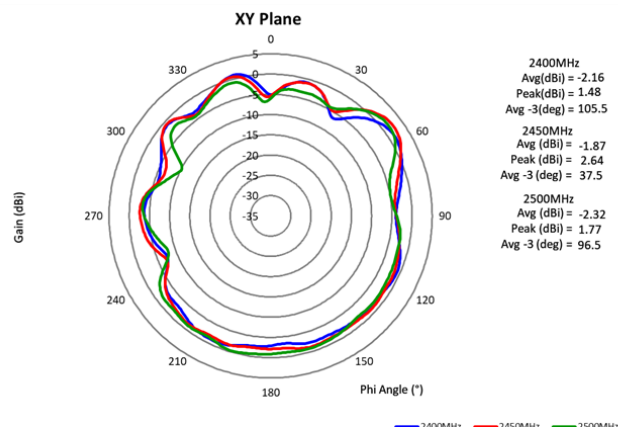
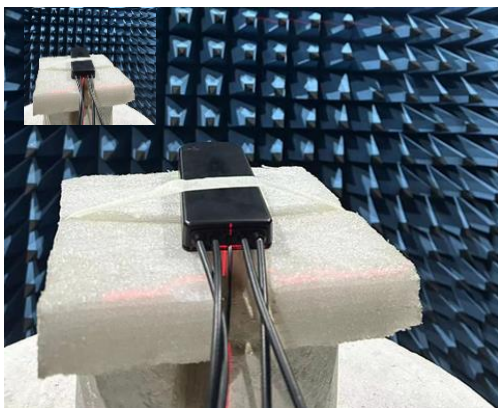
Charts

Test data
5G NR-2 Antennas

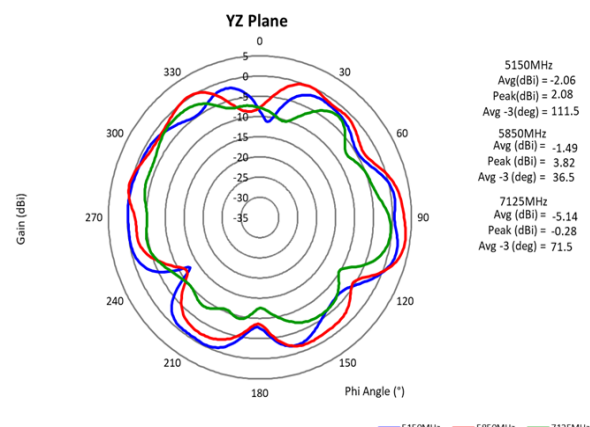
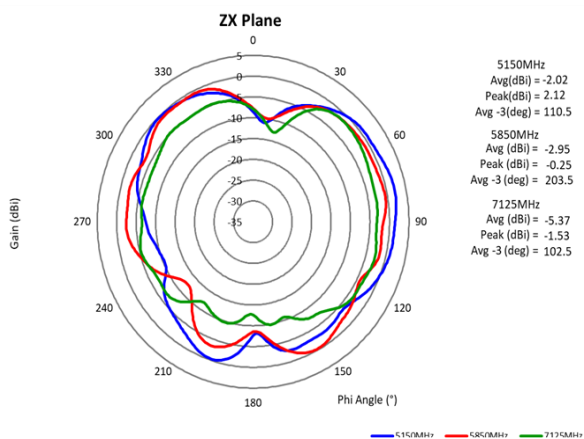
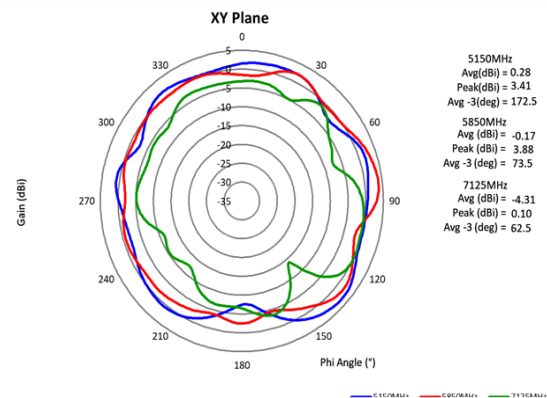
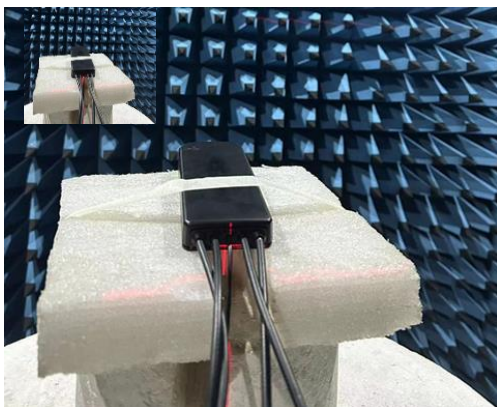
Charts

