



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

CDB52211AM

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

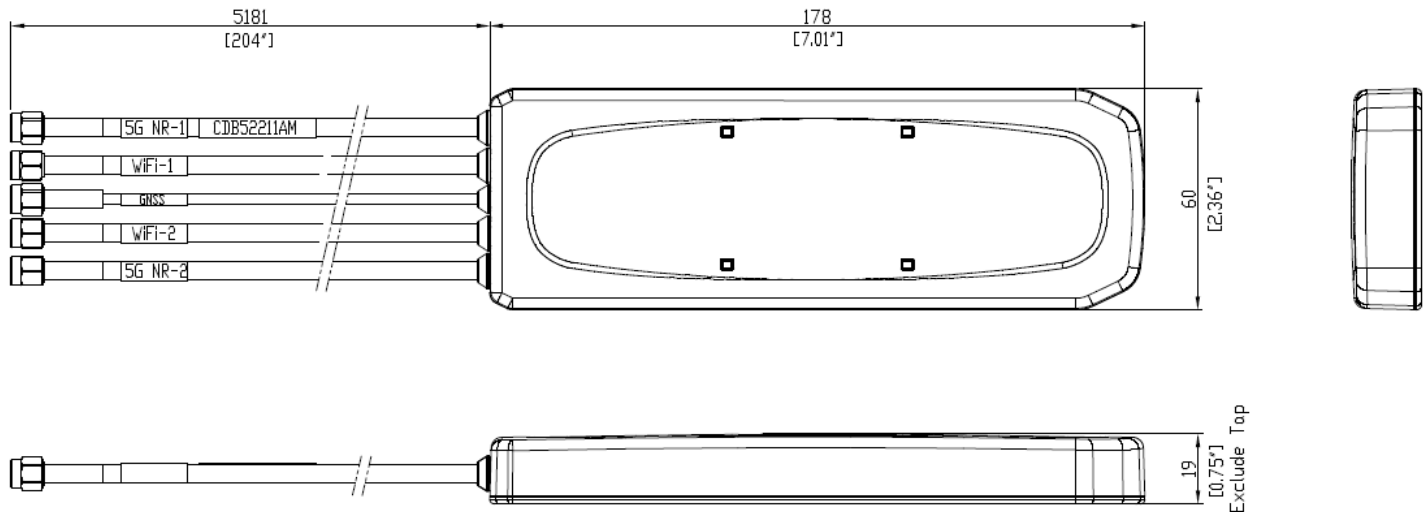
CDB52211AM

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

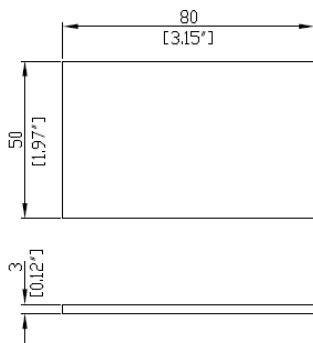
Mechanical Drawing

CDB52211AM

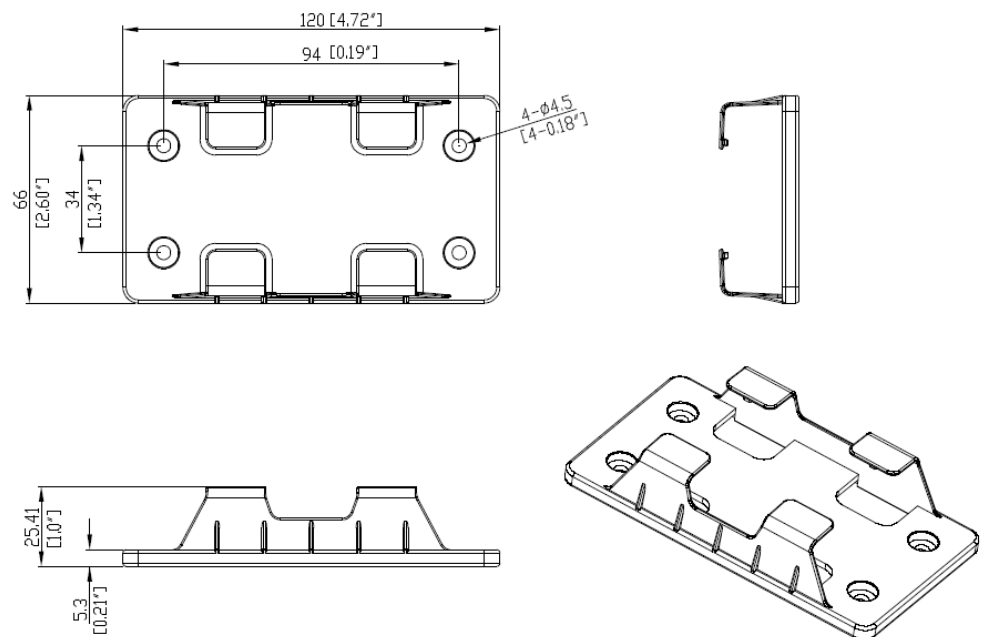
Antenna



3M VHB Tape



Plastic Bracket



*Tape and bracket package separately

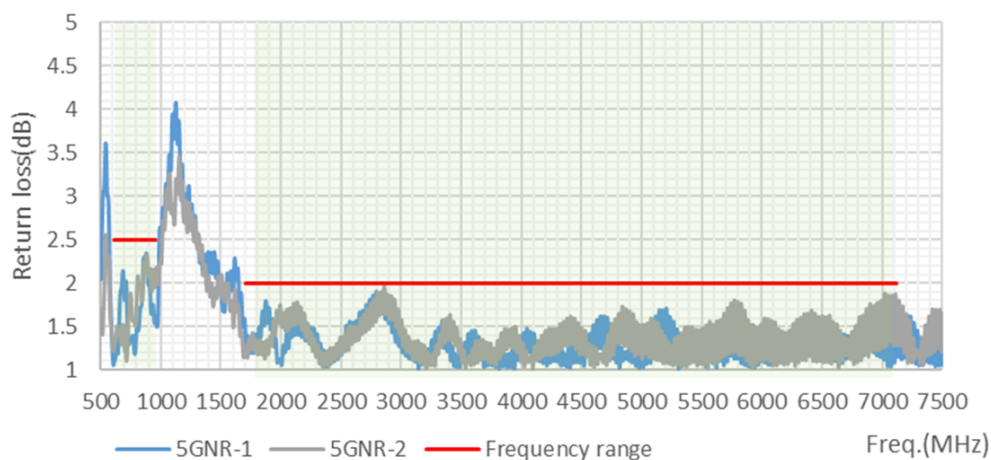
