



TAOGLAS®



Datasheet

Guardian

Part No:
MA910.A.CG.001

Description:

Guardian 2-in-1 Adhesive Mount Combination Antenna with
2*Wi-Fi MIMO

Features:

Low-Profile Adhesive Mount Housing – Mounts Flush to Wall
2* Wi-Fi (including Wi-Fi 6) MIMO 2.4GHz/5.8/7.1GHz
IP67 Waterproof Resistant Enclosure
Cable: 3m TGC-200
Connectors: RP SMA(M)ST
Dimensions: 146 * 134 * 20 mm
RoHS & Reach Compliant

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1. Introduction



The MA910 Guardian is a low-profile 2-in-1 Wi-Fi (with Wi-Fi 6 included) MIMO adhesive mount external antenna. As part of the first series of panel antenna worldwide designed for IoT gateway and router devices, it belongs to a new generation of combination antenna. The antenna functions at all Wi-Fi frequencies (2.4-2.5GHz, 5-7.125GHz) meaning it is a future-proof solution for any devices

The MA910 Guardian is ideal for Wi-Fi applications requiring the increased data throughput and range provided by MIMO technology, all in a convenient and compact form factor. It is designed with high efficiency and gain as well as high isolation between the antennas to prevent self-interference. Low loss cables are used to keep efficiency high over long cable lengths. With its heavy-duty, fully IP67 casing, the MA910 Guardian can withstand a range of environments.

All these factors make the MA910 Guardian antenna an excellent choice for use by RF professionals in:

- IoT Gateway and Routers
- HD Video Streaming
- Transportation
- Remote monitoring applications

The standard MA910 Guardian antenna comes with 3 meter, low loss TGC-200 coaxial cable. Customized cables and connector versions are also available. Also available in white, contact your regional Taoglas customer support team for further information.

