



TAOGLAS®



Datasheet

Guardian

Part No:
MA910.W.A.CG.001

Description:

White 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.W Guardian is a white 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 black, contact your regional Taoglas customer support team for further information.

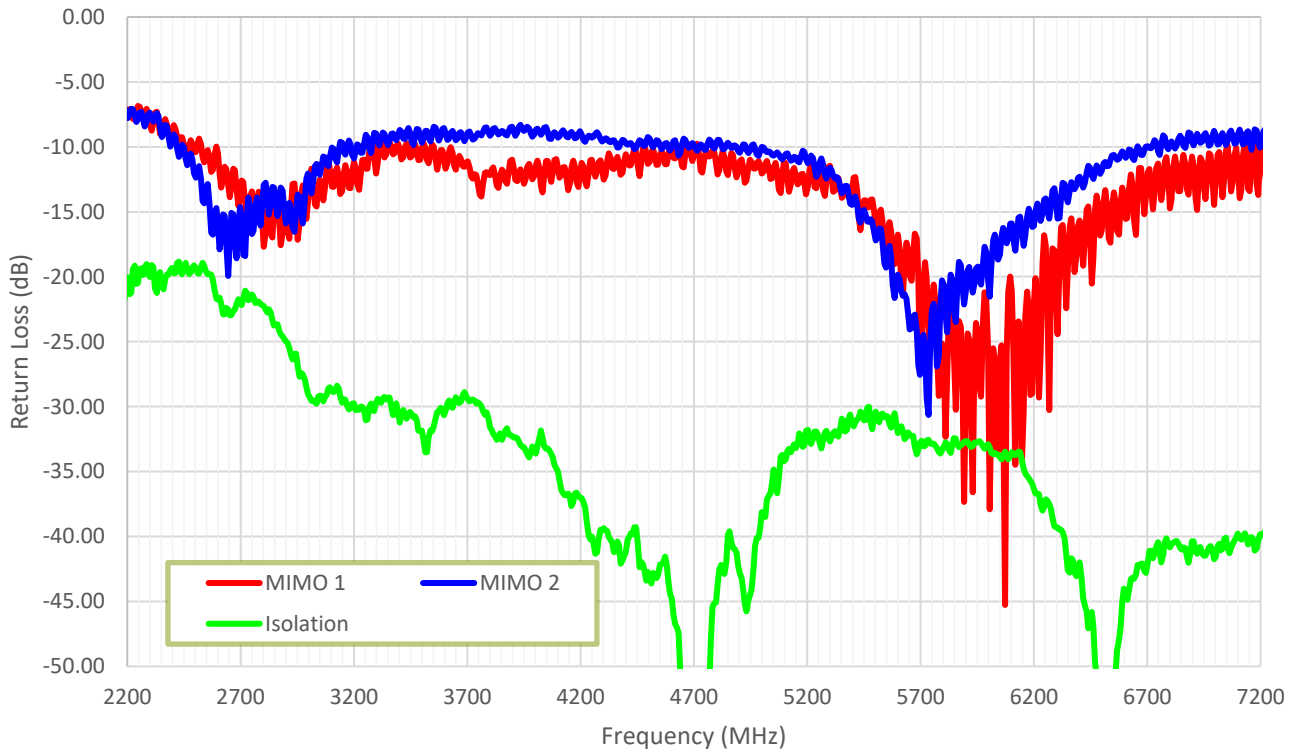
2. Specifications

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				

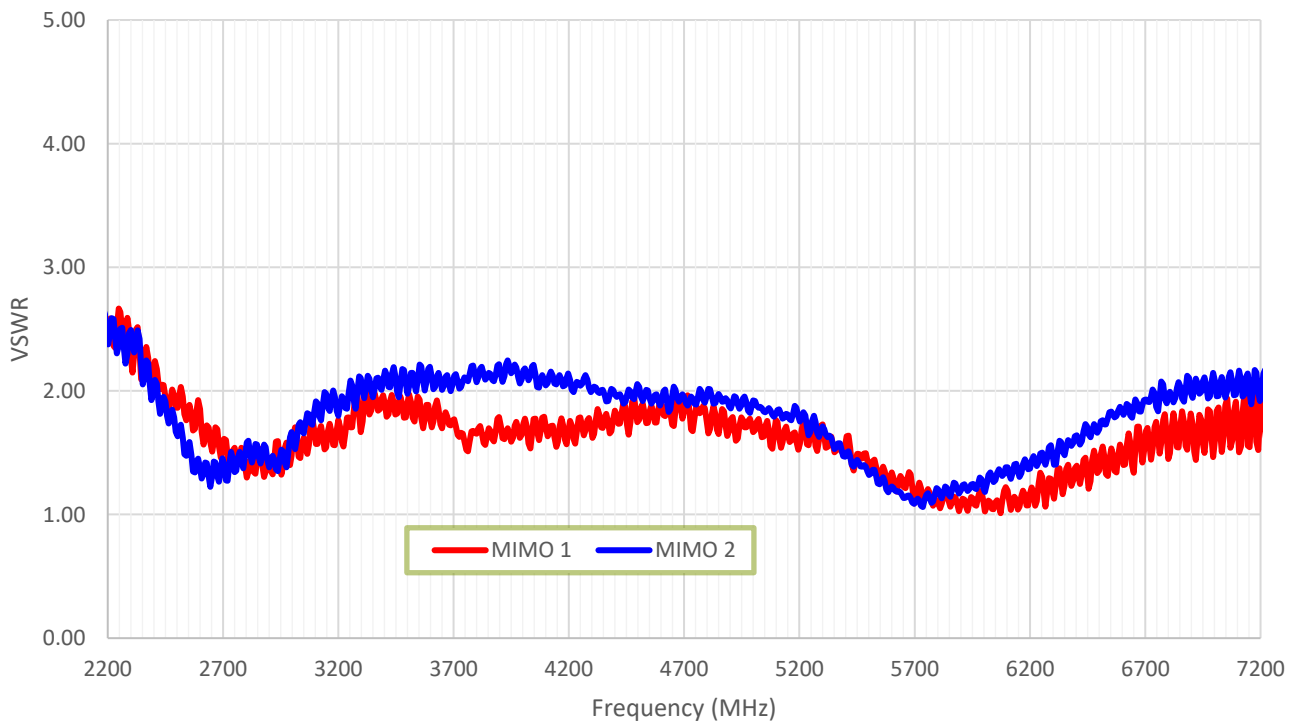
Mechanical	
Antenna Dimensions	146*134*20mm
Casing	ASA
Weight (including cable)	445g
Ingress Protection Rating	IP67
Connector	2* RP-SMA(M)
Cables	2* 3000mm TGC200
Environmental	
Operation Temperature	-40°C to 85°C
Storage Temperature	-40°C to 90°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