Unit: mm/ inches

Charts

Test data
5G NR Antennas

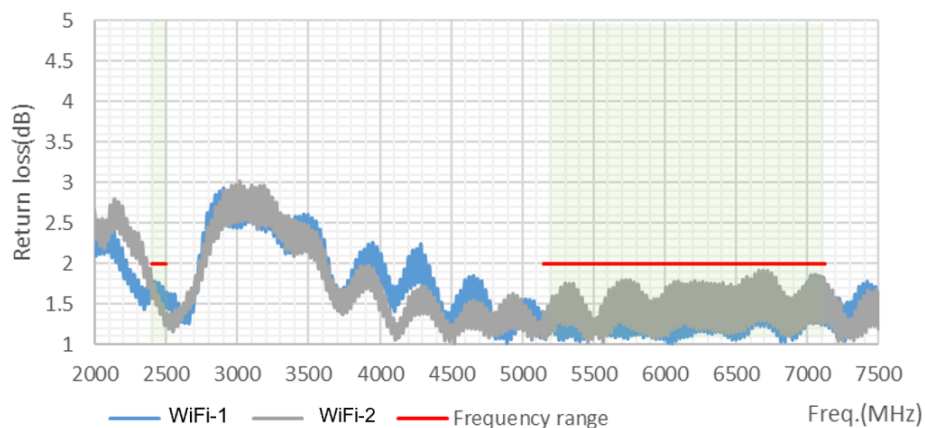
VSWR vs Frequency

Measured in PSU 20230510



VSWR vs Frequency

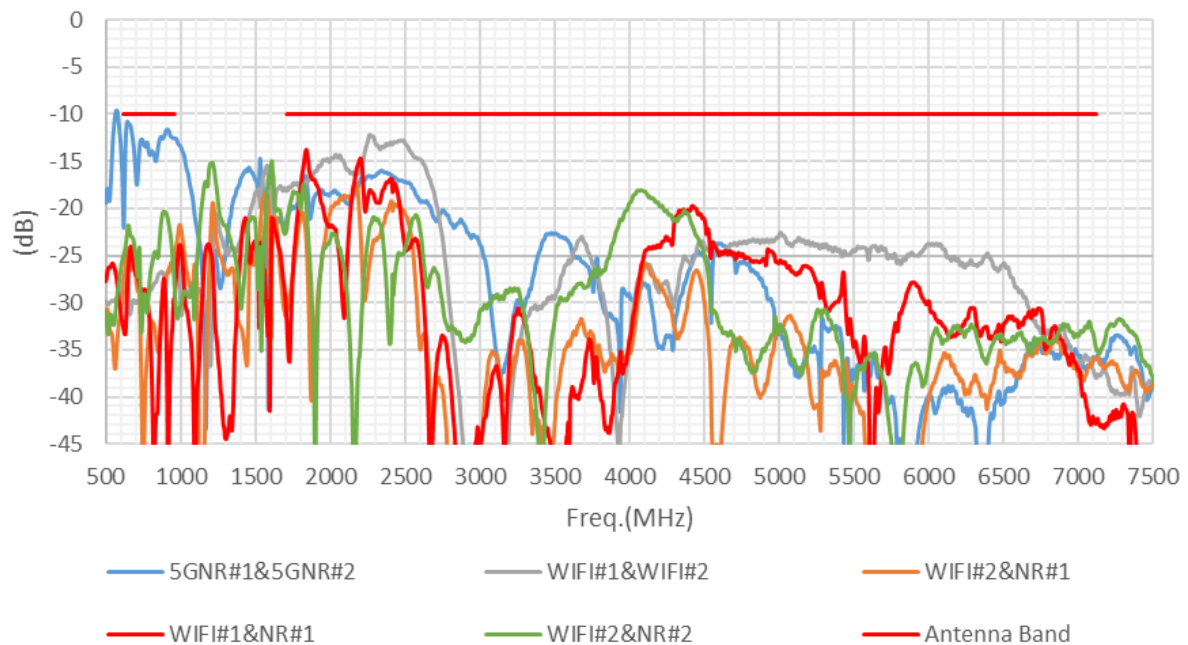
Measured in PSU 20230510



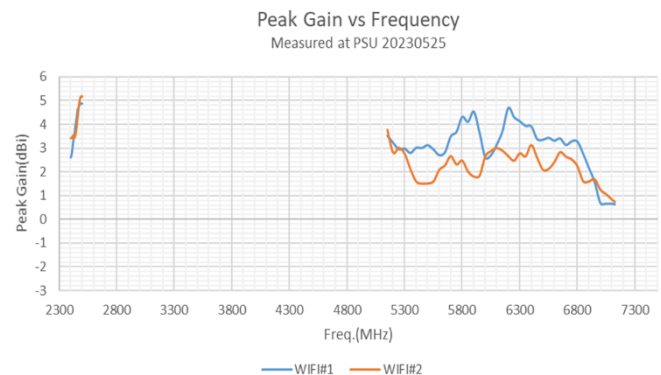
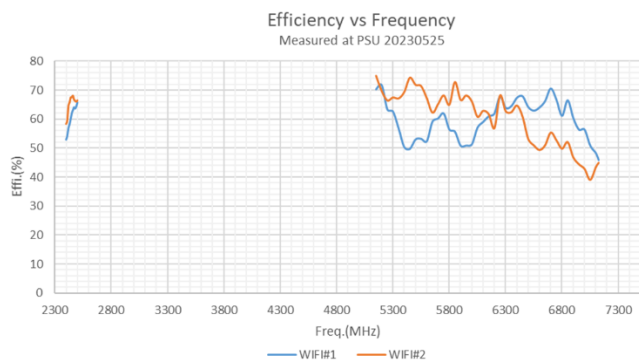
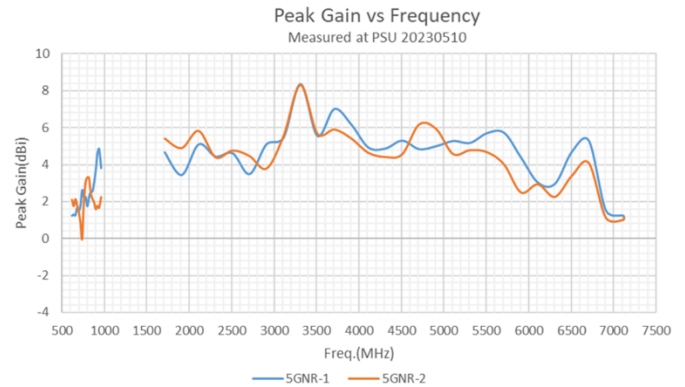
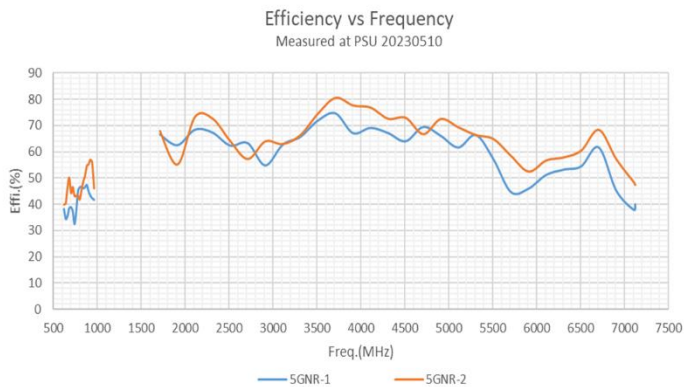
*antenna VSWR test in free space and 10-ft cables