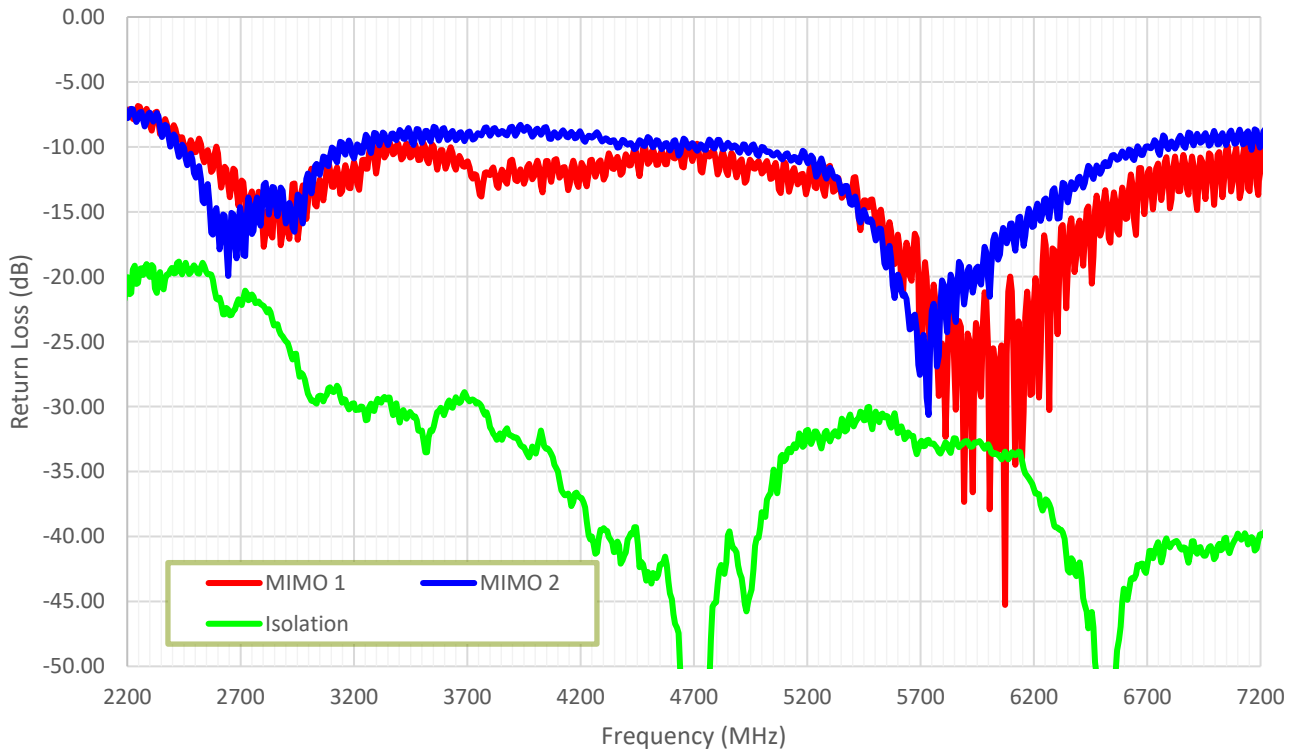
2. Specifications

Wi-Fi MIMO Free Space Electrical									
Band	Frequency (MHz)	Setup	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	Impedance	Max Power Input	Polarization	Radiation Pattern
2.4GHz Wi-Fi	2400~2500	MIMO 1	20.2	-6.9	0.8	50 Ω	10W	Linear	Omni-Directional
		MIMO2	20	-7	-0.1				
5.8GHz Wi-Fi	5150~5850	MIMO 1	20.7	-6.8	0.5				