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5G NR-2 Antennas

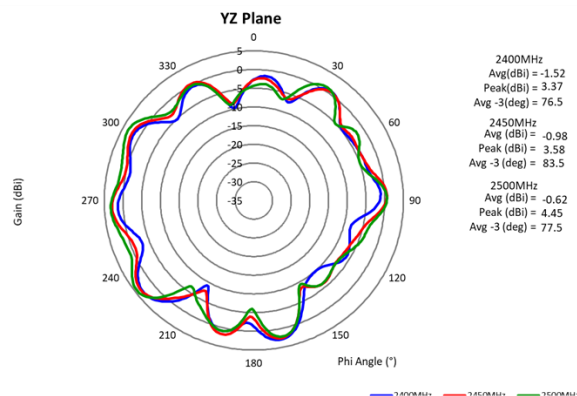
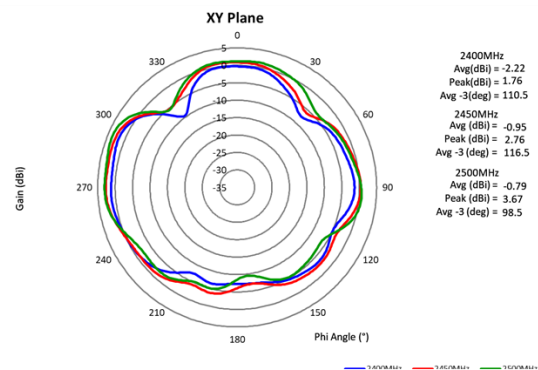
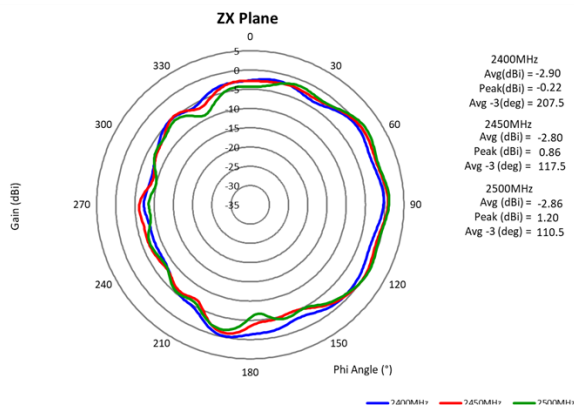
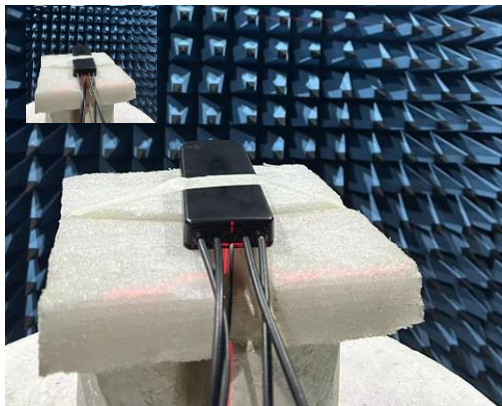
Charts