Isolation vs Frequency

Measured at PSU 20230510

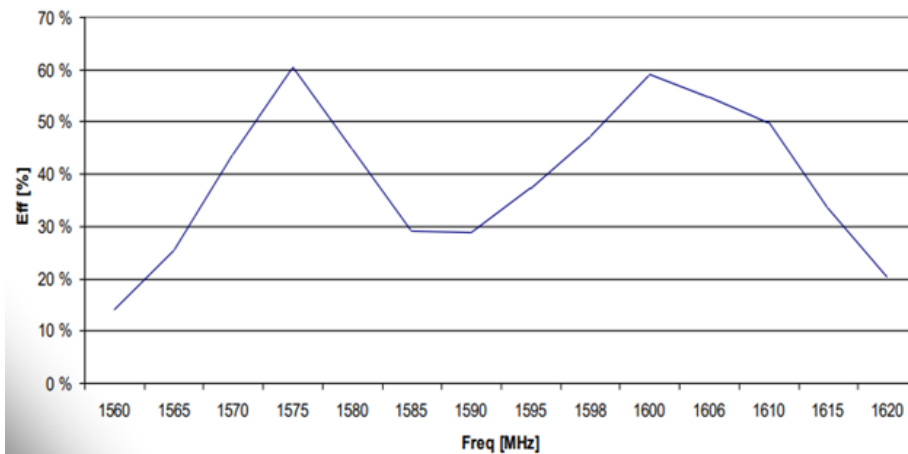


Charts

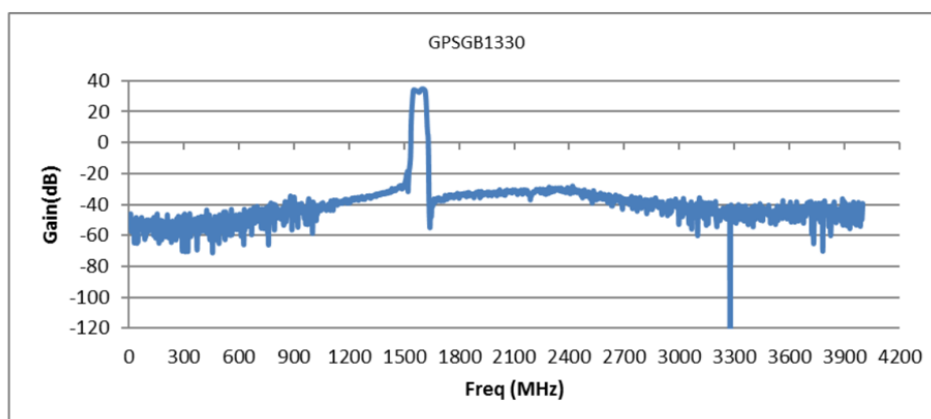
Test data
5G NR Antennas

* antenna test in free space and 1-ft cables

Charts

Test data
GNSS Antenna

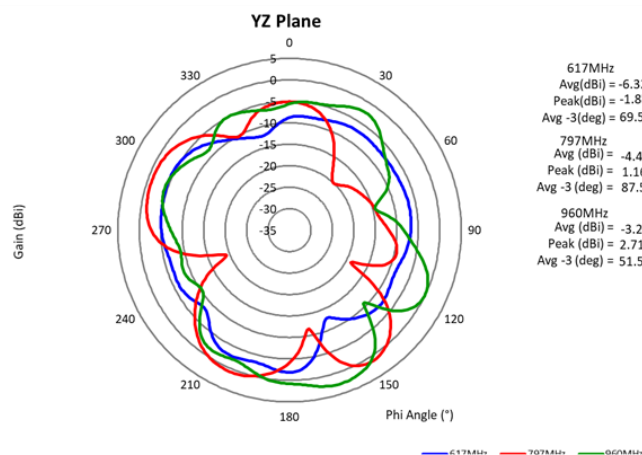
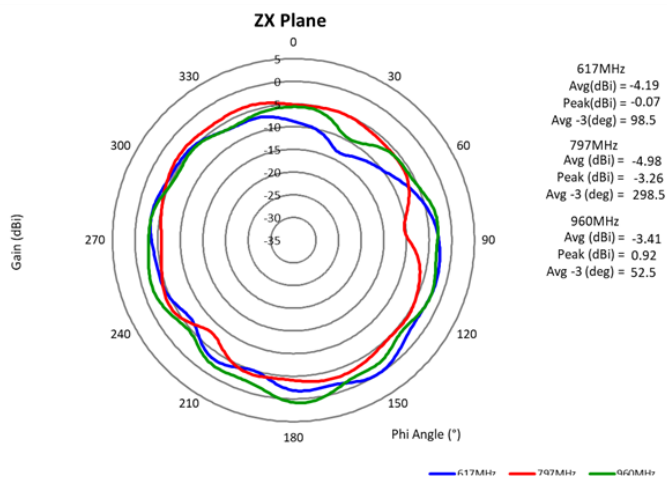
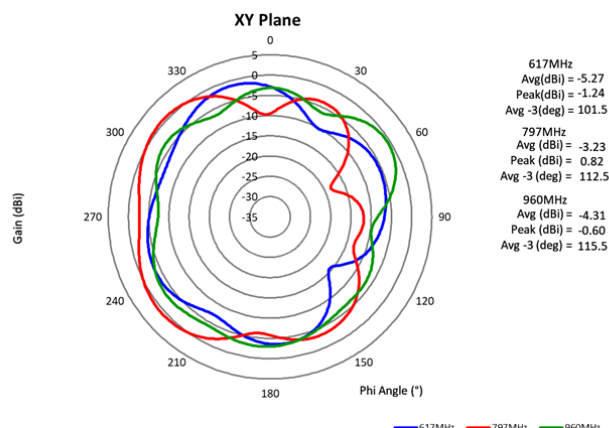
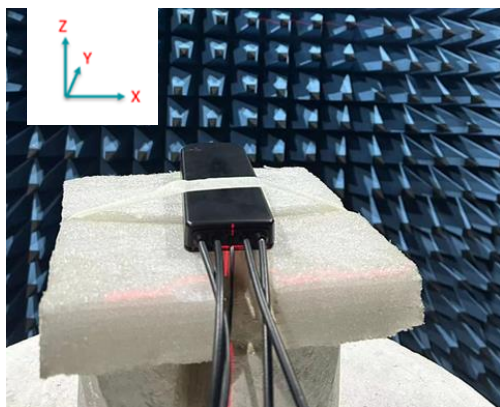
LNA Gain and out-of-band rejection