		MIMO2	20.6	-6.9	1.6				
7.1GHz Wi-Fi 6	5925~7125	MIMO 1	25.5	-6	1.6				
		MIMO2	22	-6.8	3				

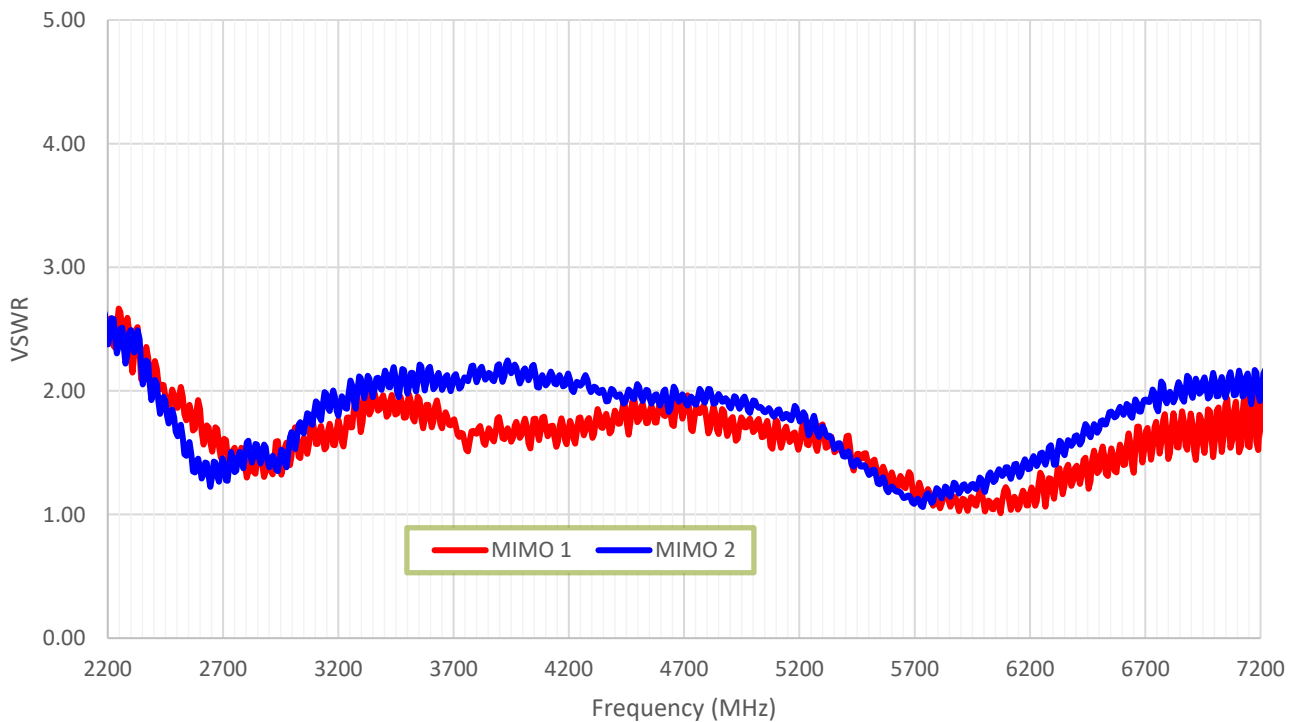
Mechanical	
Antenna Dimensions	146*134*20mm
Casing	ASA
Weight (including cable)	455g
Ingress Protection Rating	IP67
Connector	2* RP-SMA(M)
Cables	2* 3000mm TGC200
Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 90°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

