TAOGLAS®

Datasheet

2.4GHz Cyclops

Part No:
WM.24.A.305111

Description:

Cyclops 2400~2500MHz Wall Mount Flexible Whip Antenna

Features:

- Wi-Fi® 2.4GHz Whip Antenna
- Wall-Mount Bracket
- Flexible Inner Steel Core Whip
- IP65 Waterproof
- SMA(M) ST connector
- 3m Low loss CFD-200 cable
- Cable is hidden internally in the Bracket
- RoHS & REACH Compliant

Ireland & USA
ISO 9001:2015
Certified

Taiwan
ISO 9001:2015
Certified

IATF16949

1. Introduction

The WM.24 is a 2.4GHz flexible whip antenna with a screw mounted wall mount L bracket. The radiation pattern is omni-directional in the azimuth, allowing for large coverage range in typical indoor or outdoor installations. Peak gain, average gain/efficiency are both optimized to provide extended coverage area in the azimuth (horizontal direction), while also maintaining an Omni-directional pattern for close in reception/transmission.

Typical Applications include:

- Remote Monitoring
- Connected Enterprise
- Agriculture
- Security

This antenna provides high efficiency while fixed on the L-bracket. The whip is made up of a flexible inner steel core covered by TPU, so it is extremely resistant to collisions and maintaining its original shape and RF performance. The whip and the internal connection to the bracket is IP65 rated waterproof. The whip can be removed by unscrewing.

The bracket allows complete concealment of the cable for a more secure integration and cleaner installation. The cable can also be routed out of the back wall of the bracket into the interior of the mounting wall for added security against vandalism. The standard version comes with 3 metres of extremely low loss CFD-200 cable (0.3dB against 0.7dB for RG-58) to allow for flexibility of placement. The cable and connector can be completely customized. The whip itself can also be changed for different frequency bands or gain requirements.

Contact your regional Taoglas Customer Support Team for more information or installation guidelines.

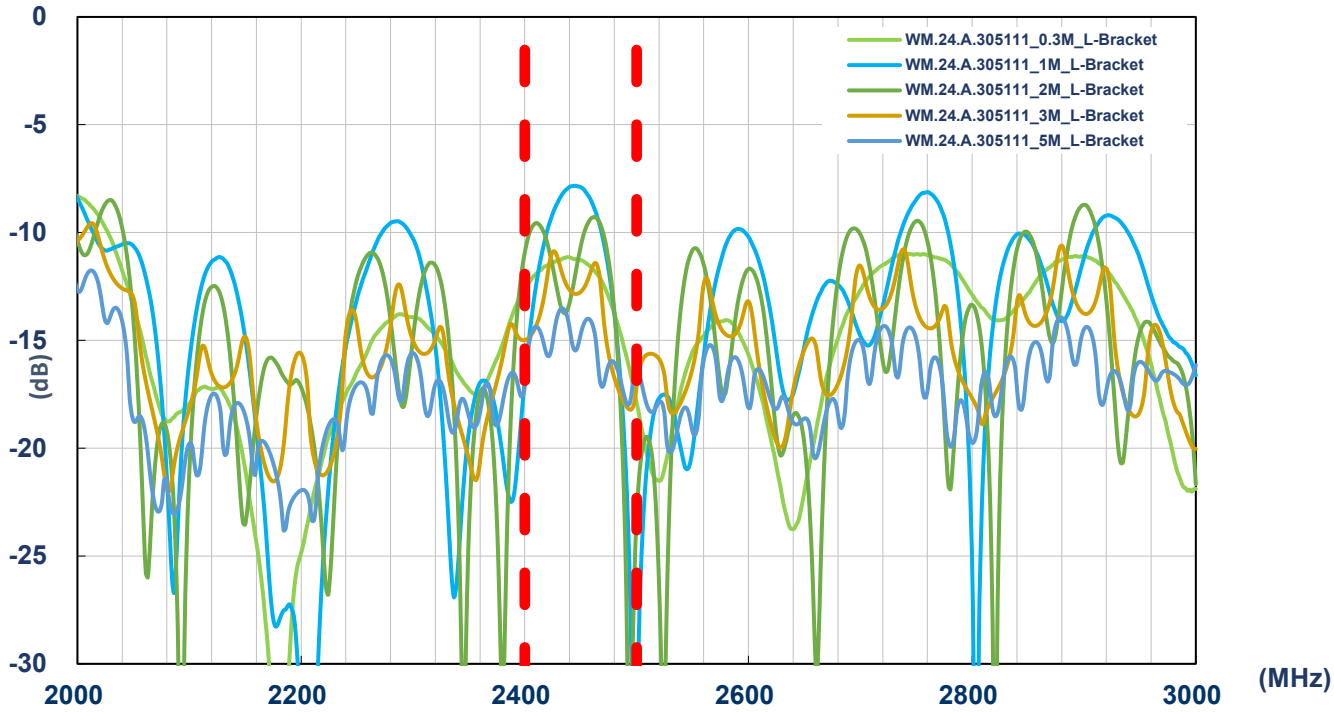
2. Specifications

Cellular	
Frequency (MHz)	**2400~2500MHz**
Peak Gain (dBi)	
30cm	2.97
1m	2.57
2m	1.97
3m	1.37
5m	0.77
Average Gain (dB)	
30cm	-1.93
1m	-2.33
2m	-2.93
3m	-3.53
5m	-4.13
Efficiency (%)	
30cm	64.18
1m	58.53
2m	50.97
3m	44.40
5m	38.67
Return Loss(dB)	<-10
Impedance	50Ω
Polarization	Linear
Radiation Pattern	Omni-Directional
Input Power	10W