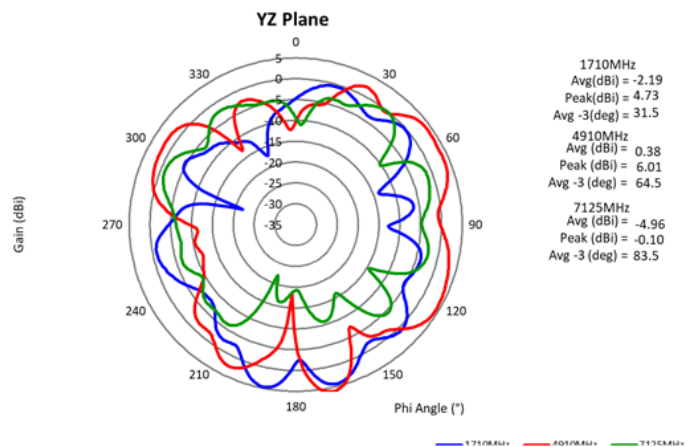
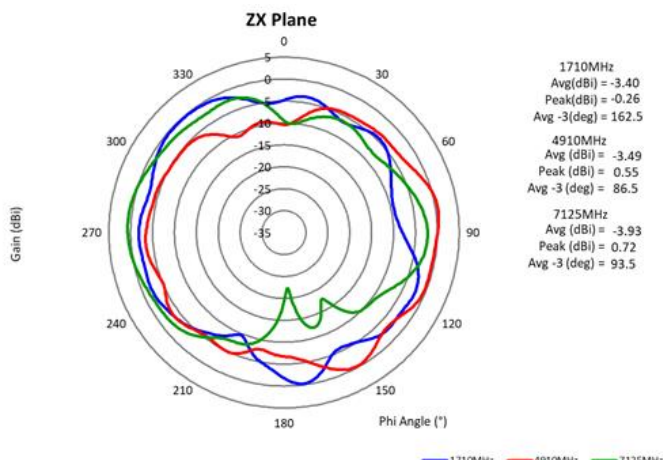
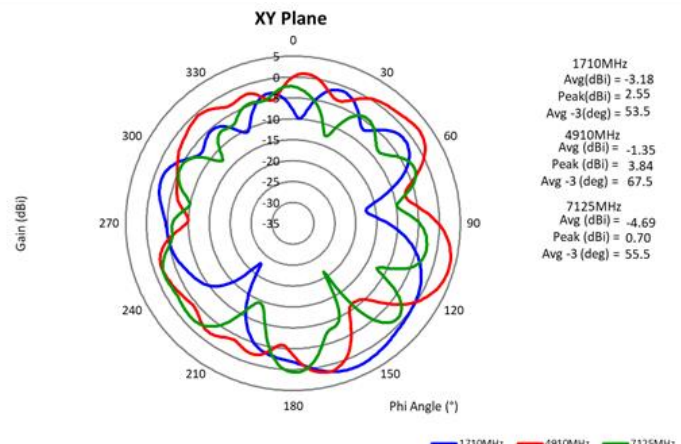
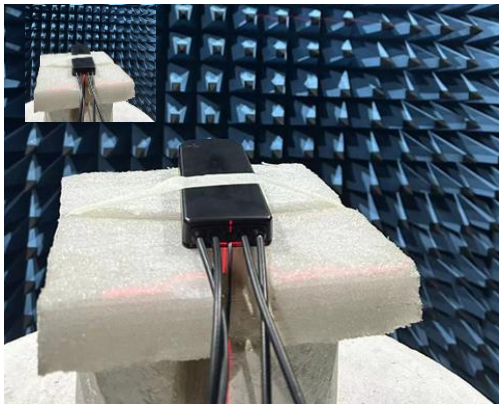
Charts

Test data
5G NR-1 Antennas

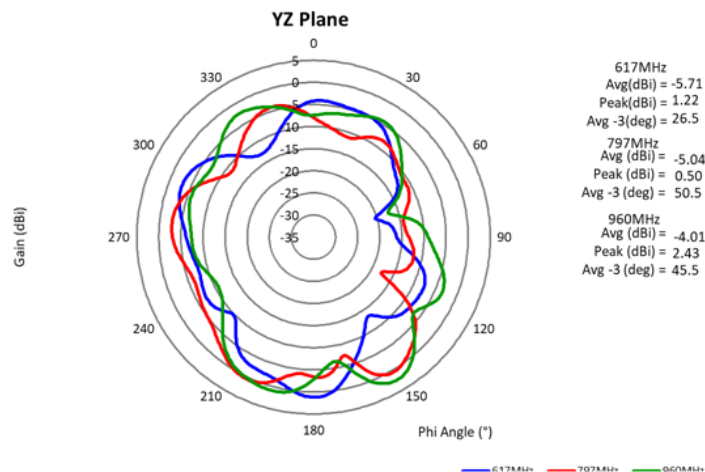
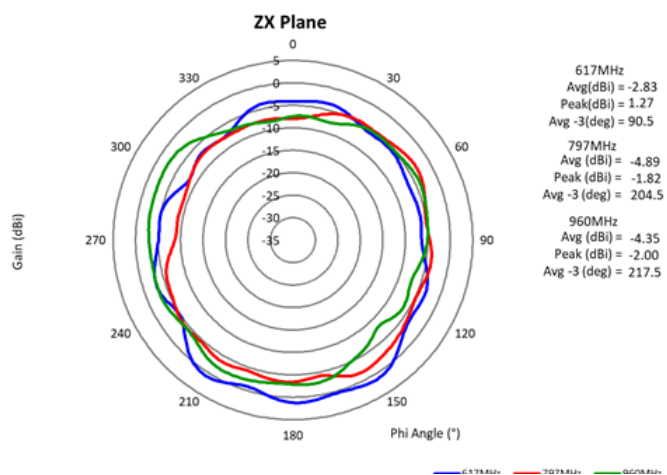
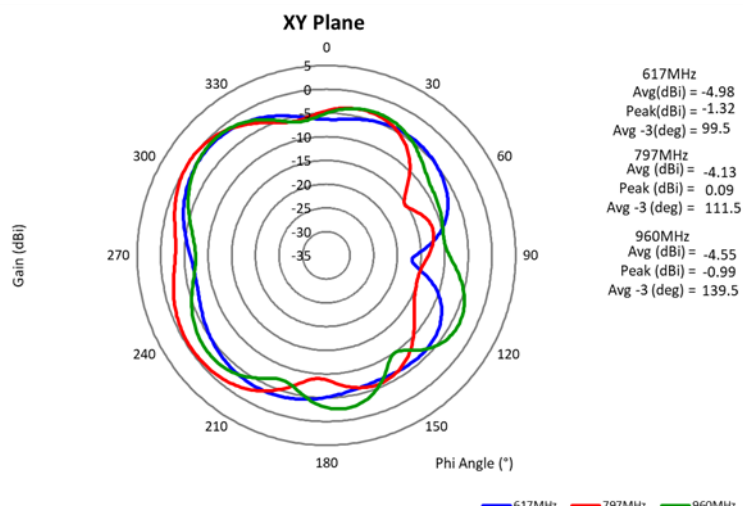
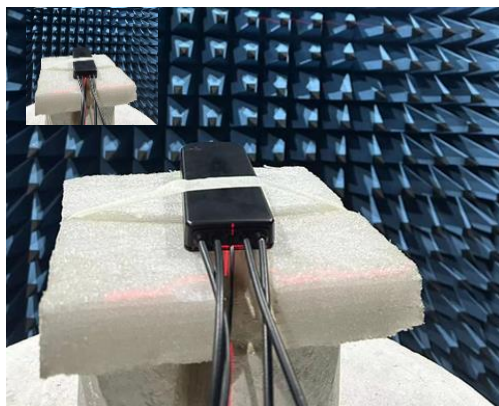
Radiation Pattern