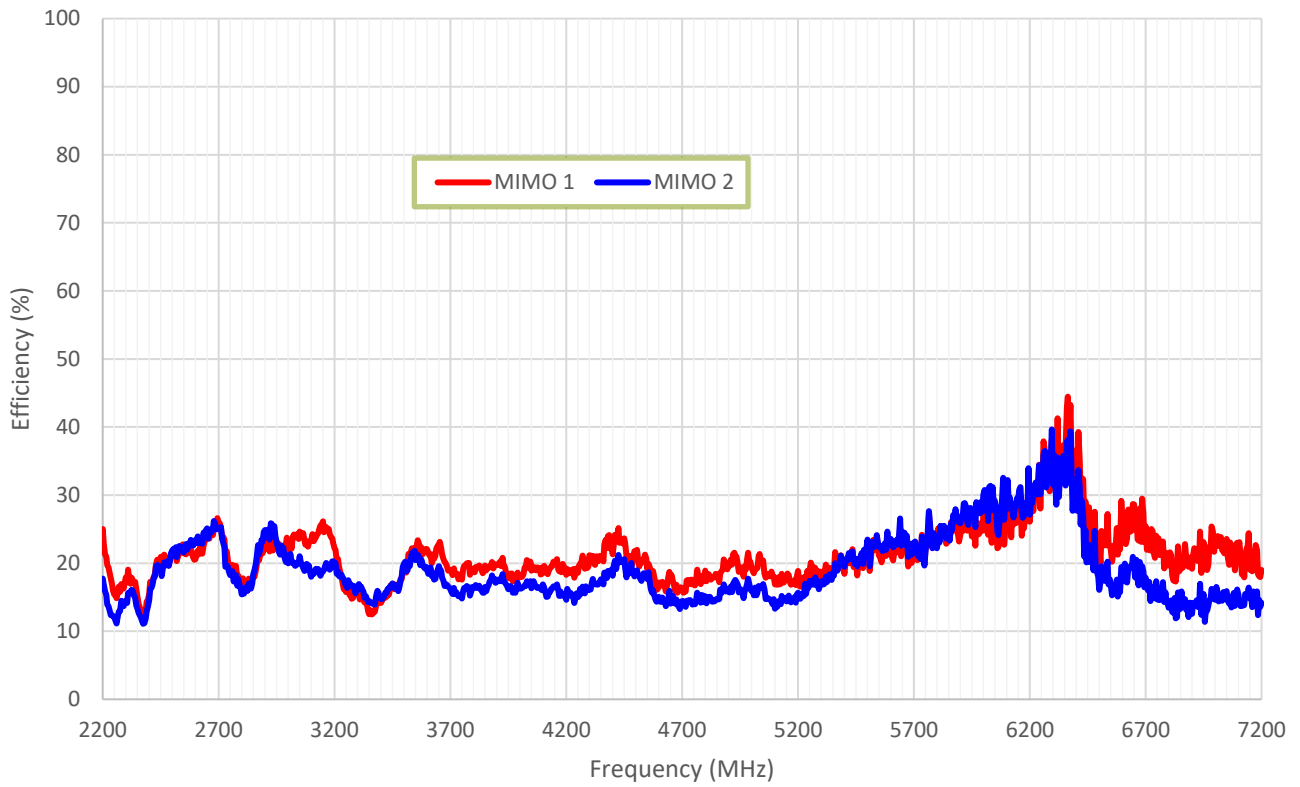
3.1 Return Loss



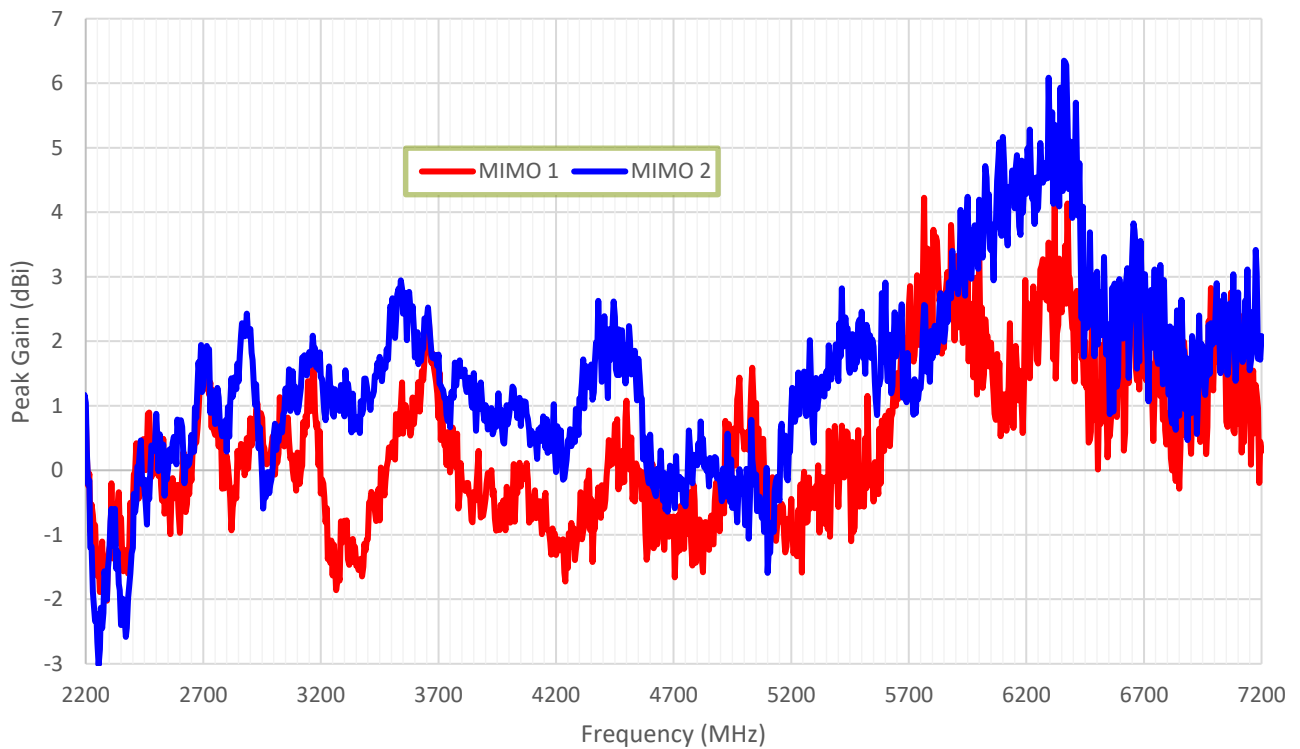
3.2 VSWR



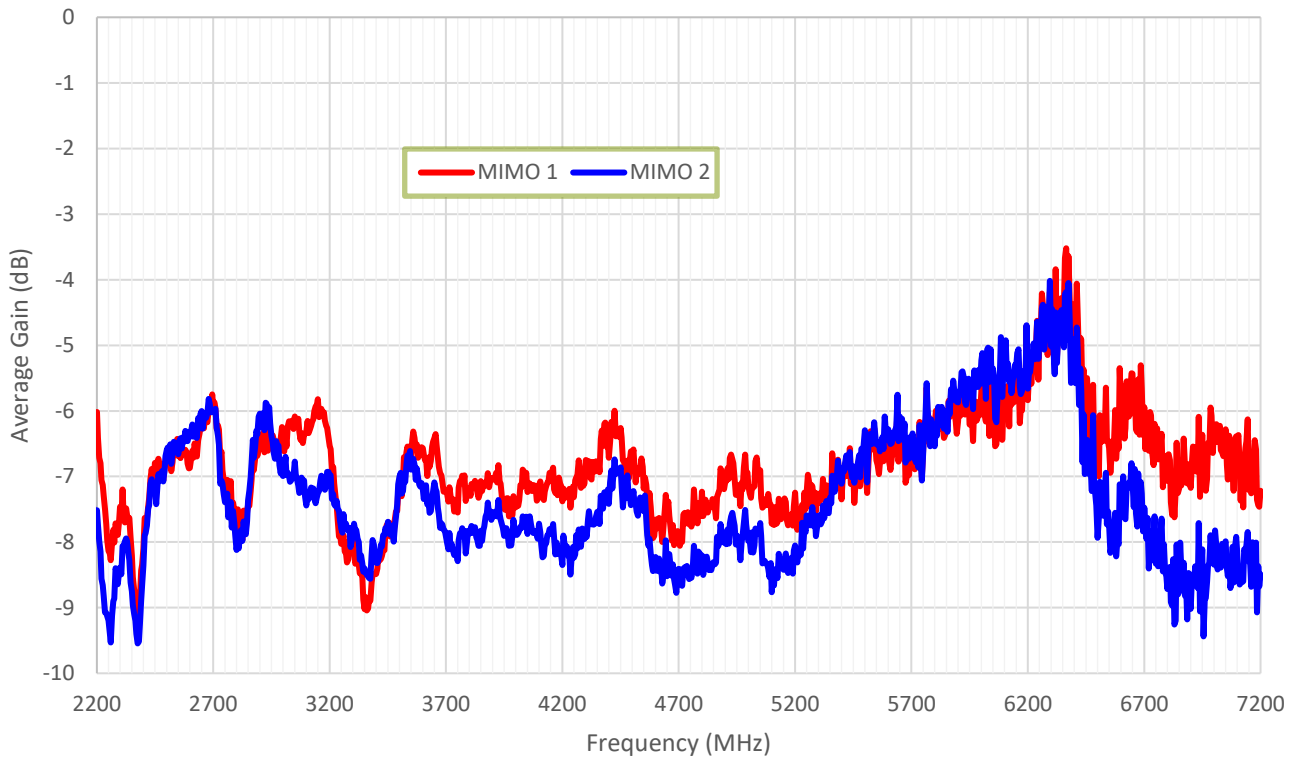
3.3 Efficiency