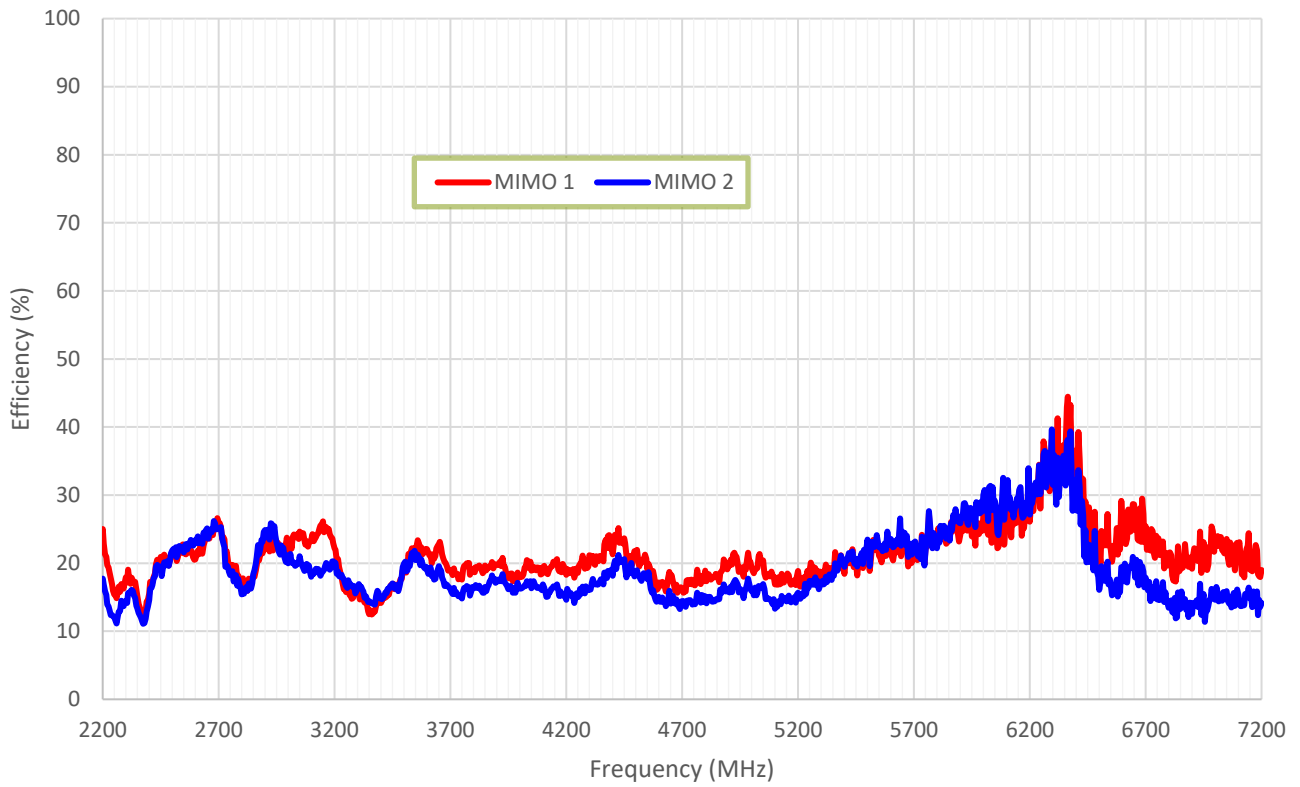
3.1 Return Loss



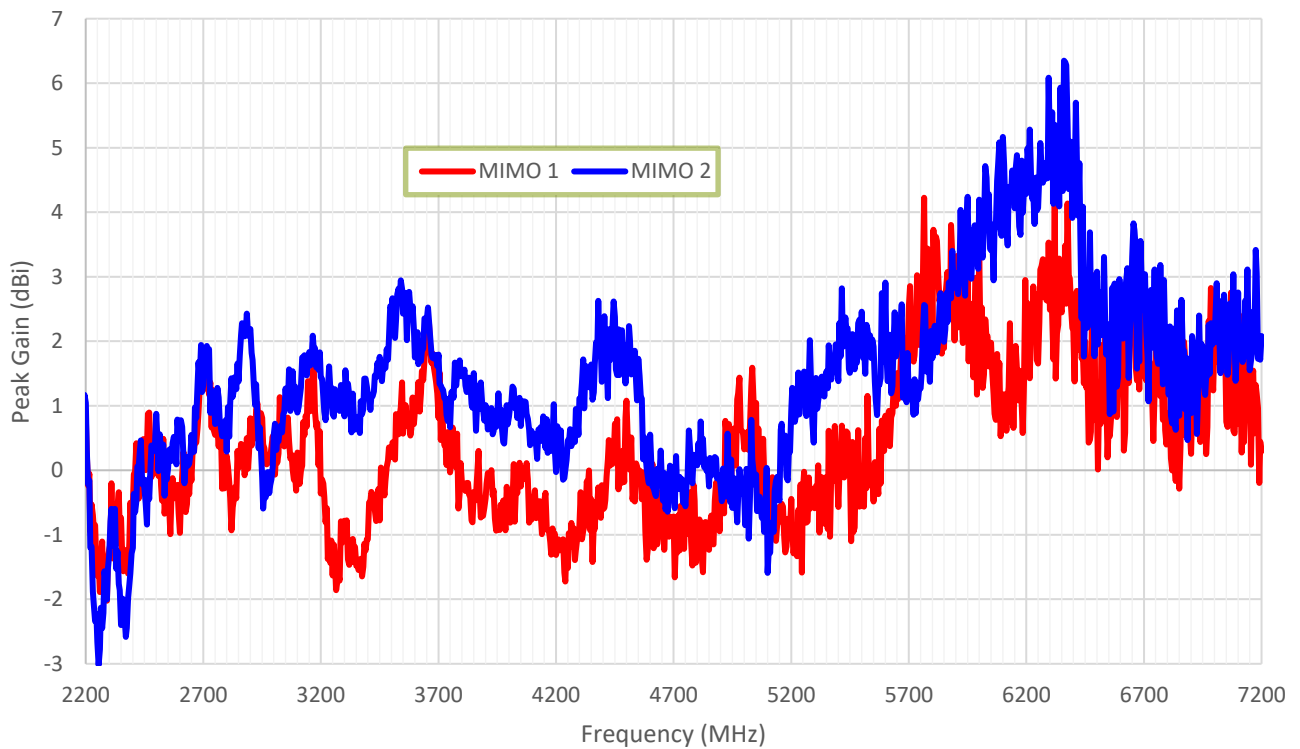
3.2 VSWR



