

M4000 Wi-Fi Antenna Specifications

1. Antenna Part Number:

- Manufacturer: SUNNYWAY
- Wi-Fi Ant# W0 Part Number: 3M40000709
- Wi-Fi Ant# W1 Part Number: 3M40000710

2. Antenna Construction:

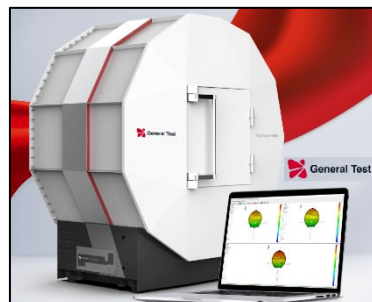
- Material: Flexible Printed Circuit Design consists of Copper and Adhesive
- Type: PIFA Antenna

3. Antenna Passive Gain Table:

WiFi Ant #0	Frequency Range	Gain
DTS	2412MHz to 2462MHz	1.92 dBi
UNI-1	5170MHz to 5250MHz	1.94 dBi
UNI-2A	5250MHz to 5330MHz	1.88 dBi
UNI-2C	5490MHz to 5730MHz	1.85 dBi
UNI-3	5735MHz to 5835MHz	1.94 dBi
WiFi Ant #1	Frequency Range	Gain
DTS	2412MHz to 2462MHz	1.95 dBi
UNI-1	5170MHz to 5250MHz	1.91 dBi
UNI-2A	5250MHz to 5330MHz	1.94 dBi
UNI-2C	5490MHz to 5730MHz	1.96 dBi
UNI-3	5735MHz to 5835MHz	1.96 dBi

4. Measurement Test Equipment Information:

- Antenna Engineer: Gaohuabin
- Passive Measurement Date: 11-29-2025
- Measurement Test Site: Xi'an R&D Center: D601, ZTE Industrial Park, No. 10 Tangyan South Road, High-tech Zone, Xi'an
- Test Equipment System:
 - MFG Name: General Test Systems Inc.
 - System Model: RayZone 1800E
 - Measurement Type Functions: Active/Passive Antenna & OTA Testing
- Measurement Test Software:
 - MFG Name: General Test Systems Inc.
 - Version: MaxSign Libra v1.5.7-rc.2