3.4 Peak Gain



3.5 Average Gain

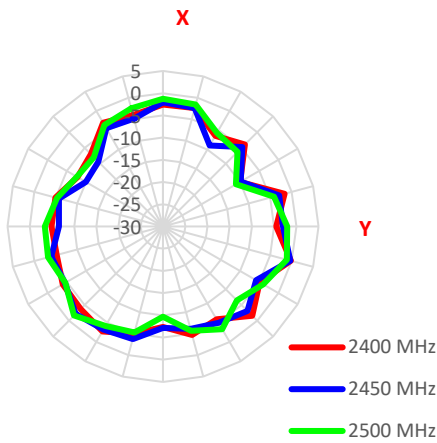


4. Radiation Patterns

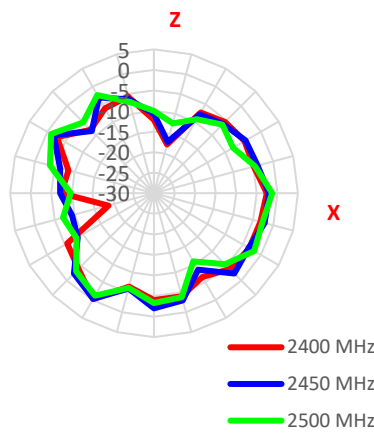
4.1 Wi-Fi MIMO 1 3D and 2D Radiation Patterns