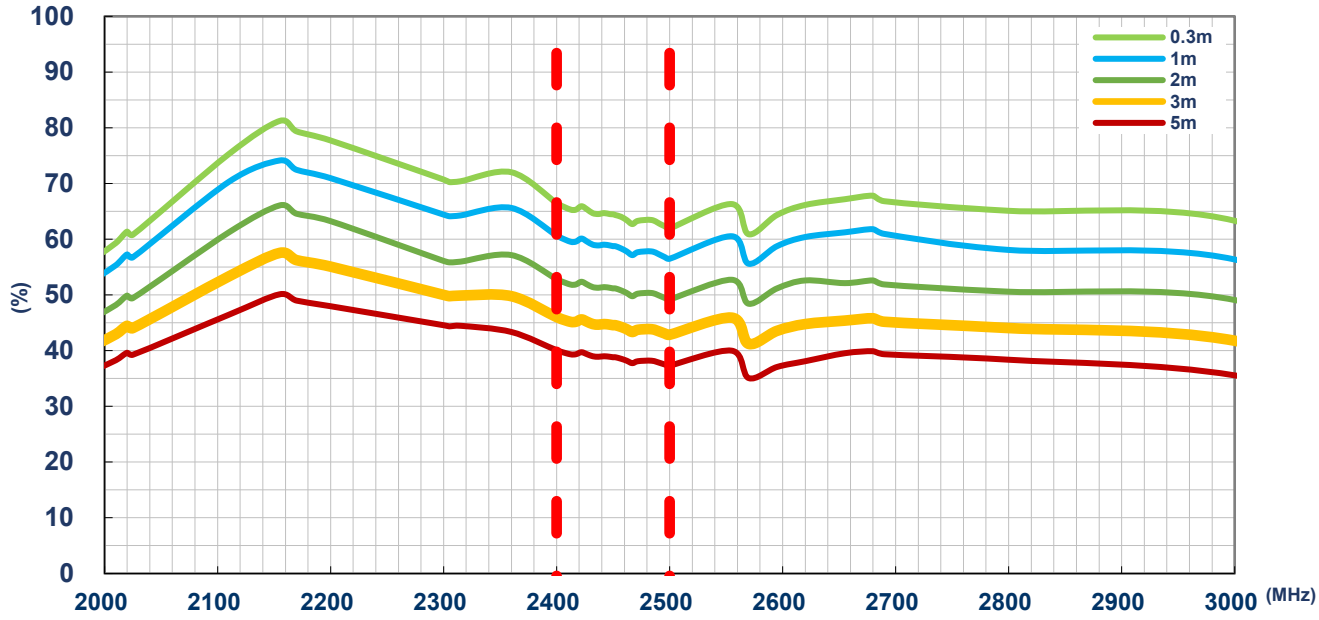
Mechanical	
Antenna Height	307mm
Bracket Dimensions	118 x 32 mm
Cable	3m CFD-200
Connector	SMA(M) ST
Antenna Casing	ABS
Bracket Casing	PC
Weight	330g
Environmental	
Waterproof Rating	IP65
Operation Temperature	-40°C to 85°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

