

Galtronics Electronics (Wuxi) Co.,LTD

SPECIFICATION FOR APPROVAL

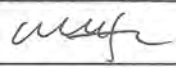
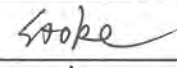
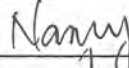
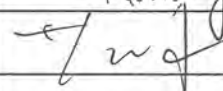
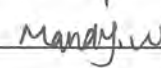
REV NO.	DATE	DESCRIPTION
S1	2025.3.7	First release

P/N of Galtronics

P/N of Cybertan

02102140-08200B-1

2365-82000006R

APPROVED BY	SIGNATURE	DATE
Engineering Manager		2025.3.7
Mechanical Engineer		2025.3.7
RF Engineer		2025.3.7
Quality Engineer		2025.3.7
Project Manager		3/7/2025
Customer Approval		

Product

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5. Final picture & Net weight (To be updated)	
6. Cable tension test (To be updated)	

1. Galtronics Dual Band Wi-Fi Antenna

The Galtronics 02102140-08200B-1 antenna is a Dual Band Wi-Fi Antenna that operates in 2400-2500 MHz and 5150-5850 MHz bands. It provides high efficient radiation with good cost benefit. The antenna can be mounted on a customer device by double sided adhesive foam tape and connected to the radio through a U.FL connector.

2. Features

- Operates in 2400-2500 MHz and 5150-5850 MHz bands
- Peak gain: 2.34 dBi in 2.4 GHz band and 2.40 dBi in 5 GHz band
- High efficiency
- U.FL connector interface

3. Specifications and Interface

Standard	Wi-Fi Dual Band
Frequency Range	2400-2500 MHz and 5150-5850 MHz
Peak Gain	2.34 dBi in 2.4GHz band and 2.40 dBi in 5GHz band
VSWR	2:1
Feed Impedance	50Ω
Power Handling	30 dBm
Interface	U.FL
Antenna Dimensions	33.6 mm x 15.6 mm x 0.64 mm (L x W x T)
Temperature range	Operating: -20° C to +60° C (-4° F to +140° F) Storage: -20° C to +60° C (-4° F to +140° F)
Humidity Range	Operating: 10% to 85% non-condensing Storage: 5% to 90% non-condensing

4. Return Loss

The antenna was tested with antenna mounted on a 100 x 100 x 2.3mm ABS evaluation board with 1.6mm thickness double-sided tape and a 98 mm long cable (Cable Total Length is 110mm).

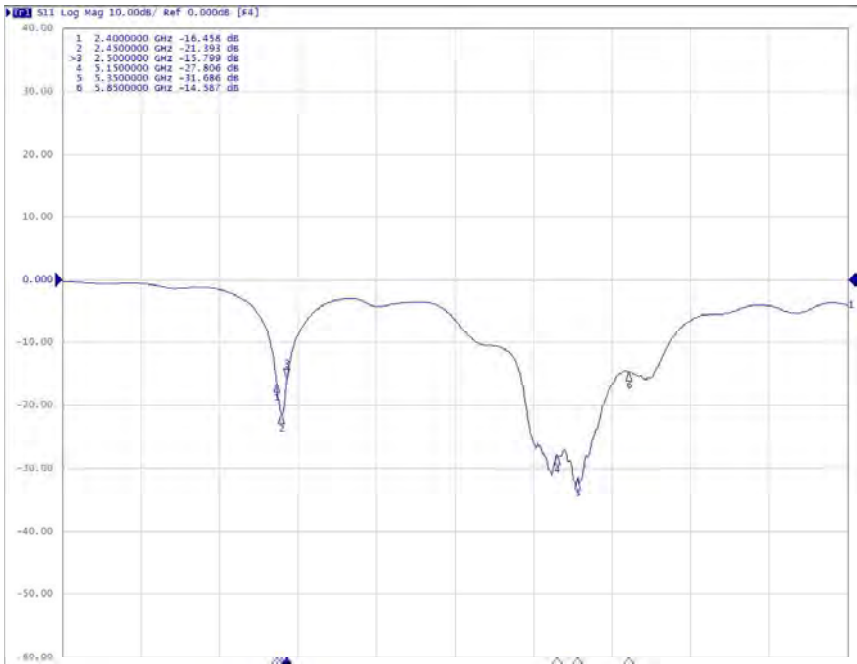


Figure 2 Return Loss

5. Gain, Directivity and Efficiency

Table 1 Peak Gain, Directivity & Efficiency

Dual Band	Frequency (MHz)	Peak Gain (dBi)	Antenna Directivity (dBi)	Terminal Efficiency (%)
Wi-Fi Antenna	2400	2.34	3.62	74.53
	2450	2.13	3.32	76.08
	2500	1.88	3.17	74.19
	Average			74.93