2400-2500MHz

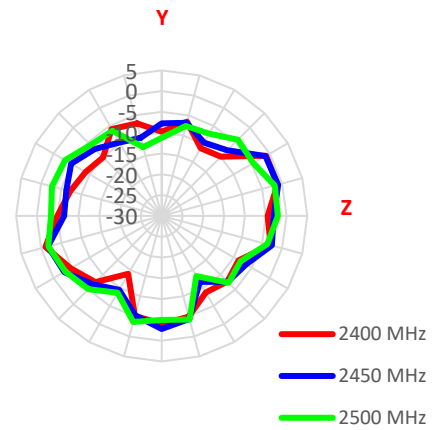
XY Plane



XZ Plane

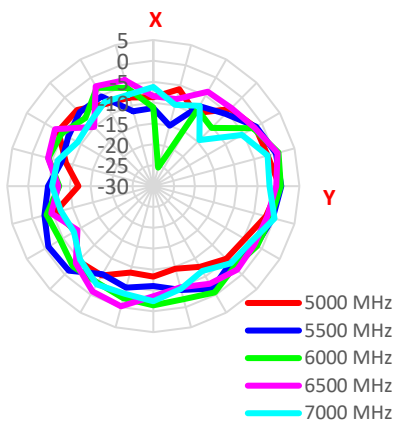


YZ Plane

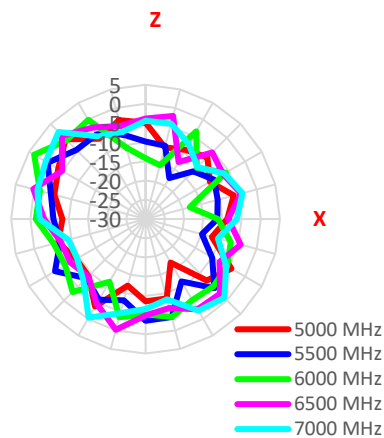


5000-7000MHz

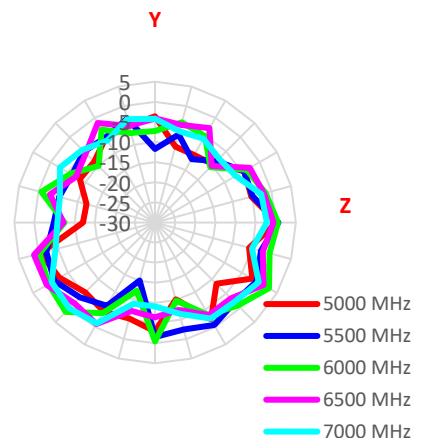
XY Plane