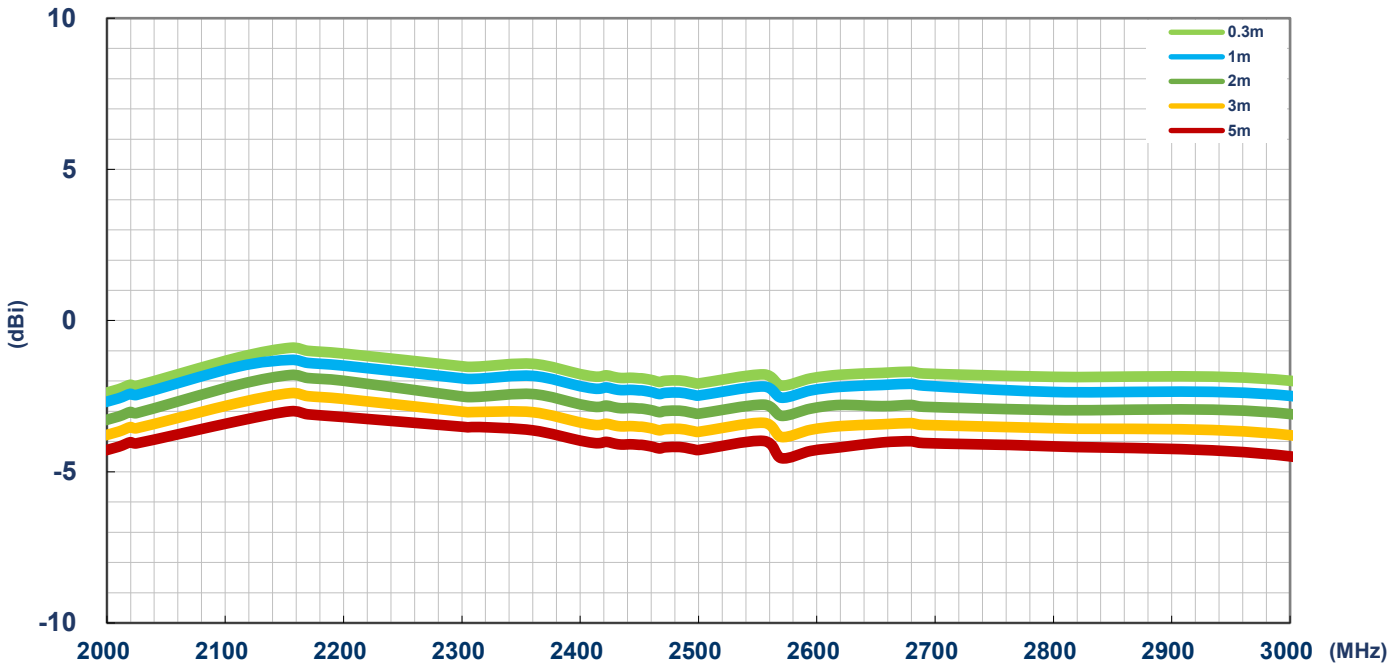
3.1 Return Loss



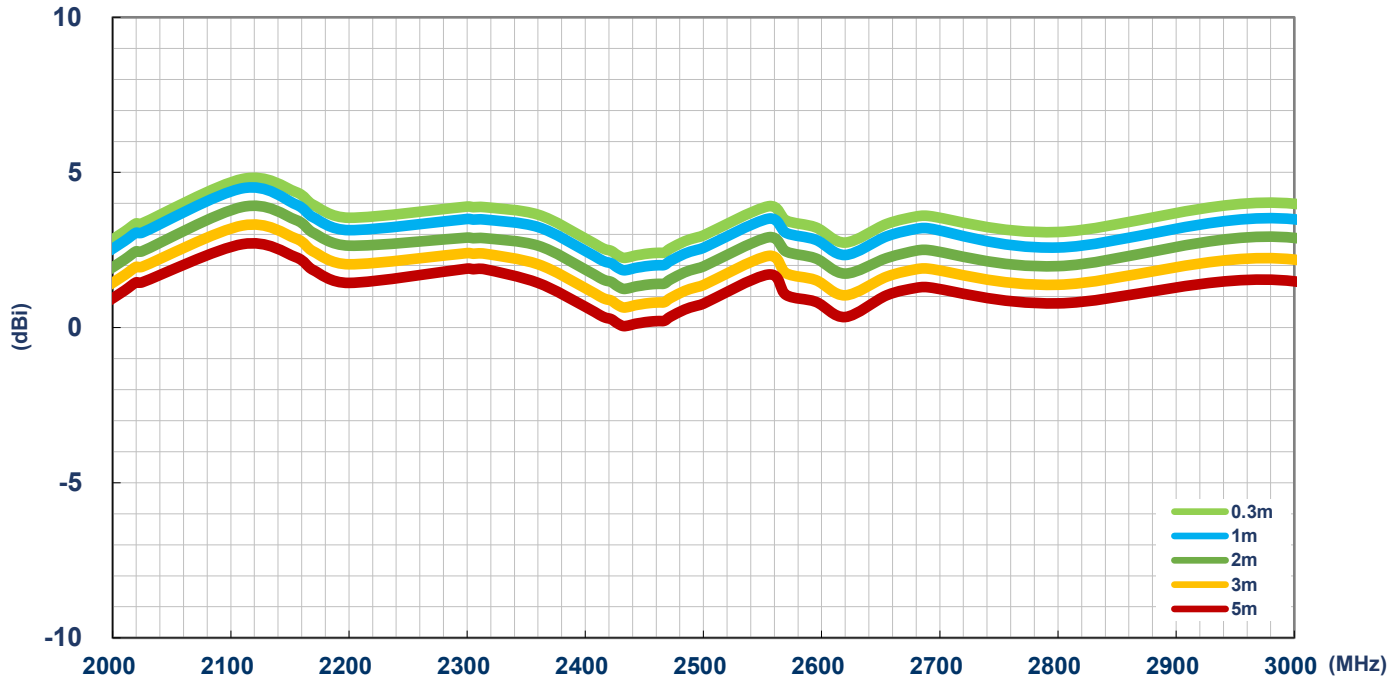
3.2 Efficiency



3.3 Average Gain

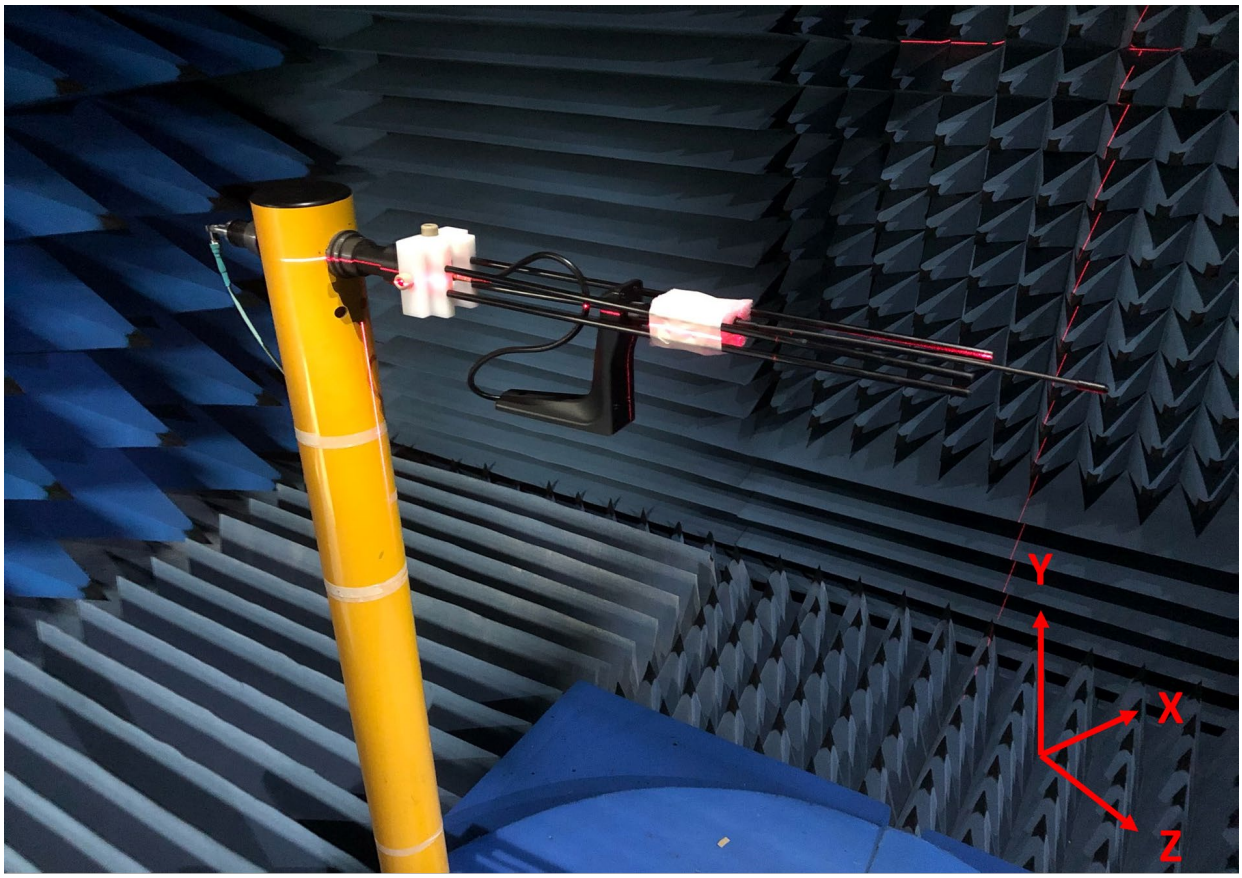


3.4 Peak Gain



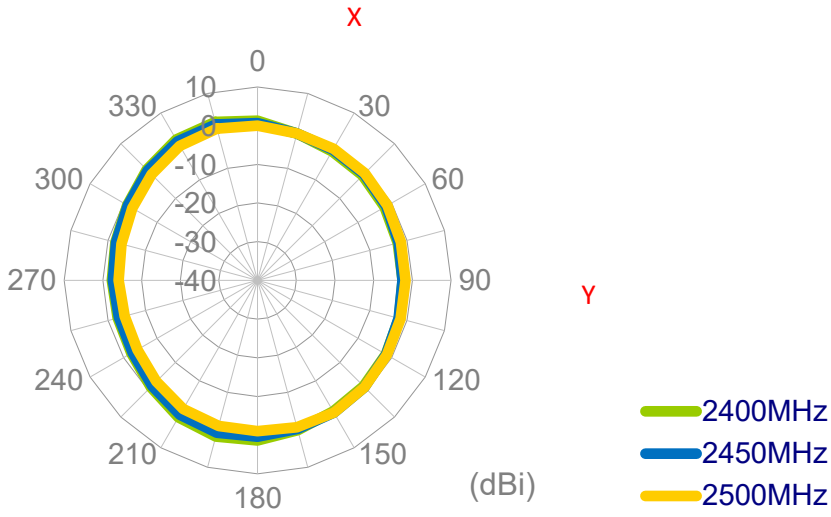
4. 2D Radiation Patterns

4.1 Test Setup