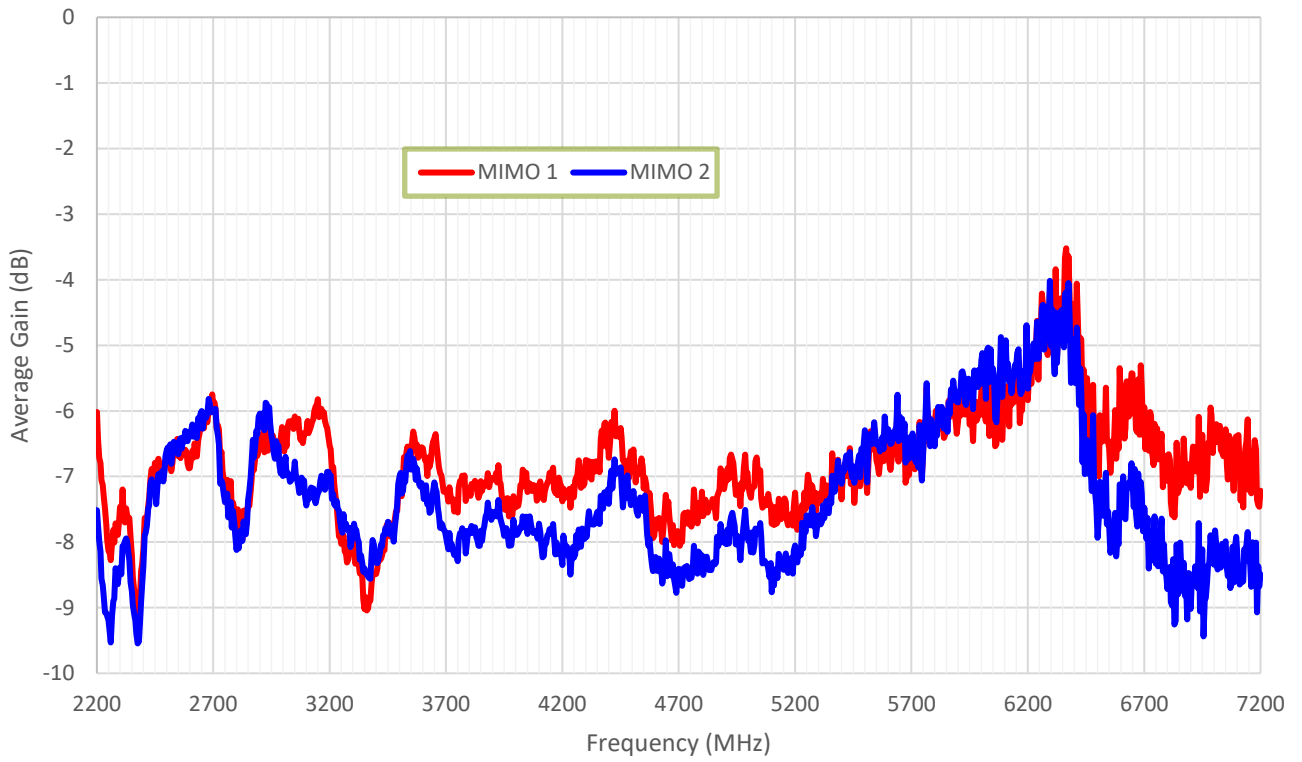
3.3 Efficiency



3.4 Peak Gain



3.5 Average Gain

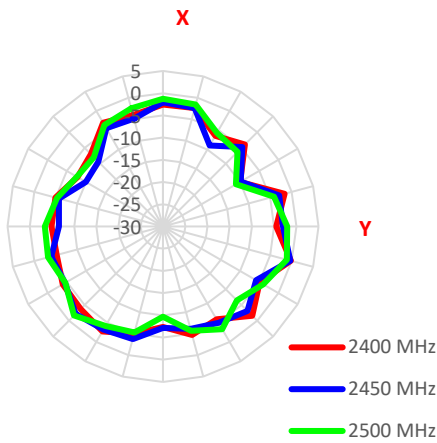


4. Radiation Patterns

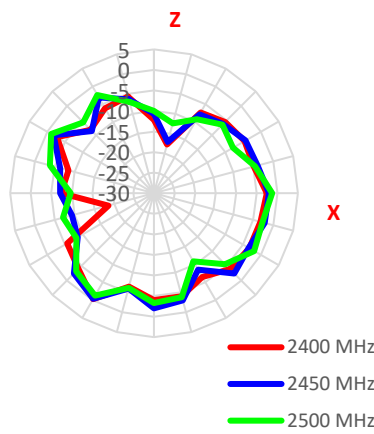
4.1 Wi-Fi MIMO 1 3D and 2D Radiation Patterns