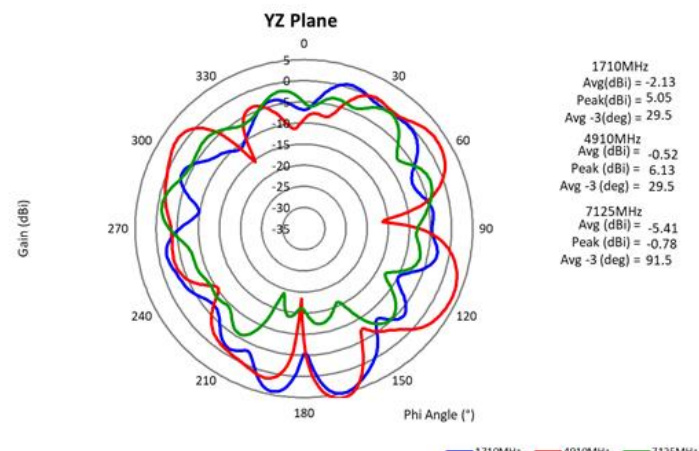
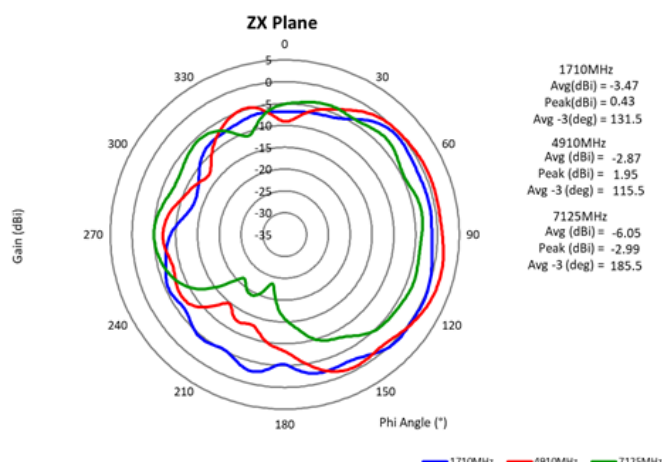
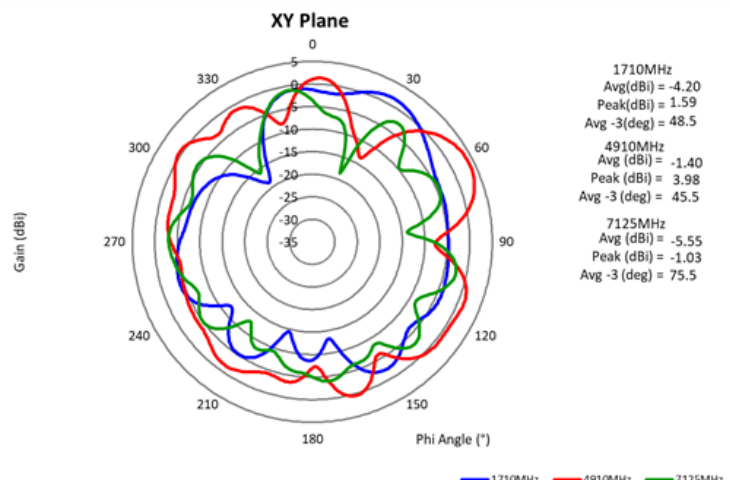
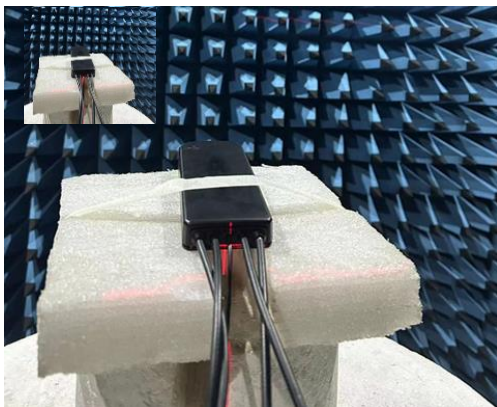
Charts