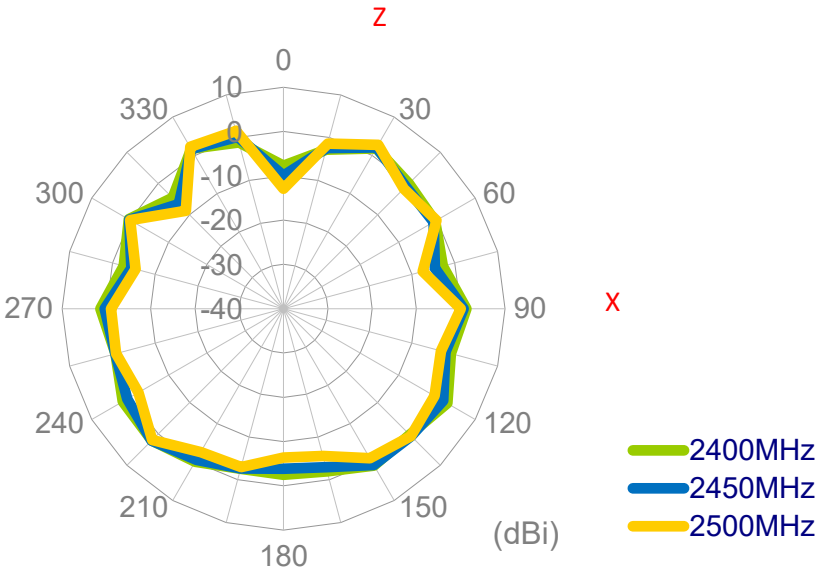


Free space

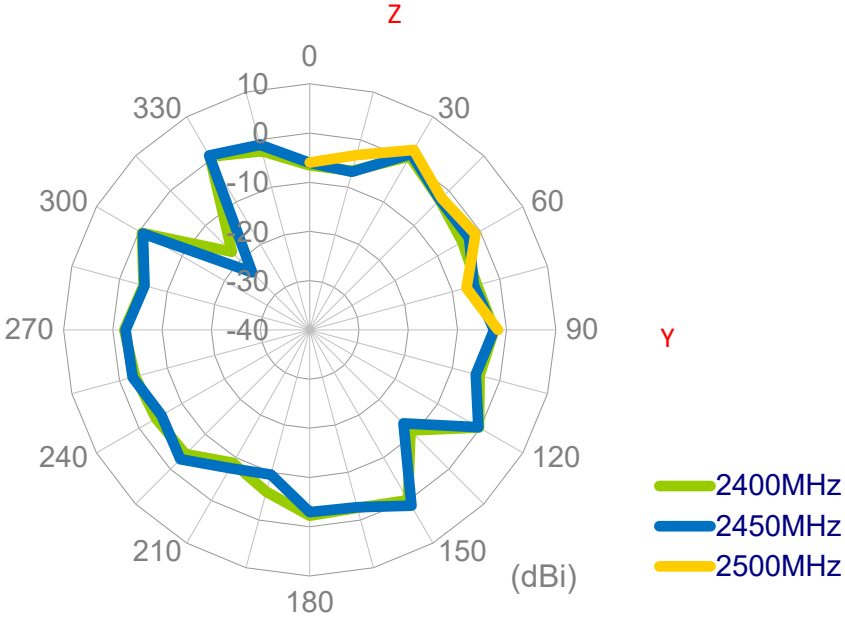
XY Plane



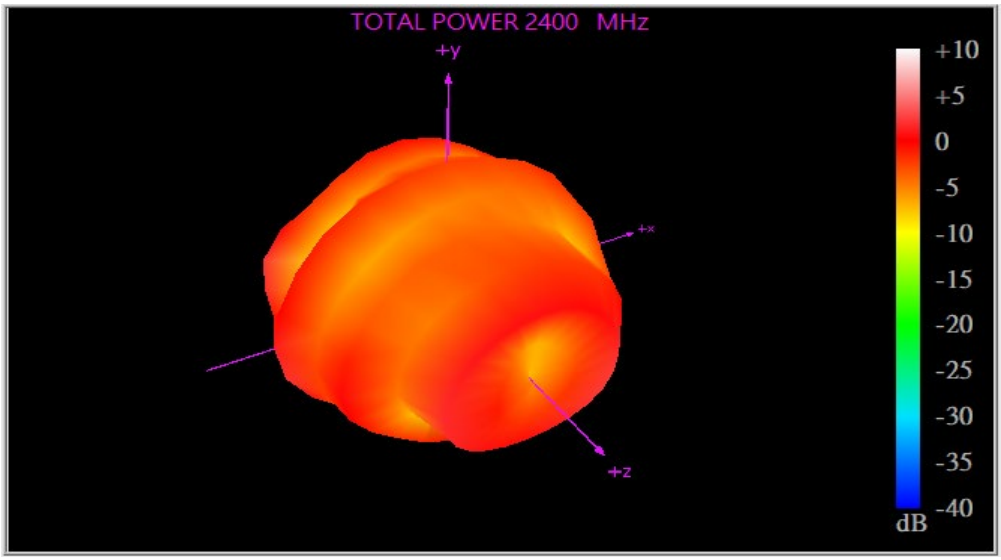
XZ Plane

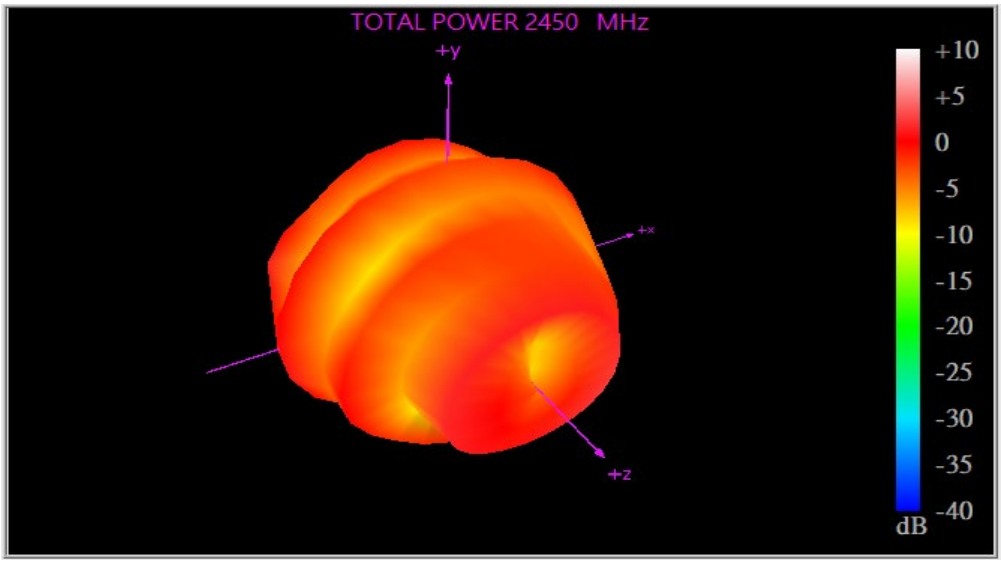


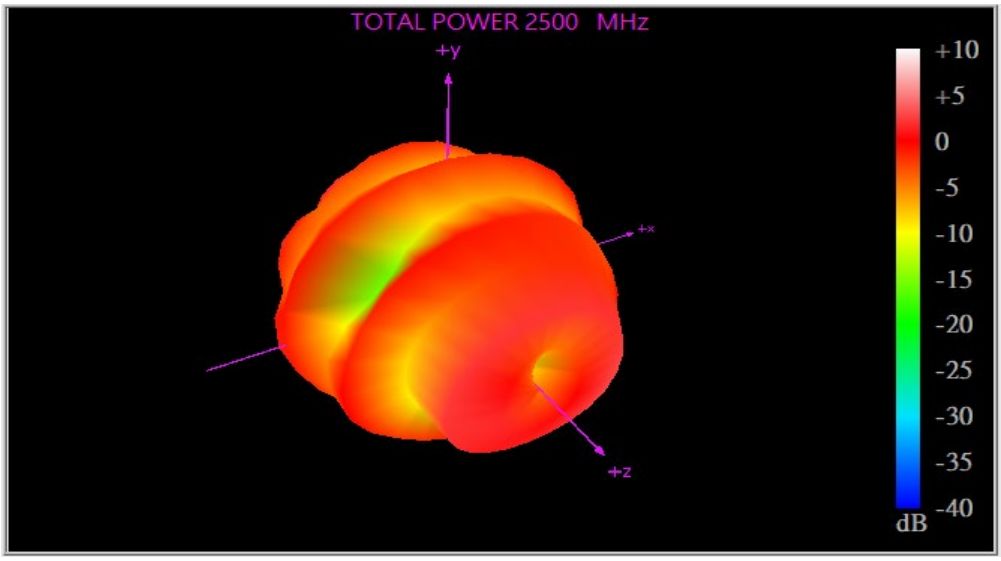
YZ Plane



5. 3D Radiation Patterns



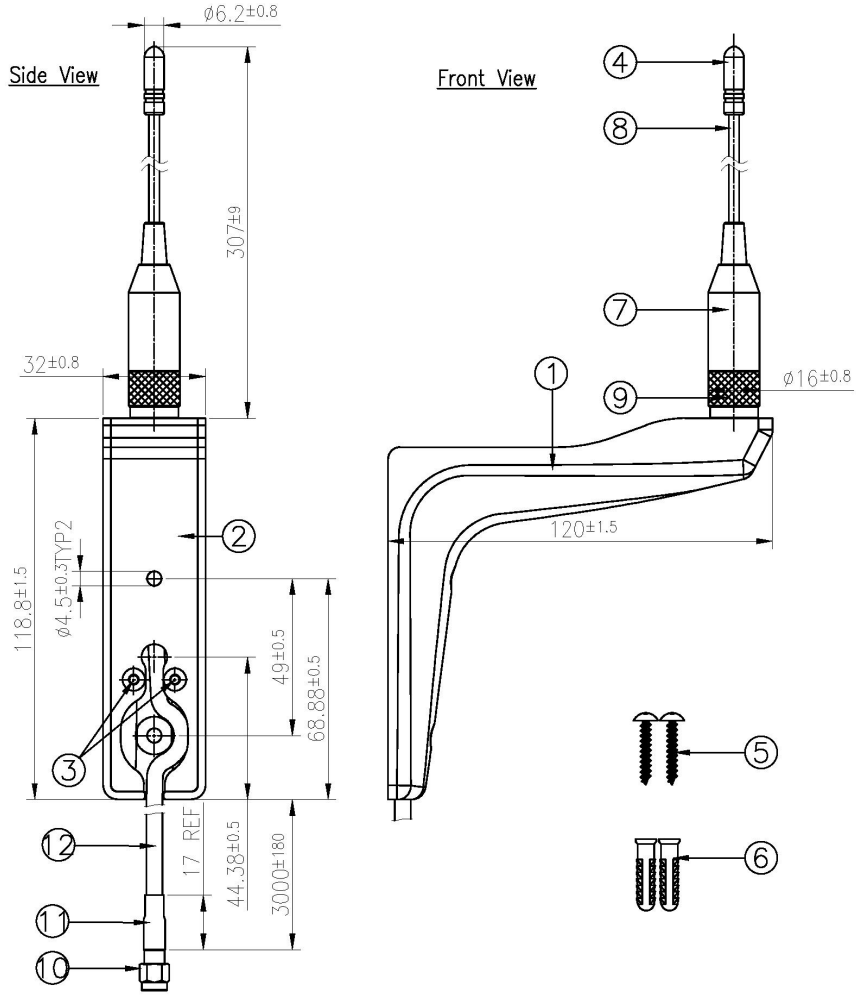