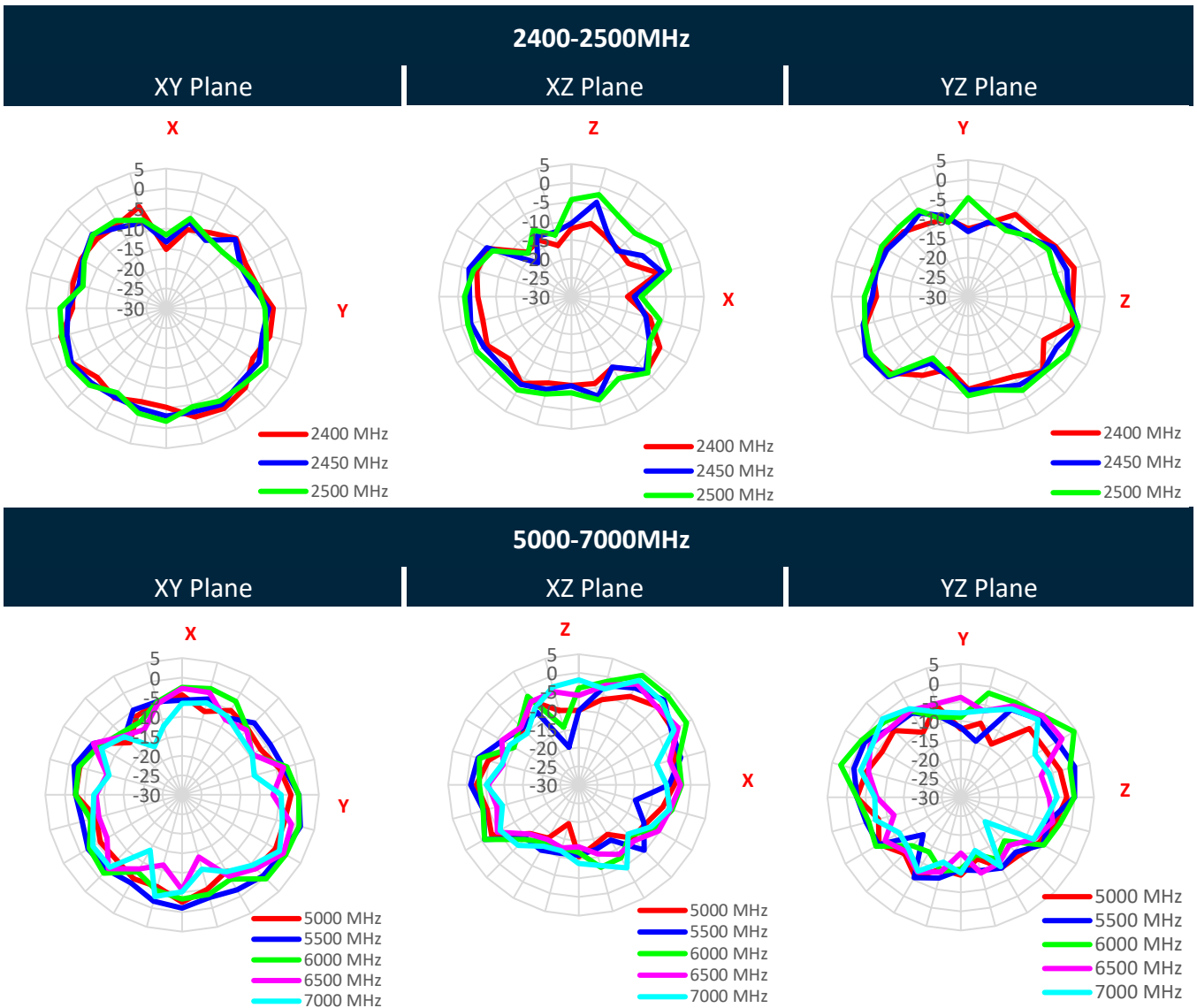
XZ Plane



YZ Plane



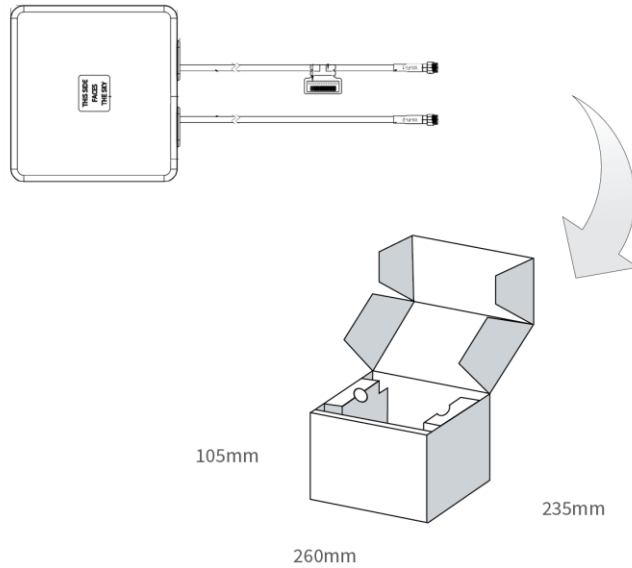
4.2 Wi-Fi MIMO 2 3D and 2D Radiation Patterns



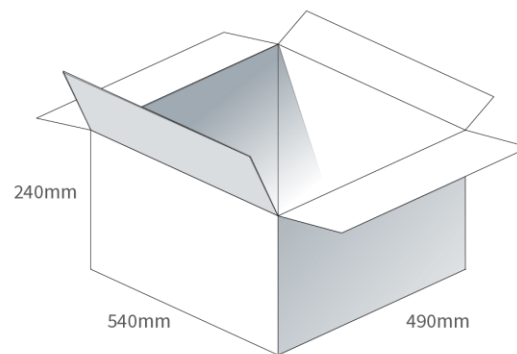
5. Mechanical Drawing (Units: mm)