 Test data
 WIFI-1 Antennas


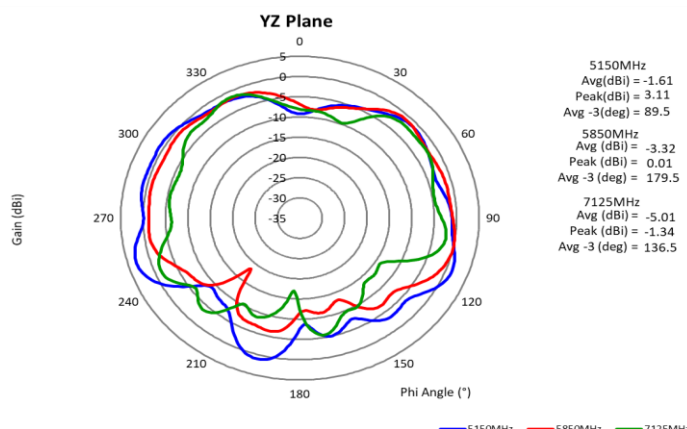
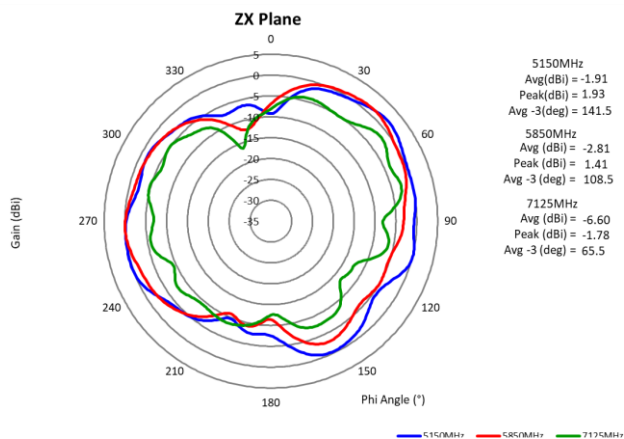
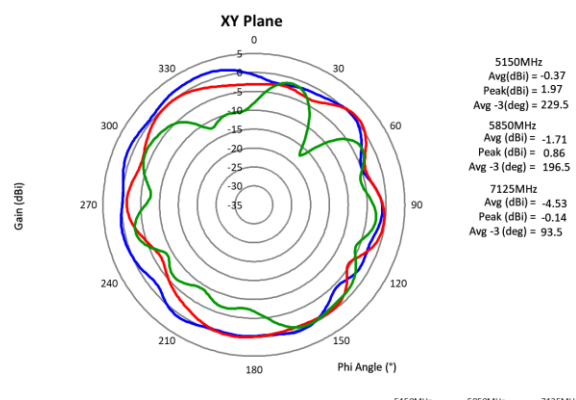
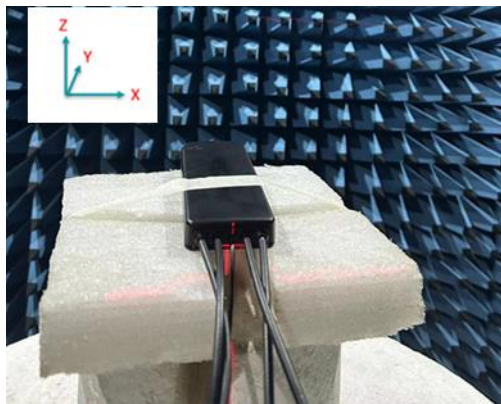
Charts