6. Mechanical Drawing (Units: mm)

REV	ZONE	DESCRIPTION	ENG	APPROVED	ISSUED DATE
D01	ALL	Initial Design	Rachel	Haley	2018/12/06

ISO NO: EDW-18-8-7685 <Release>



	Name	P/N	Material	Finish	QTY
1	L-Bracket Housing	000111C010020A	PC	Black	1
2	L-Bracket	000111C010020A	SPCC	Black	1
3	3*8 Screw	000411C020020A	Steel	Black	6
4	Cap	000716J000000A	POM	Black	1
5	ø4*25L Screw	000411A040054A	Steel	Ni Plated	2
6	ø6*24L Wall Mount	000411A050054A	Nylon	White	2
7	Housing	000116J060000A	ABS	Black	1
8	Internal Steel Cable	001116J000000A	Steel+PE Jacket	Black	1
9	Outer Body SMA(M)	210216J000002A	Brass	Black	1
10	SMA(M)ST	200212K010020A	Brass	Au Plated	1
11	Heat Shrink Tube	001315C030000A	PE	Black	1
12	CFD200 Cable	301415C010000A	PVC	Black	1

UNLESS OTHERWISE SPECFIED TOLERANCES ON: .X± 0.2, XX.± 0.5, .XX± 0.1, X.± 0.3, .XXX± 0.05

DATE: 2018/12/06 | MAT'L:

UNIT: mm | FINISH:

