PRODUCT SPECIFICATION

Part No.	CGMA113
Product Name	L1/L5 Dual Band Right Handed Circular Polarized Stacked Patch Antenna 1575.42 / 1176.42 MHz
Features	L1/L5 Dual band high gain circular polarization antenna for GPS/GNSS applications. Covers dual-band L1/L5: L1 Band: 1565~1586 MHz L5 Band: 1166~1187 MHz RHCP gain 2.3 to 4.7 dBic RoHS Compliant

INTRODUCTION

The CGMA113 antenna is a circularly polarized high gain antenna used for satellite-based communications such as GPS and GNSS. It is designed to be mounted directly on a PCB. Additional circuit to apply phases in each port can be added.

Typical applications

- Enhanced GPS/GNSS satellite communications.
- Any device including Automotive for location detection service
- Best product for RTK (Real Time Kinematic positioning) for precise position detection

This antenna delivers best in class antenna gain technology for satellite navigation systems such as GNSS to support both L5 and L1 bands at 1166.22MHz and 1575.42MHz.

Satellite navigation applications of today demand higher circular gain than ever before. Higher gain antennas with high circularity are necessary to achieve the better position detection for these next generation satellite based position detection systems such as RTK (Real Time Kinematic Positioning). By using its patented antenna technology, SkyMirr is able to build higher gain and low AR (Axial Ratio) solutions as compared to currently available antennas.

The CGMA113 antenna has been carefully designed to work equally well in both L5 band as well as L1 band. This allows for better position detecting as the world requires more precise location detection services in Automotive, IoT, Military, and more applications.

Additional circuit to provide phases in each antenna port may be necessary to achieve circular polarization in radiation. For further services including the circuit design, please contact the SkyMirr sales office (sales@skymirr.com or +1.321.482.1811).

SPECIFICATIONS

Summary

Electrical_Patch antenna

NO	Item	Specification		Unit	Remark
		L1 Band	L5 Band		
1	Frequency	1565~1586	1166~1187	Mhz	Note1
2	Polarization	RHCP		-	
3	Gain @ Zenith	Typ. 2.4~4.7	Typ. 2.3~4.5	dBic	
4	Axial Ratio	Typ. 3 @ Zenith	Typ. 3 @ Zenith	dB	
5	Impedance	50		Ω	
6	Patch Antenna Size	Φ41 x 8t		mm	
7	Antenna Coupler	High Performance Coupler			

※ Note1 : Measured on the 150 x 150mm GND plane / with case

Electrical_Patch + LNA

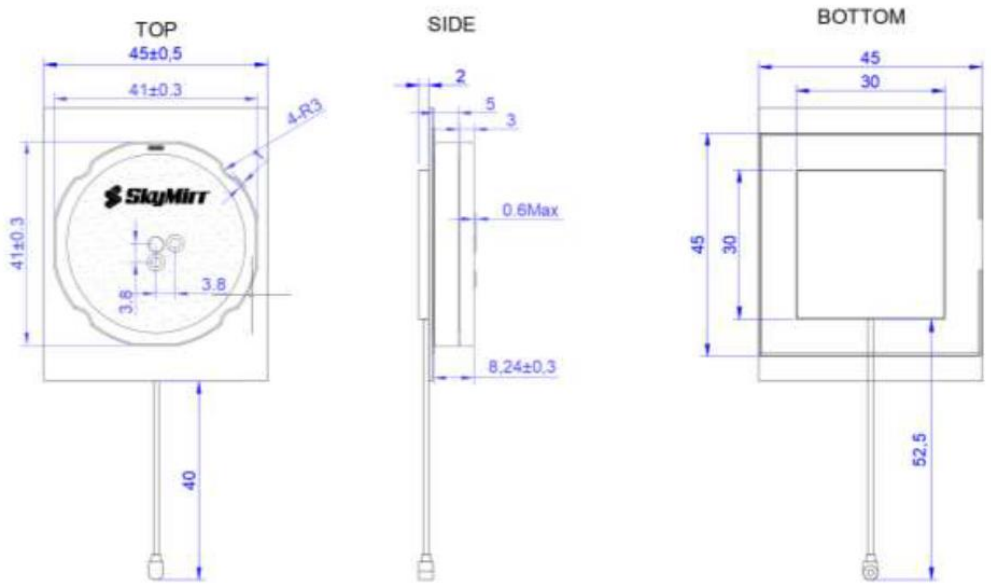
NO	Item	Specification		Unit	Remark
		L1 Band	L5 Band		
1	Frequency	1565~1586	1166~1187	Mhz	Note2
2	Total Gain @ Zenith	Typ. 30.5~32.7	Typ. 26.1~32.5	dBic	
3	Axial Ratio	Typ. 3 @ Zenith	Typ. 3 @ Zenith	dB	
4	Output VSWR	< 2:1	< 2:1	-	
5	Impedance	50		Ω	

※ Note2 : Measured on the 150 x 150mm GND plane / with case, DC5V

Mechanical

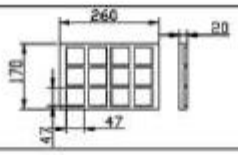
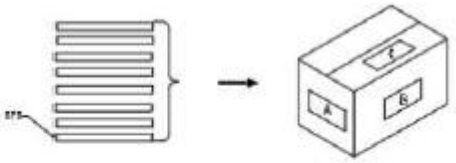
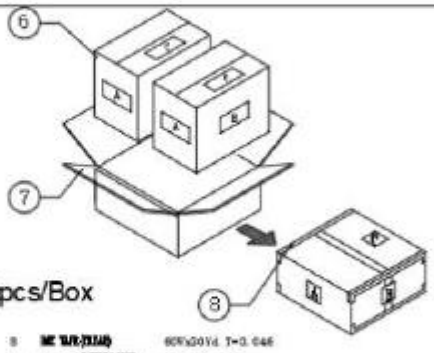
NO	Item	Specification	Unit
1	Width	45(L) x 45(W)	mm
2	Height	Max 12	mm
3	Weight	60	g
4	Cable / Connector	Φ1.13 100mm / I-pex	-

Dimension



Top view Side view Bottom view

Package

1. Tray	 47*47 12pcs/Tray
2. Inner Carton Box	 96pcs/Box Size= 280x187x170
3. Outside Carton Box	 192pcs/Box
4. Carton Label