Test data
WIFI-1 Antennas

Charts

Test data
WIFI-2 Antennas

Charts

Test data
WIFI-2 Antennas

Packing

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TBD

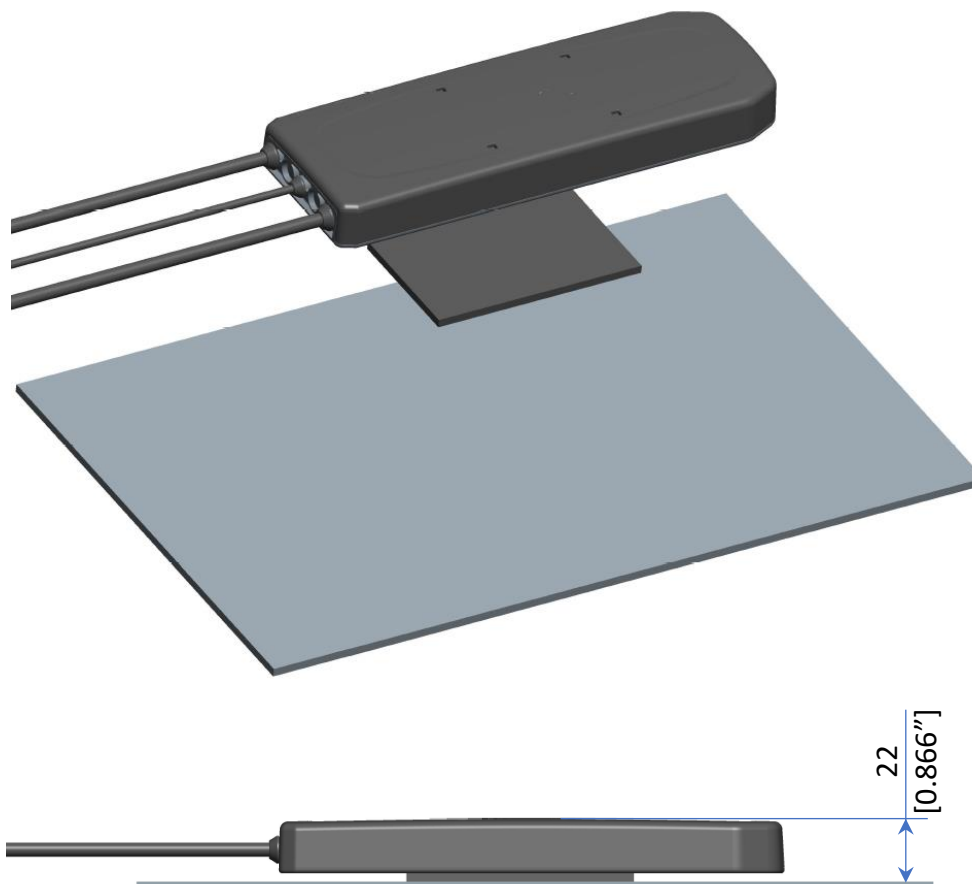
Assembly

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Option 1

Tap Mount

Apply to the surface of the glass fiber or plastic material, the antenna could be adhered on the surface by the 3MVHB adhesive tape (3M VHB4959 80X50mm).



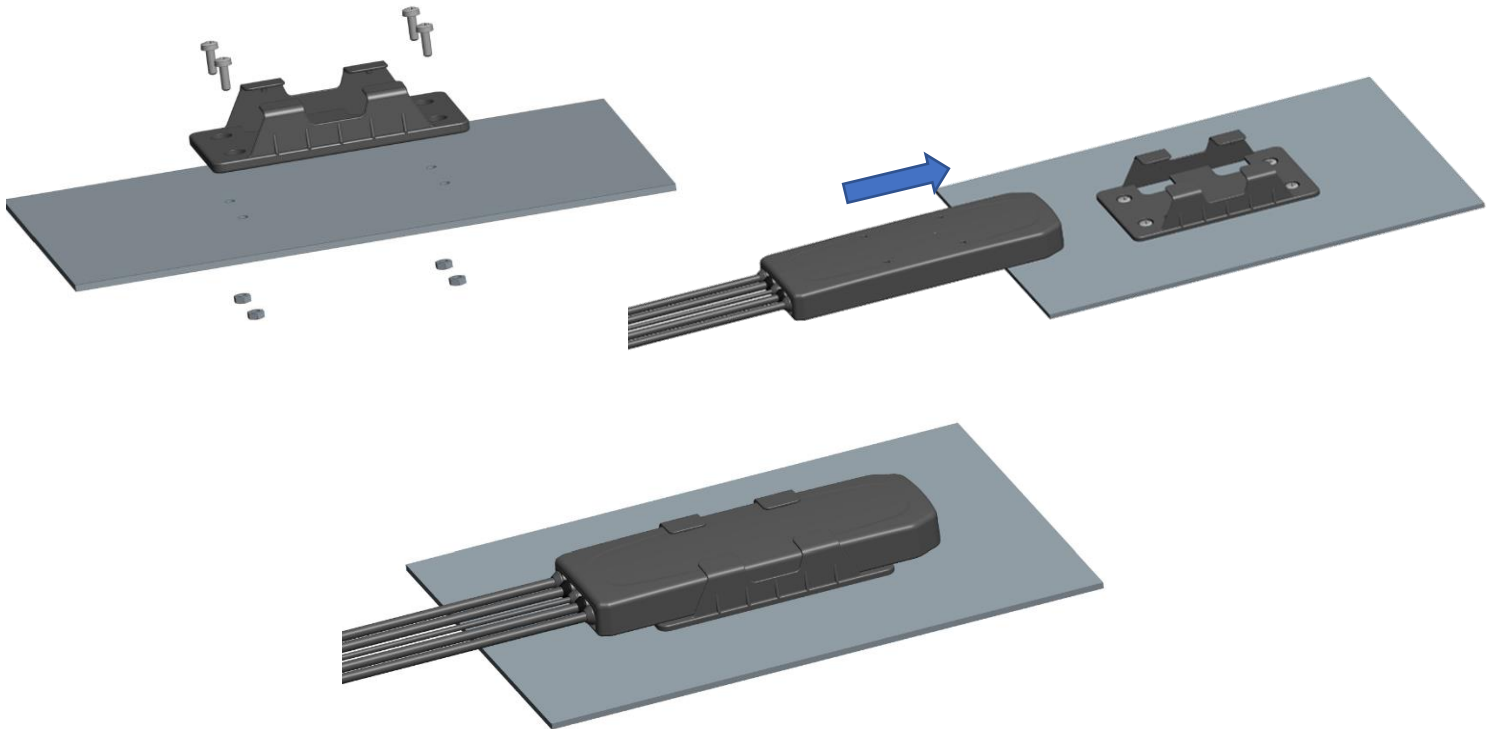
Assembly

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Option 2

Plastic Bracket Mount

Firstly, fix the bracket on the customer side with 4pcs M4 screws and 4pcs M4 nuts;
Then push the antenna into the plastic bracket.



For More Information:

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