2400-2500MHz

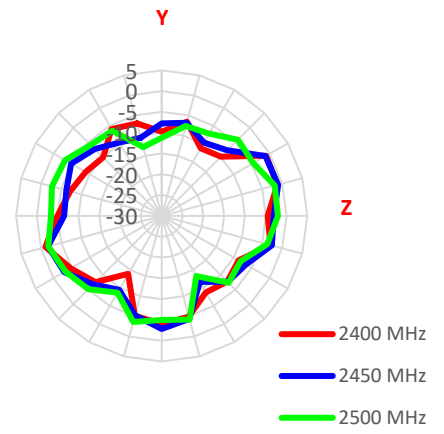
XY Plane



XZ Plane

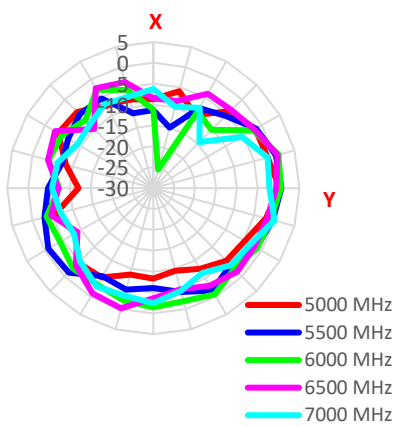


YZ Plane

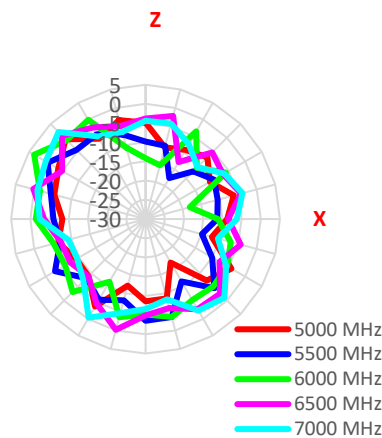


5000-7000MHz

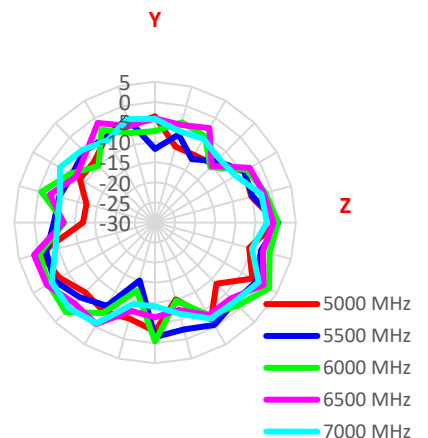
XY Plane



XZ Plane



YZ Plane



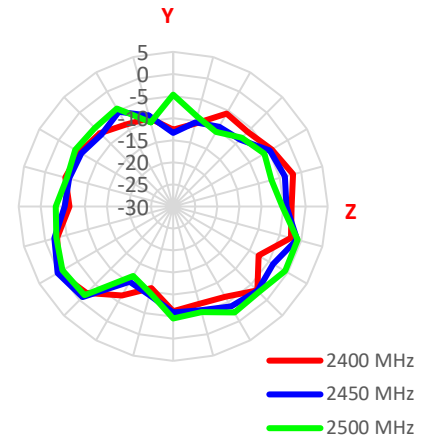
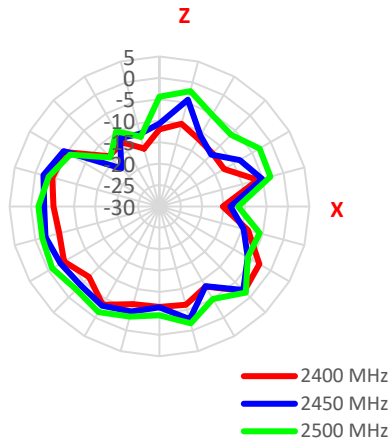
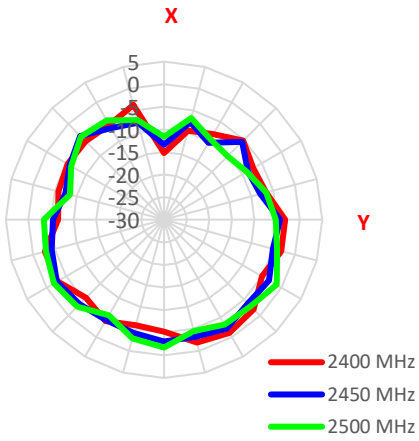
4.2 Wi-Fi MIMO 2 3D and 2D Radiation Patterns

2400-2500MHz

XY Plane

XZ Plane

YZ Plane

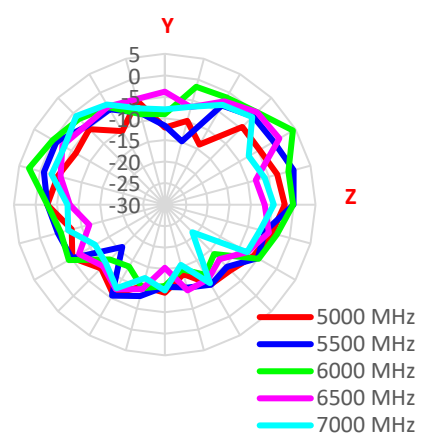
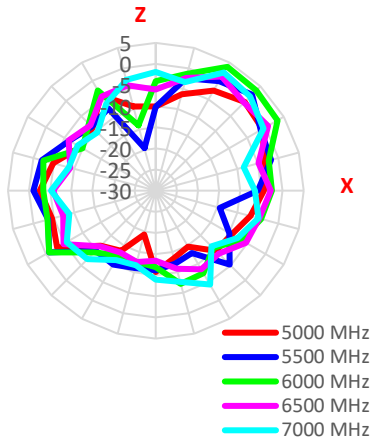
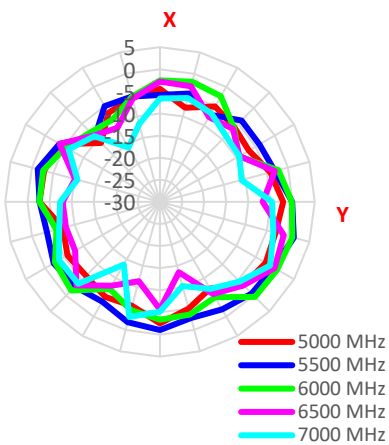


5000-7000MHz

XY Plane

XZ Plane

YZ Plane



5. Mechanical Drawing (Units: mm)

6	5	4	3	2	1				
ISO NO: EDW-18-8-6203		<Release>		REV	ZONE	DESCRIPTION	ENG	APPROVED	ISSUED DATE
		XX		ALL	Correct the Heat Shrink Tube	Ruby	Aaron	2020/07/31	
		YY		ALL	Modify the Cable to TGC-200<EC-21-08-004>	Aron Yan	Aaron	2020/08/08	

Front View

Side View

Back View

Bottom View Double sided Adhesive(Black Foam)

Detail A
Scale: 2:1

Name	P/N	Material	Finish	QTY
1 Top Housing	000115C020000A	ASA	White	1
2 Bottom Housing	000115C030000A	ASA	White	1
3 Rubber-2 Holes	000715H010000A	Silicone Rubber	Black	2
4 Clear Label	001015H030000A	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(48x30)	001015G000000A	PEPA	White	1
8 Barcode Label(25x9)	001015G010000A	PET	White	1
9 Double Sided Adhesive(Black Foam)	001019C010000A	3M 9613-1000 156	White Liner	1