Test data
5G NR-1 Antennas

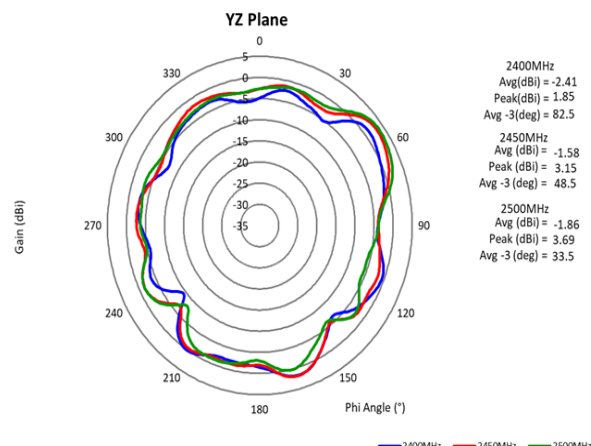
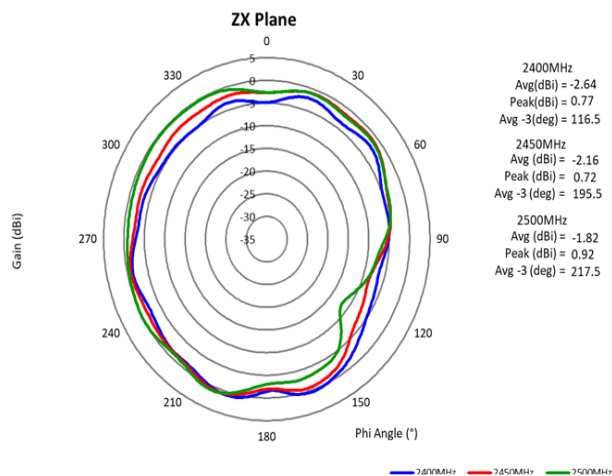
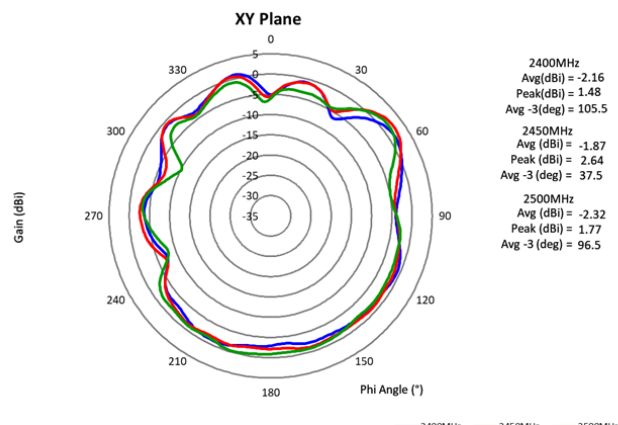
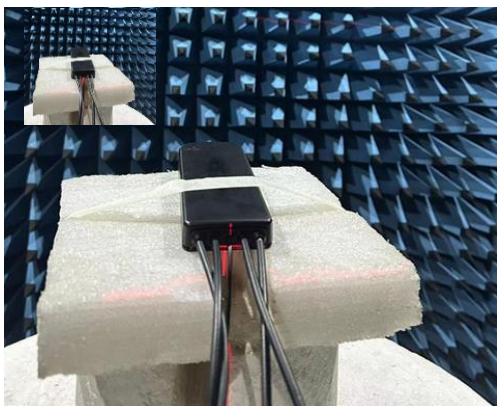
Charts

 Test data
 5G NR-2 Antennas


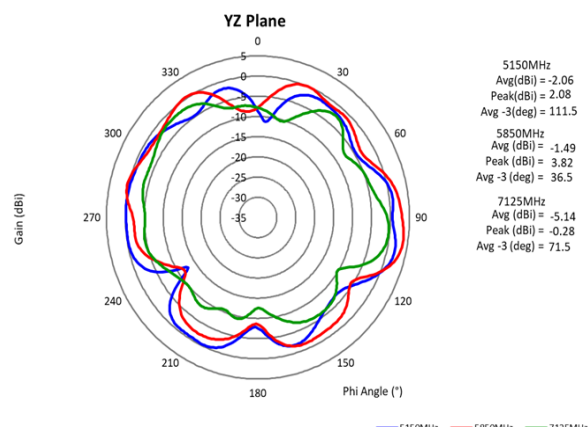
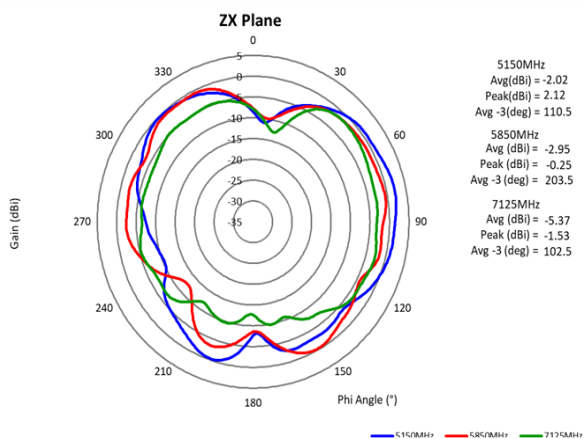
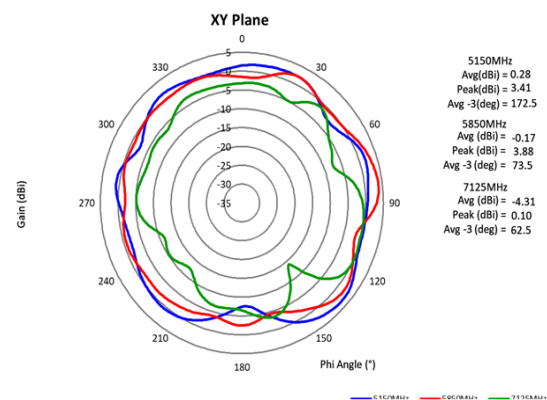
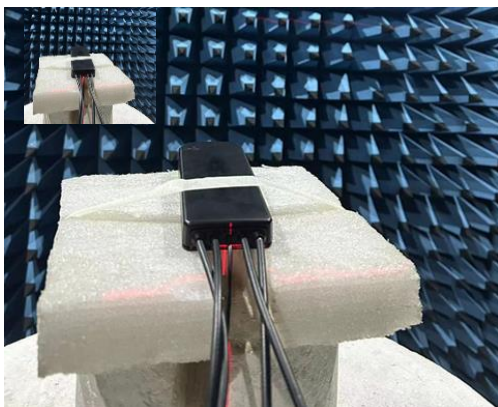
Charts