6	5	4	3	2	1																																																												
ISO NO: EDW-18-8-6200		REV ZONE DESCRIPTION ENG APPROVED ISSUED DATE																																																															
<Release>		1 ALL Initial Design Haley Paul 2016/12/12 2 ALL Change Label to Print Heat Shrink Tube. Modify BOM. (ECR-18-8-009) Alster Haley 2019/01/16 3 ALL Change Foam<ECR-19-8-005> Ruby Aaron 2019/11/20 4 ALL Amend the cable from CFD-200 to KSR200-P Ruby Aaron 2020/06/30 5 ALL Change Supplier/Connector/BOM/Cable<ECR-21-8-004> Ruby Aaron 2021/08/05																																																															
Front View		Bottom View																																																															
Side View		Back View																																																															
				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Name</th> <th>P/N</th> <th>Material</th> <th>Finish</th> <th>QTY</th> </tr> </thead> <tbody> <tr> <td>1 Top Housing</td> <td>000116B000000A</td> <td>ASA</td> <td>Black</td> <td>1</td> </tr> <tr> <td>2 Bottom Housing</td> <td>000116B010000A</td> <td>ASA</td> <td>Black</td> <td>1</td> </tr> <tr> <td>3 Rubber-2 Holes</td> <td>000715H010000A</td> <td>Silicone Rubber</td> <td>Black</td> <td>2</td> </tr> <tr> <td>4 Clear Label</td> <td>001015H040000A</td> <td>PET</td> <td>Transparent</td> <td>1</td> </tr> <tr> <td>5 Heat Shrink Tube (Wi-Fi-1)</td> <td>001316L060000A</td> <td>PE</td> <td>Yellow Tube/Black Text</td> <td>1</td> </tr> <tr> <td>6 Heat Shrink Tube (Wi-Fi-2)</td> <td>001316L070000A</td> <td>PE</td> <td>Yellow Tube/Black Text</td> <td>1</td> </tr> <tr> <td>7 Empty Label</td> <td>001015G000000A</td> <td>PEPA</td> <td>White</td> <td>1</td> </tr> <tr> <td>8 Barcode Label</td> <td>001015G010000A</td> <td>PET</td> <td>White</td> <td>1</td> </tr> <tr> <td>9 Double Sided Adhesive (Black Foam)</td> <td>001019C010000A</td> <td>GNUS-3M44K 35H</td> <td>White Liner</td> <td>1</td> </tr> <tr> <td>10 TGC200 Coaxial Cable</td> <td>306718E000000A</td> <td>PE</td> <td>Black</td> <td>2</td> </tr> <tr> <td>11 RP-SMA(M)ST</td> <td>200220K00001GA</td> <td>Brass</td> <td>Au Plated</td> <td>2</td> </tr> </tbody> </table>		Name	P/N	Material	Finish	QTY	1 Top Housing	000116B000000A	ASA	Black	1	2 Bottom Housing	000116B010000A	ASA	Black	1	3 Rubber-2 Holes	000715H010000A	Silicone Rubber	Black	2	4 Clear Label	001015H040000A	PET	Transparent	1	5 Heat Shrink Tube (Wi-Fi-1)	001316L060000A	PE	Yellow Tube/Black Text	1	6 Heat Shrink Tube (Wi-Fi-2)	001316L070000A	PE	Yellow Tube/Black Text	1	7 Empty Label	001015G000000A	PEPA	White	1	8 Barcode Label	001015G010000A	PET	White	1	9 Double Sided Adhesive (Black Foam)	001019C010000A	GNUS-3M44K 35H	White Liner	1	10 TGC200 Coaxial Cable	306718E000000A	PE	Black	2	11 RP-SMA(M)ST	200220K00001GA	Brass	Au Plated	2
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NOTES: 1. All material must be RoHS compliant. 2. The connector orientation has a fixed position to the antenna as per drawing. 3. Double Sided Adhesive Area :																																																																	
UNLESS OTHERWISE SPECIFIED TOLERANCES ON: .X± 0.2 XX± 0.5 .XX± 0.1 X± 0.3 .XXX± 0.05		DATE: 2016/12/12 MAT'L: UNIT: mm FINISH: THIRD ANGLE PROJECTION SCALE: 1/2.5		TW Design Centre This drawing and its inherent design concepts are property of Taoglas. Not to be copied or given to third parties without the written consent of Taoglas.																																																													
APPROVED BY: Paul CHECKED BY: Jason DRAWN BY: Haley		CUSTOMERS SIGNATURE / DATE		REV D05 A TITLE : 2in1 Adhesive 2* Wi-Fi MIMO 3M TGC-200 RP-SMA(M) PART NO. : MA910.A.CG.001																																																													
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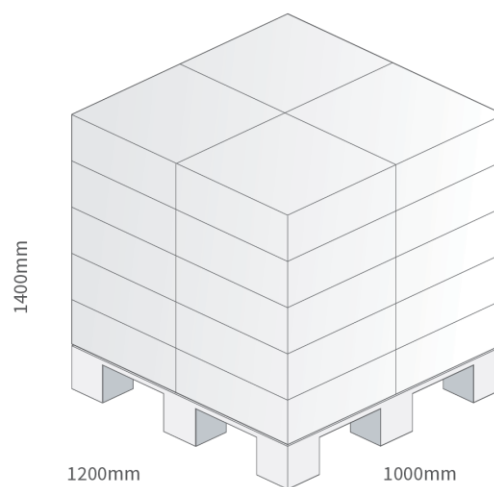
6. Packaging



1 No. MA910.A.CG.001 per small box
 Box Dimensions - 260 x 235 x 105mm
 Weight - 0.45Kg



8 pcs MA910.A.CG.001 per carton
 Carton Dimensions - 540 x 490 x 240mm
 Weight - 3.6Kg



Pallet Dimensions 1200 x 1000 x 1400mm
 20 Cartons per Pallet
 4 Cartons per layer
 5 Layers

Changelog for the datasheet

SPE-17-8-077 – MA910.A.CG.001

Revision: E (Current Version)

Date:	2022-07-11
Changes:	Drawing updated
Changes Made by:	Cesar Sousa

Previous Revisions

Revision: D

Date:	2021-03-08
Changes:	Updated Antenna Weight.
Changes Made by:	Gary West

Revision: C

Date:	2020-09-08
Changes:	Packaging Details and Wi-Fi 6 Updated
Changes Made by:	Jack Conroy

Revision: B

Date:	2019-11-20
Changes:	Drawing Updated
Changes Made by:	Jack Conroy

Revision: A (Original First Release)

Date:	2017-10-31
Notes:	
Author:	Jack Conroy



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