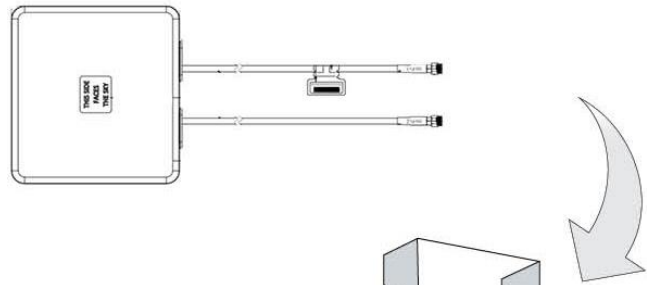
Name	P/N	Material	Finish	QTY
XX Cable Type	306718E000000A	TGC-200	Black	2
YY Connector Type	200220K00001GA	RP-SMA(M)ST	Au Plated	2

NOTES:

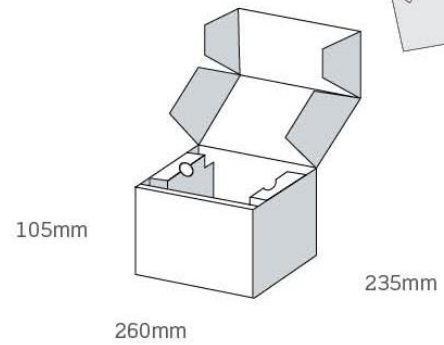
- All material must be RoHS compliant.
- The connector orientation has a fixed position to the antenna as per drawing.
- Part No..MA910.W.A.CG05151.G305151
- Double Sided Adhesive Area :

UNLESS OTHERWISE SPECIFIED TOLERANCES ON:	DATE: 2016/12/06	MAT'L:	TAOGLAS TW Design Centre <small>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.</small>	REV D07
	UNIT: mm	FINISH:		
XX ± 0.5 .XX ± 0.1 X ± 0.3 .XXX ± 0.05	THIRD ANGLE PROJECTION	SCALE: 1/2.5	TITLE. : 2in1 White Adhesive Wi-Fi(1&2) 3000mm TGC-200 RP-SMA(M) PART NO. : MA910.W.A.CG.001	
APPROVED BY: Paul	CHECKED BY: Jack/Jason	DRAWN BY: Haley		

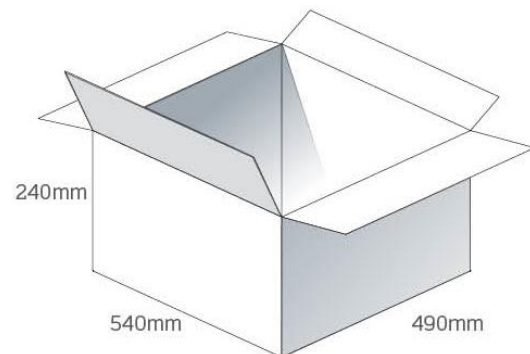
6. Packaging



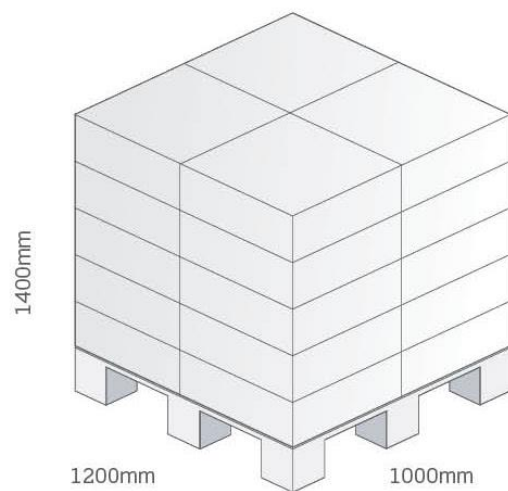
1 No. MA910.W.A.CG.001 per small box
 Box Dimensions - 260 x 235 x 105mm
 Weight - 0.75Kg



8 pcs MA910.W.A.CG.001 per carton
 Carton Dimensions - 540 x 490 x 240mm
 Weight - 6.6Kg



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



Changelog for the datasheet

SPE-17-8-078 – MA910.W.A.CG.001

Revision: E (Current Version)	
Date:	2022-07-12
Changes:	Drawing Updated
Changes Made by:	Cesar Sousa

Previous Revisions

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

Revision: C	
Date:	2019-11-21
Changes:	Drawing Updated
Changes Made by:	Jack Conroy

Revision: B	
Date:	2018-04-27
Changes:	Peak Gain
Changes Made by:	Jack Conroy

Revision: A (Original First Release)	
Date:	2017-10-31
Notes:	
Author:	Jack Conroy



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