Test data
5G NR-2 Antennas

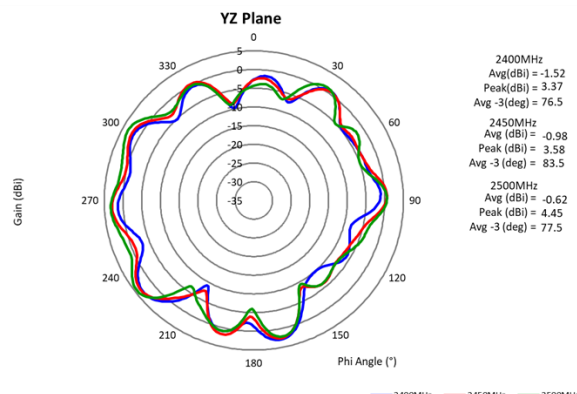
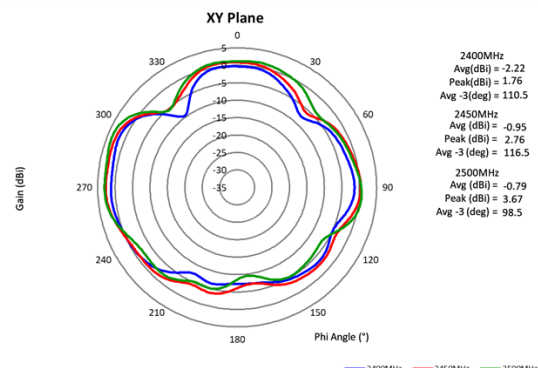
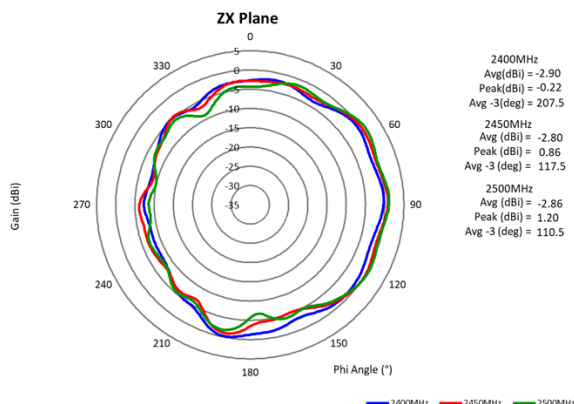
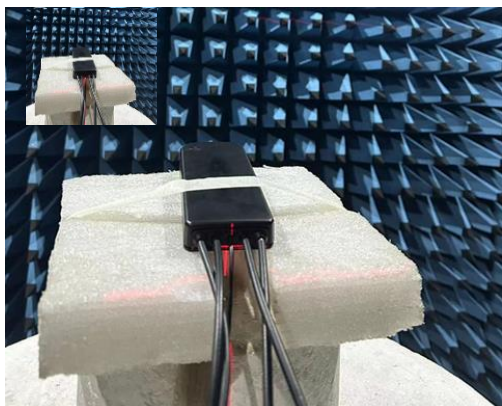
Charts

 Test data
 WIFI-1 Antennas


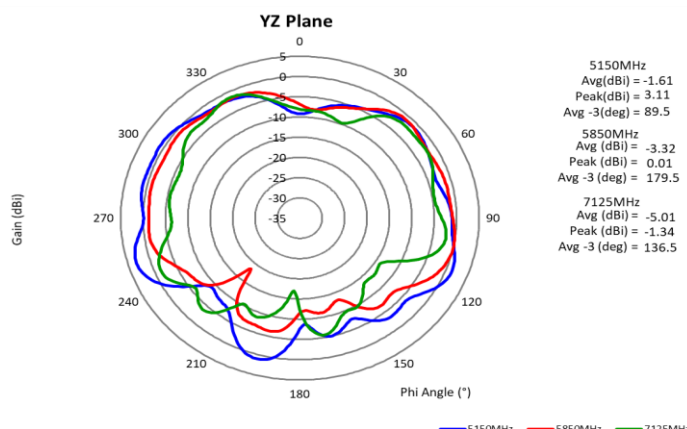
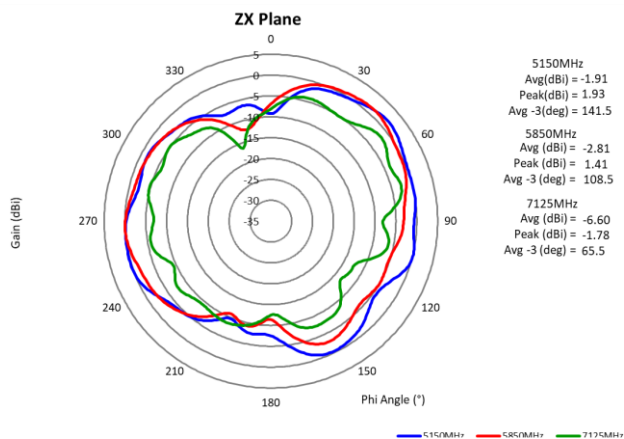
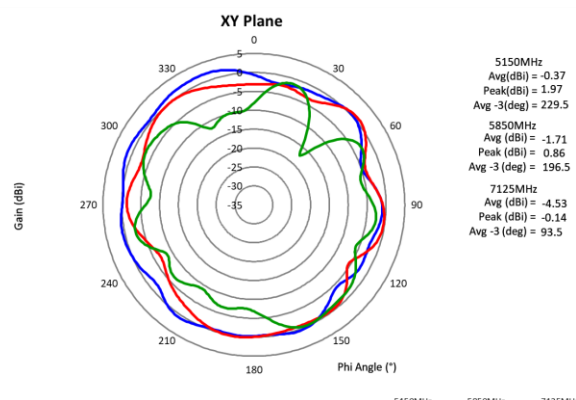
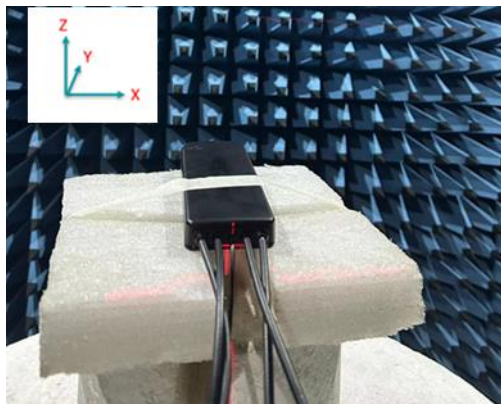
Charts