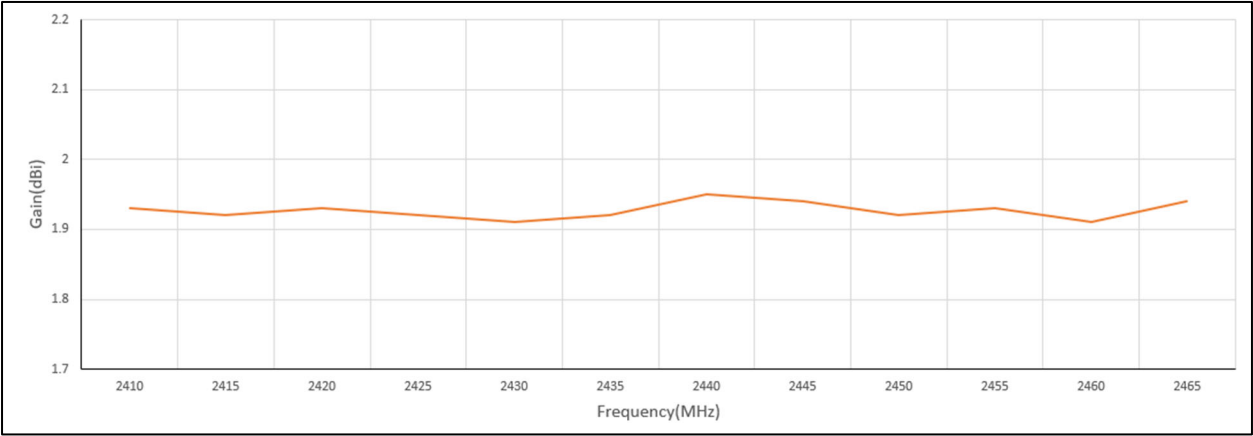


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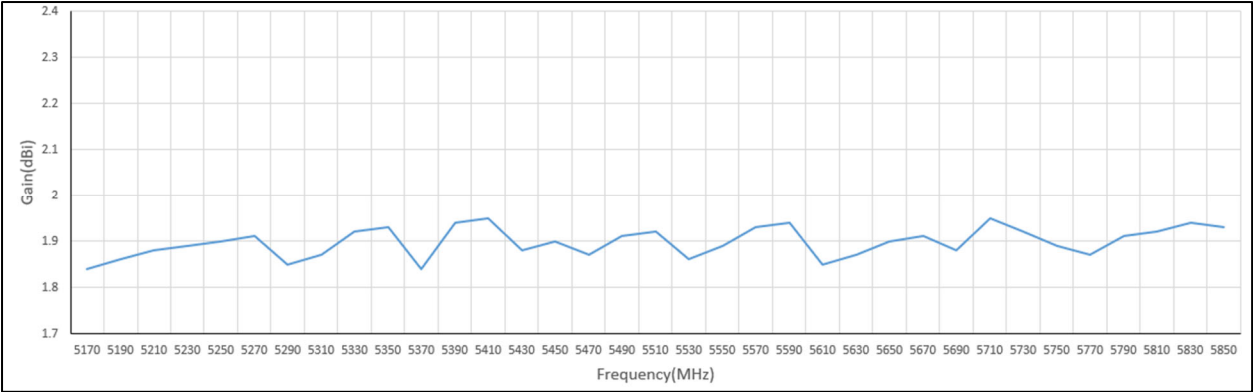
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5. Antenna Passive Gain (dBi) Charts:

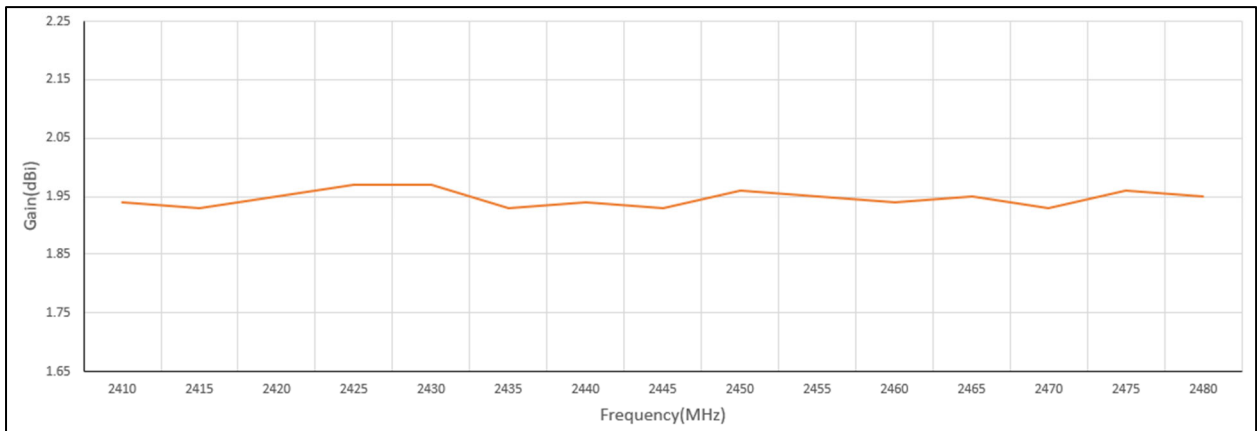
Maximum Gain WiFi ANT W0 2.4GHz (DTS)



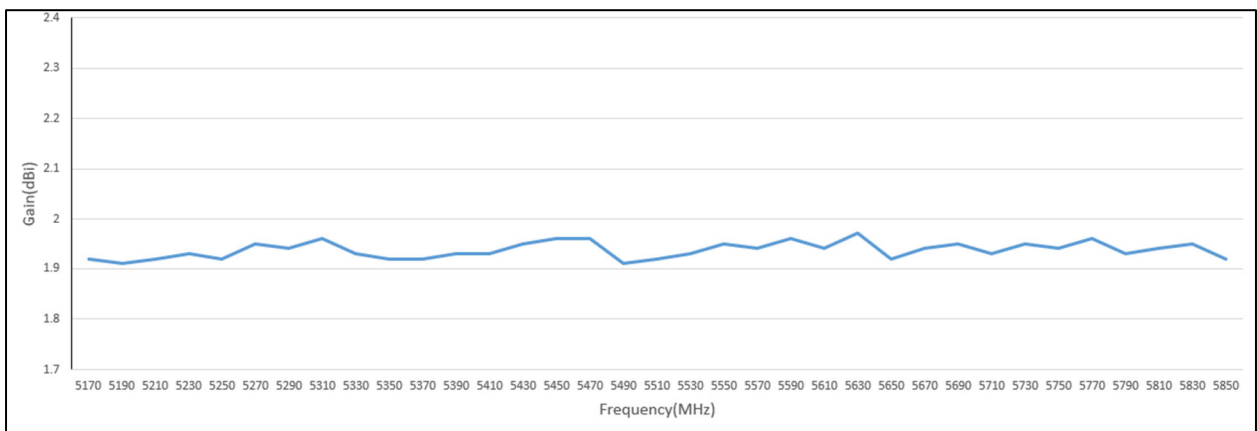
Maximum Gain WiFi ANT W0 5GHz (UNI-1, UNII-2, UNII-3)