Dual Band	Frequency (MHz)	Peak Gain (dBi)	Antenna Directivity (dBi)	Terminal Efficiency (%)
Wi-Fi Antenna	5150	2.12	3.60	72.14
	5250	2.30	3.45	76.70
	5350	2.12	3.44	73.78
	5750	2.40	3.73	73.60
	5850	2.37	3.76	72.56
	Average			73.76

6. Radiation Pattern

Figure 3 shows the antenna measurement coordinate system in anechoic chamber. Azimuth plane is XY plane ($\Theta=90^\circ$), Elevation 1 plane is XZ plane ($\Phi=0^\circ$) and Elevation 2 plane is YZ plane ($\Phi=90^\circ$).

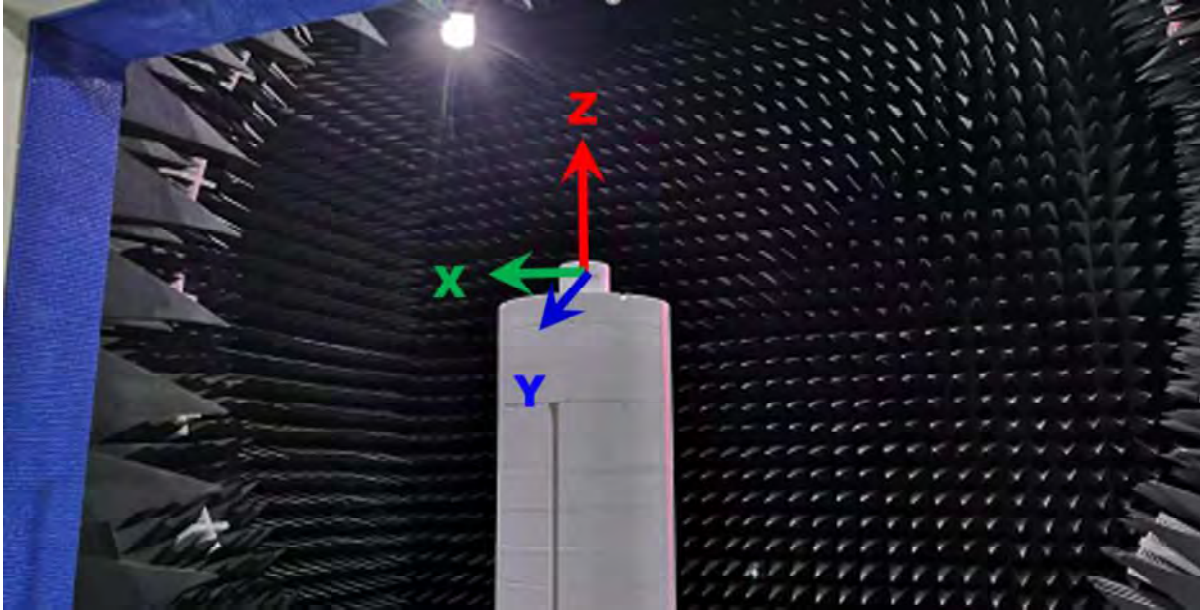
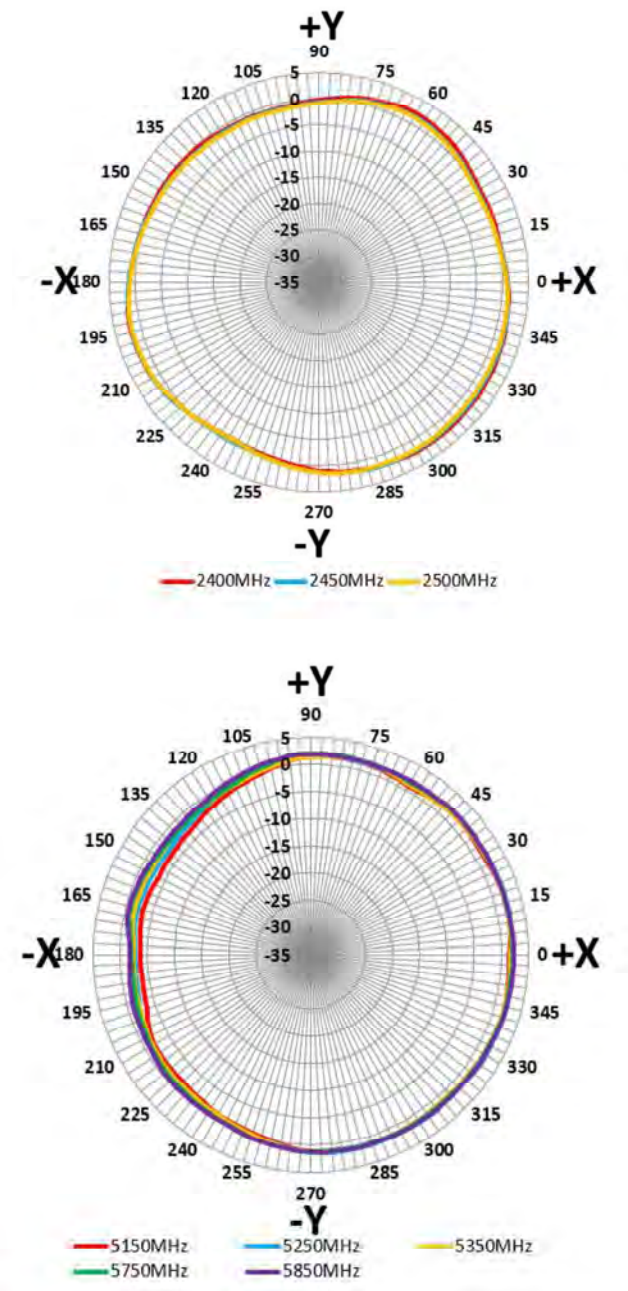