 Test data
 WIFI-1 Antennas


Charts

Test data
WIFI-2 Antennas

Charts

Test data
WIFI-2 Antennas

Packing

CDB52211AM

TBD

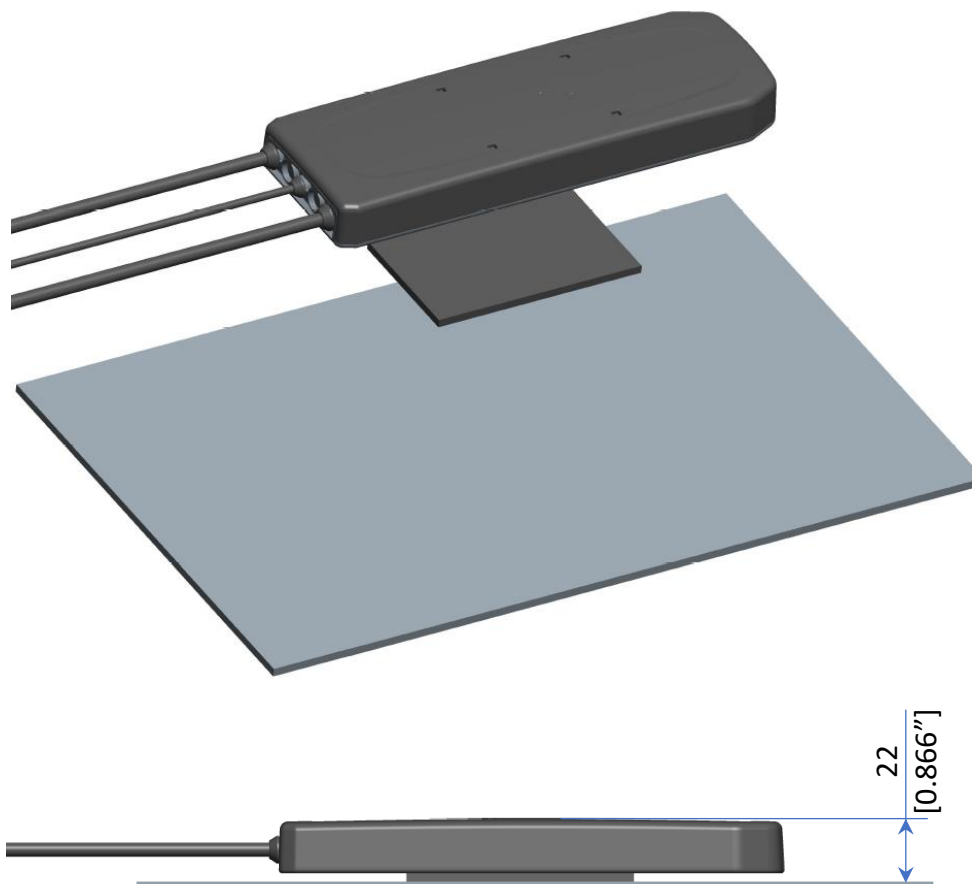
Assembly

CDB52211AM

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).



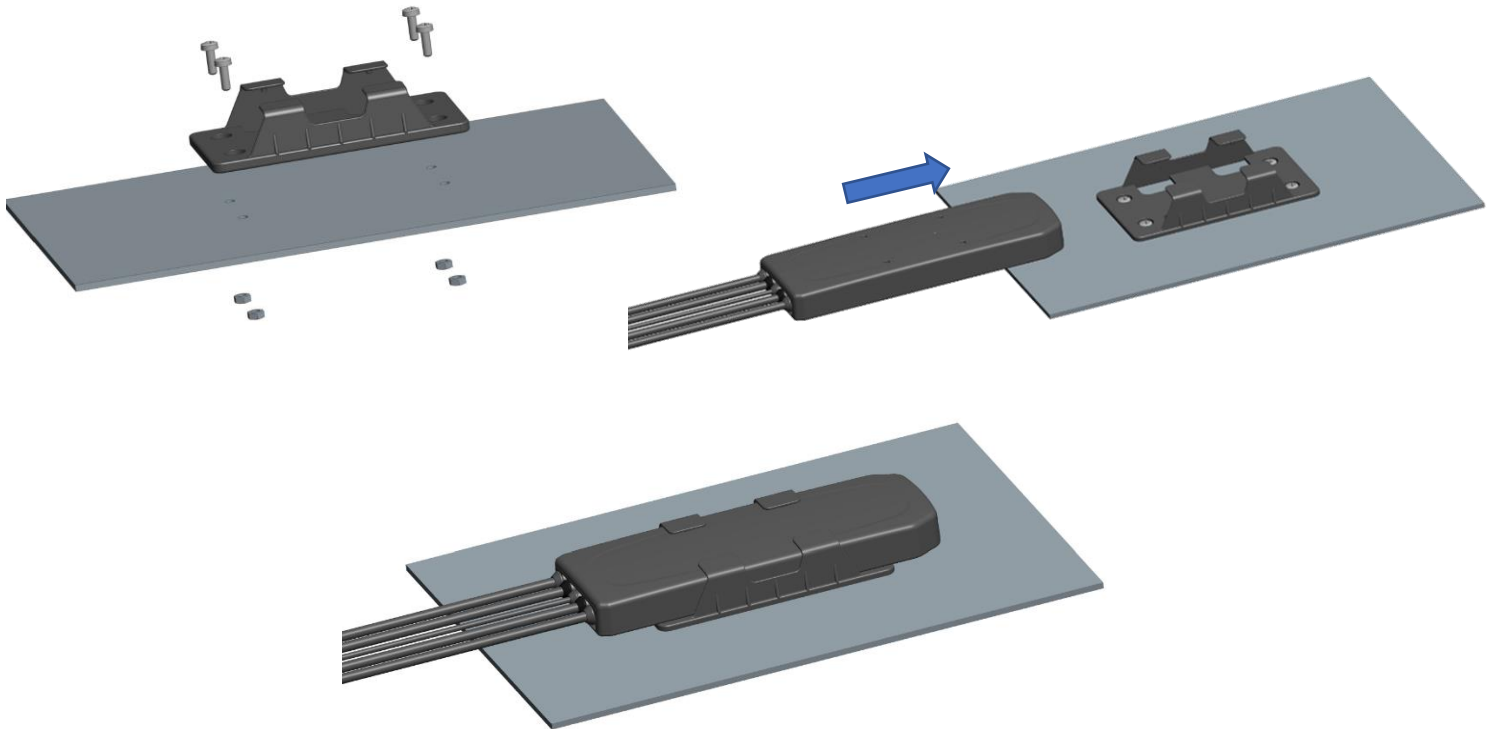
Assembly

CDB52211AM

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:

Americas - antennas.us@pulseelectronics.com | Europe – antennas.eu@pulseelectronics.com | Asia – antennas.as@pulseelectronics.com | Questions? +1-800-ANTENNA
Performance warranty of products offered on this data sheet is limited to the parameters specified. Data is subject to change without notice. Other brand and product names mentioned herein may be trademarks or registered trademarks of their respective owners. © Copyright , 2020. Pulse Electronics, Inc. All rights reserved.
Company address: Pulse Electronics, a YAGEO Company, 15255 Innovation Drive, Suite #100, San Diego, CA 92128

'YAGEO Corporation and its affiliates do not recommend the use of commercial, automotive, and/or COTS grade products for high reliability applications or manned space flight.'