Maximum Gain WiFi ANT W1 2.4GHz (DTS)



Maximum Gain WiFi ANT W1 5GHz (UNI-1, UNII-2, UNII-3)



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6. Antenna Passive Measurement Setup:

Passive Performance Test System Components and Diagram

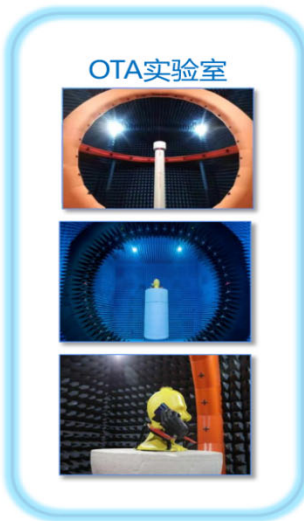
Frequency Bands: 400MHz to 6 GHz

Max. Size of DUT: 400mm

Max. Weight of DUT: 20kg

The system is capable of the following measurements:

- Gain
- Sidelobe levels
- 3D radiation pattern
- Radiation pattern in any polarization (linear or circular)
- Antenna efficiency test



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Gain Measurement Method Explained:

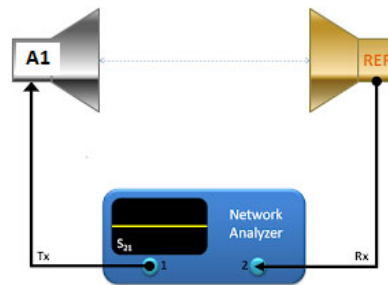
- a) **Calibration:** Use Two Antennas (one has to have a known gain [In this case Ref]) to measure and record the S parameter S_{21} which is the input/output relationship between the ports on the Network analyzer

- a. Normalize the calibration to produce 0 DB reference on the network Analyzer.
- b. All cable loss factors are accounted for in the system.

Notes: A1 represents Arch antennas in system

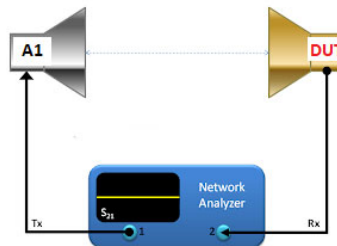
The software instructs the VNA to produce a sweep signal over the frequency range specified.

The it will generate the signal is a swept CW between the start and end frequency and pausing at predetermined points long enough to collect measurement.



Calibration diagram

- b) **DUT Measurements:** Replace reference Antenna with DUT Antenna (maintaining the same conditions) distance etc.



DUT Measurement diagram

- c) Remeasure S_{21} response which now represents the gain relative to reference antenna. Collect $G(\text{Rel})$.
- d) Calculate $G(\text{Dut}) = G(\text{ref}) + G(\text{rel})$

Note: The chamber measurement system is automated. The measurement is taken at multiple locations points by rotating the DUT and the Arch.