Figure 3 Measurement Orientation

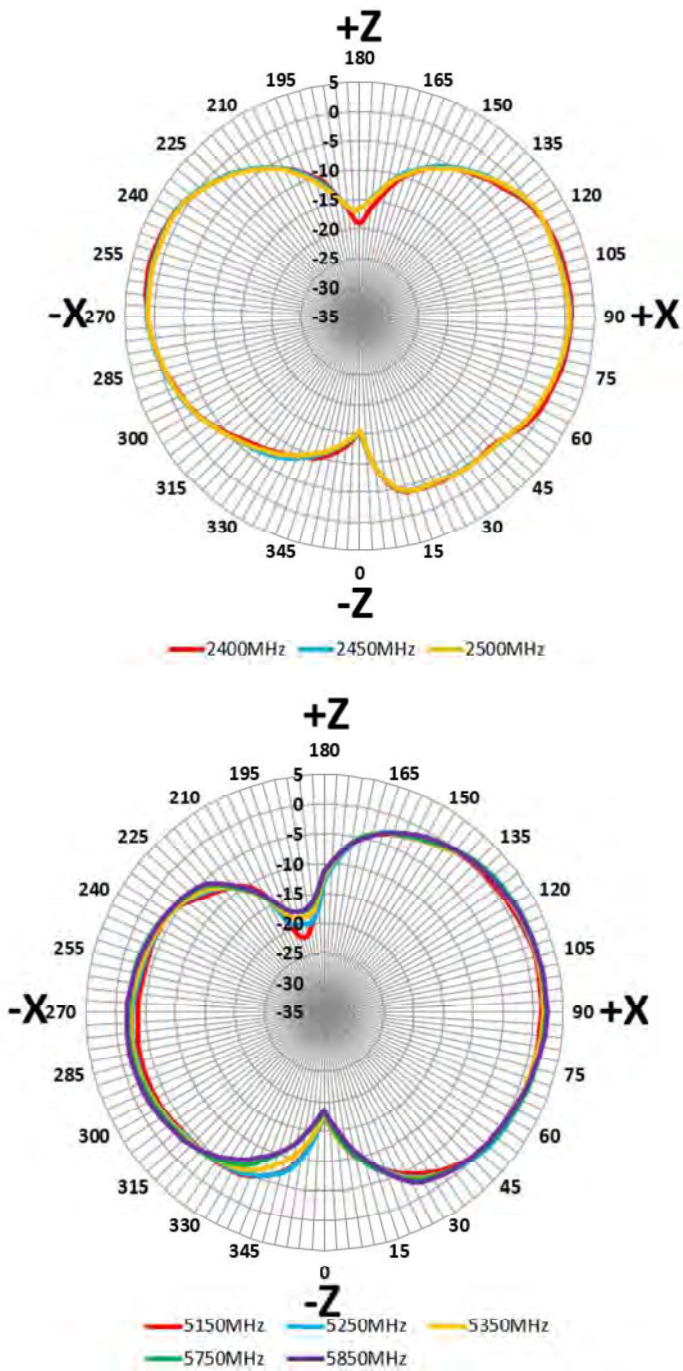
WE'RE MAKING WAVES

Figure 3 (A), (B) and (C) show the radiation pattern in three major planes.



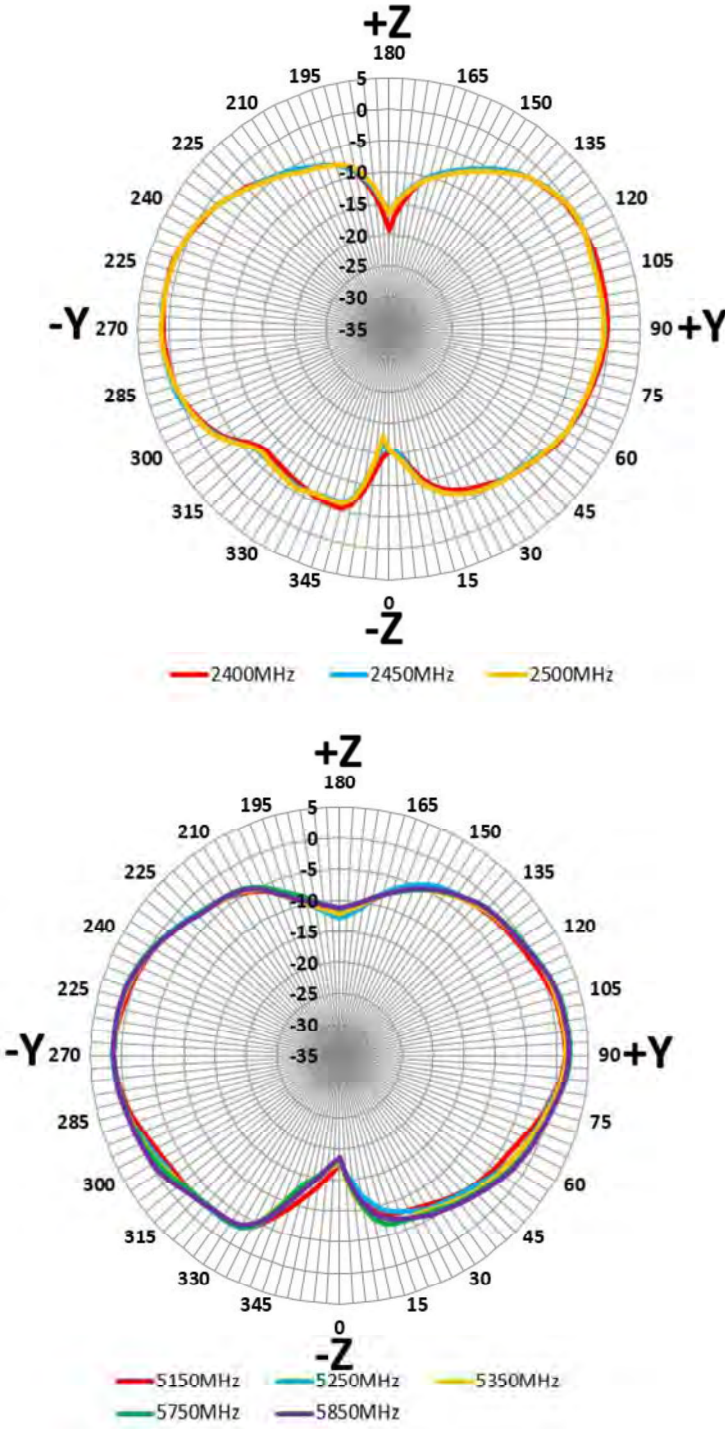
(A). Azimuth plane (XY plane) radiation pattern

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(B). Elevation 1 plane (XZ plane) radiation pattern

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(C). Elevation 2 plane (YZ plane) radiation pattern

Figure 4 Radiation Patterns in Wi-Fi Dual Band.