THIRD ANGLE PROJECTION | SCALE: 1/2

TAOGLAS. TW Design Centre

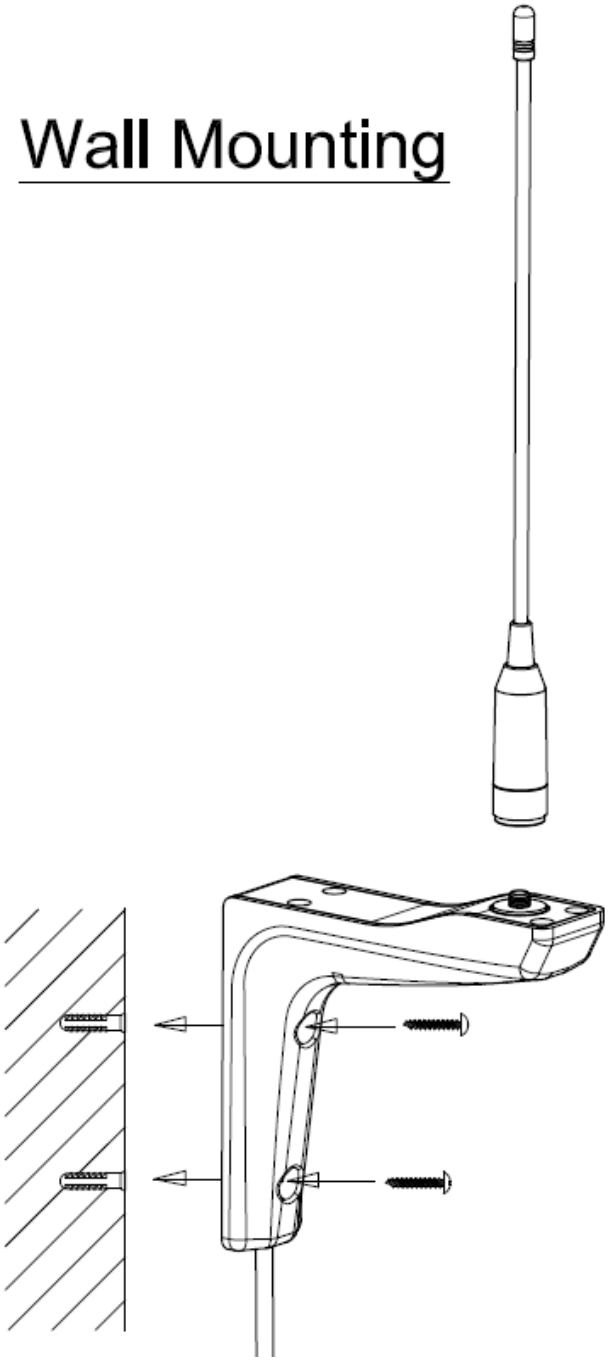
REV D01

TITLE. : Cyclops 2.4 Wall Mount Flexible Whip Monopole with Bracket 3000mm CFD-200 SMA(M) – (SMA whip)

PART NO. : WM.24.A.305111

APPROVED BY:	CHECKED BY:	DRAWN BY:	CUSTOMERS SIGNATURE / DATE
Haley	Jack/Haley	Rachel	

7. Installation

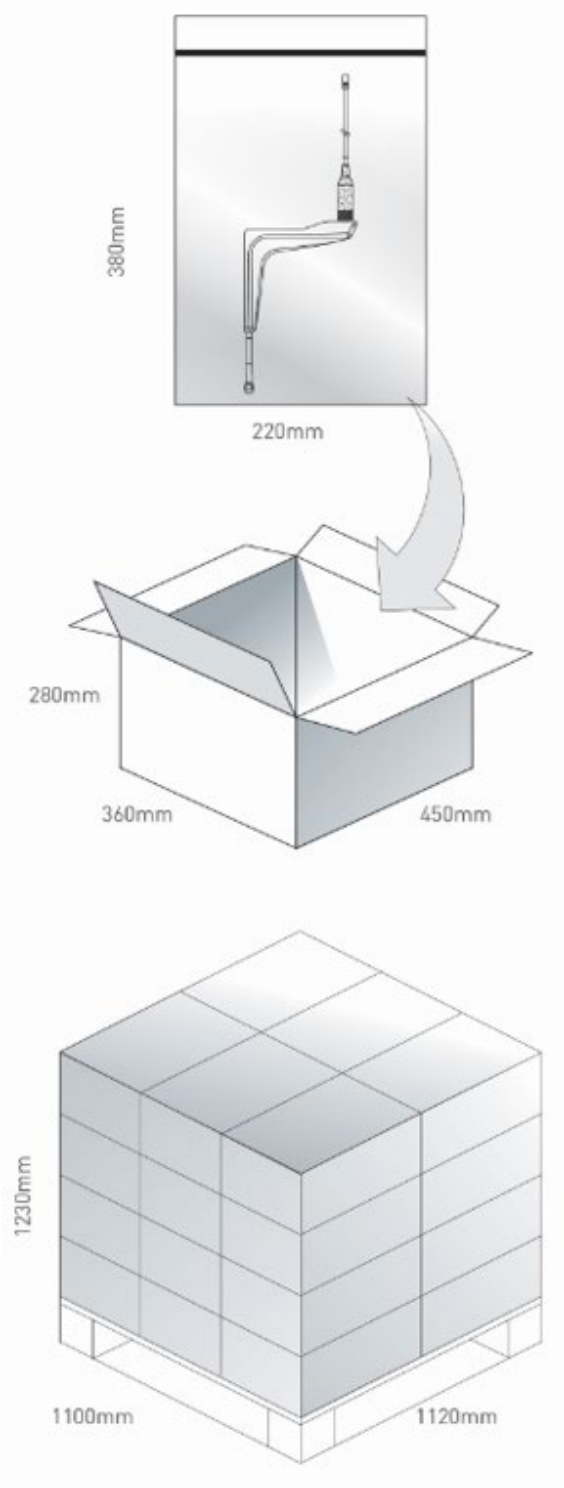


8. Packaging

1pcs WM.24.A.305111 per PE Bag
Bag Dimensions: 380*220mm
Weight: 360g

25pcs WM.24.A.305111 per carton
Bag Dimensions: 450*360*280mm
Weight: 2.9Kg

Pallet Dimensions: 1100*1120*1230mm
24 Cartons per Pallet
6 Cartons per Layer
4 Layers



Changelog for the datasheet

SPE-19-8-085 – WM.24.A.305111

Revision: A (Original First Release)	
Date:	2019-06-21
Notes:	
Author:	Jack Conroy

Previous Revisions

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