7. Passive Measurement Equipment Calibration:

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- 0.6-6GHz Passive System Calibration performed by Sunnyway with MVG SH600 Dual-Ridge Horn (0.6-6.0GHz).
 - OTA Engineer: Liangjuan
 - Data: 06/03/2025
- RayZone 1800E Passive Antenna Measurement Chamber Calibration Certificate: (5yr Cycle)

Keysight E5071B ENA RF Network Analyzer Calibration Certificate

					
校准证书 CALIBRATION CERTIFICATE					
		第 1 页 共 6 页 Page of			
证书编号: WZZ250603093					
客户名称:	深圳市尚远科技有限公司				
Name of Customer					
客户地址:	深圳市光明区凤凰街道塘尾社区南太云创谷5栋602、601-605、609-610号				
Address of Customer					
计量器具名称:	网络分析仪				
Name of Instrument					
规格/型号:	E5071B				
Type/Specification					
制造单位:	/				
Manufacturer					
出厂编号:	/				
Serial No.					
管理编号:	SY-YF-016				
Regulation Number					
					
		批准人		余东阳	
		Approved by			
		职务		工程师	
		Post			
		核验员		刘洋	
		Checked by			
		校准员		李明昊	
		Calibrated by			
委托日期	2025	年	06	月	02
Received Date	Year		Month		Date
校准日期	2025	年	06	月	03
Calibration Date	Year		Month		Date
签发日期	2025	年	06	月	03
Issue Date	Year		Month		Date
地址: 珠海市金湾区红旗镇红旗三路北1号一期厂房2栋206室					
Add: Room 206, Building 2, Phase I, No. 1, Honghui Third Road North,					
Hongqi Town, Jinwan District, Zhuhai					
邮编 (Post): 519090					
电话 (Tel): 0756-6923550					
E-mail: ad@Anycheck.com.cn					
传真 (Fax): 0756-7790055					

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StarPoint SP9500E 5G Radio Communication Test Set (CTS)

		 		中国认可 国际互认 校准 CALIBRATION CNAS L19398					
校准证书 CALIBRATION CERTIFICATE									
		第 1 页 共 6 页 Page of							
证书编号: WZ250603080									
客户名称:	深圳市尚远科技有限公司								
客户地址:	深圳市光明区凤凰街道塘尾社区南太云创谷5栋602、601-605、609-610号								
计量器具名称:	综测仪								
规格/型号:	StarPoint SP9500E 5G								
制造单位:	/								
出厂编号:	/								
管理编号:	SY-YF-001								
									
委托日期	2025	年	06	月	02	日	批准人	余东阳	
Received Date	Year		Month		Date		Approved by	工程师	
校准日期	2025	年	06	月	03	日	核验员	刘洋	
Calibration Date	Year		Month		Date		Checked by		
签发日期	2025	年	06	月	03	日	校准员	李明昊	
Issue Date	Year		Month		Date		Calibrated by		
地址: 珠海市金湾区红旗镇红旗三路北1号一航厂2栋206室 Add: Room 206, Building 2, Phase 1, No. 1, Honghui Third Road North, Honghui Town, Jinwan District, Zhuhai 邮编 (Post): 519030							电话 (Tel): 0756-6923550 E-mail: ad@Anycheck.com.cn 传真 (Fax): 0756-7790056		

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CMW500 Wideband Radio Communication Test Set (CTS)

		 		国际互认 校准 CALIBRATION CNAS L19398
校准证书 CALIBRATION CERTIFICATE				
		第 1 页 共 6 页 Page of		
证书编号: WZZ250603082				
客 户 名 称:	深圳市尚远科技有限公司			
Name of Customer				
客 户 地 址:	深圳市光明区凤凰街道塘尾社区南太云创谷5栋602、601-605、609-610号			
Address of Customer				
计 量 器 具 名 称:	综测仪			
Name of Instrument				
规 格 / 型 号:	CMW500			
Type/Specification				
制 造 单 位:	/			
Manufacturer				
出 厂 编 号:	/			
Serial No.				
管 理 编 号:	SY-YF-003			
Regulation Number				
				
委托日期 2025 年 06 月 02 日 Received Date Year Month Date		批准人 余东阳 Approved by Post 工程师		
校准日期 2025 年 06 月 03 日 Calibration Date Year Month Date		核验员 刘洋 Checked by		
签发日期 2025 年 06 月 03 日 Issue Date Year Month Date		校准员 李明昊 Calibrated by		
地址: 珠海市金湾区红旗镇虹晖三路北1号一顺厂房2栋206室 Add: Room 206, Building 2, Phase 1, No. 1, Honghui Third Road North, Hongqi Town, Jinwan District, Zhuhai		电话 (Tel): 0756-6923550 E-mail: ad@Anvcheck.com.cn 传真 (Fax): 0756-7790055		

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