



ACTIVE GNSS HELICAL

LYRA

Active Quadrifilar Helical GNSS Antenna

SZA-N-6G56

BANDS
L1 / L2 / L5

LNA GAIN
28 dB typical

CONNECTOR
SMA Male

RATING
IP67

L2 / L5	1164 to 1254 MHz	Covers GPS L5, L2; GLONASS G2; BeiDou B2
L1	1559 to 1609 MHz	Covers GPS L1; GLONASS G1; BeiDou B1

Key Features

- GPS, GLONASS, BDS: L1 L2 L5
- RHCP, wide-angle circular polarization
- 28 dB LNA, NF ≤ 1.5 dB, 3.3 to 16 V
- SMA male, IP67, 12 g

1 Introduction

SZA-N-6G56 is an active Quadrifilar Helical GNSS Antenna for GPS, GLONASS and BDS, covering L1, L2 and L5. The quadrifilar helix structure gives wide-angle circular polarization, so the antenna receives more low elevation satellite signals than a traditional patch design. An integrated low noise amplifier with 28 dB typical gain and a maximum noise figure of 1.5 dB is powered through the same SMA connector that carries the RF signal, so only one connection is needed. At 12 g with IP67 protection, it is well suited to UAVs, handheld devices and wearable devices. All antennas are 100% RF tested.

— Features

- ◆ GPS L1 L2 L5, GLONASS G1 G2, BDS B1 B2
- ◆ RHCP with wide-angle circular polarization for low elevation satellites
- ◆ Integrated LNA with 28 dB typical gain
- ◆ Noise figure 1.5 dB maximum
- ◆ DC bias and RF signal through one SMA male connector
- ◆ DC input range from 3.3 to 16 V
- ◆ Lightweight: 12 g
- ◆ IP67 protection
- ◆ Operating temperature from -40°C to +85°C
- ◆ 100% RF tested

— Applications

- ◆ UAVs and drones
- ◆ Handheld GNSS devices
- ◆ Wearable devices

2 Mechanical Specifications

Part Number	SZA-N-6G56
Name	LYRA
Dimensions (mm)	56.0 × Ø 23.0
Weight	12 g
Antenna Type	Active Quadrifilar Helical GNSS Antenna
Connector	SMA Male

3 Antenna Gain

Band	Signal Centre Frequency (MHz)	Gain (dBi) Minimum
GPS L5	1176.45	1.0
BDS B2	1207.14	0.0
GPS L2	1227.60	-3.0
GLONASS G2	1246	-5.0
BDS B1	1561.098	0.5
GPS L1	1575.42	2.0
GLONASS G1	1602	0.0

4 Electrical / RF Specifications

Impedance	50 Ω (nominal)
Polarization	RHCP
Coverage	360°
Output VSWR	≤2.0
Axial Ratio	≤3 dB

Measured at Ta +25 ±5°C

5 LNA Specifications

DC Voltage (V)	Current (mA)	Gain (dB) Typical	Input / Output VSWR	Noise Figure (dB)
3.3 to 16	≤25	28	≤2.0	≤1.5

6 Environmental

Operational Temperature	-40 to +85°C
Storage Temperature	-40 to +85°C
IP Rating	IP67

7 Product Photos

Connector end (SMA male)

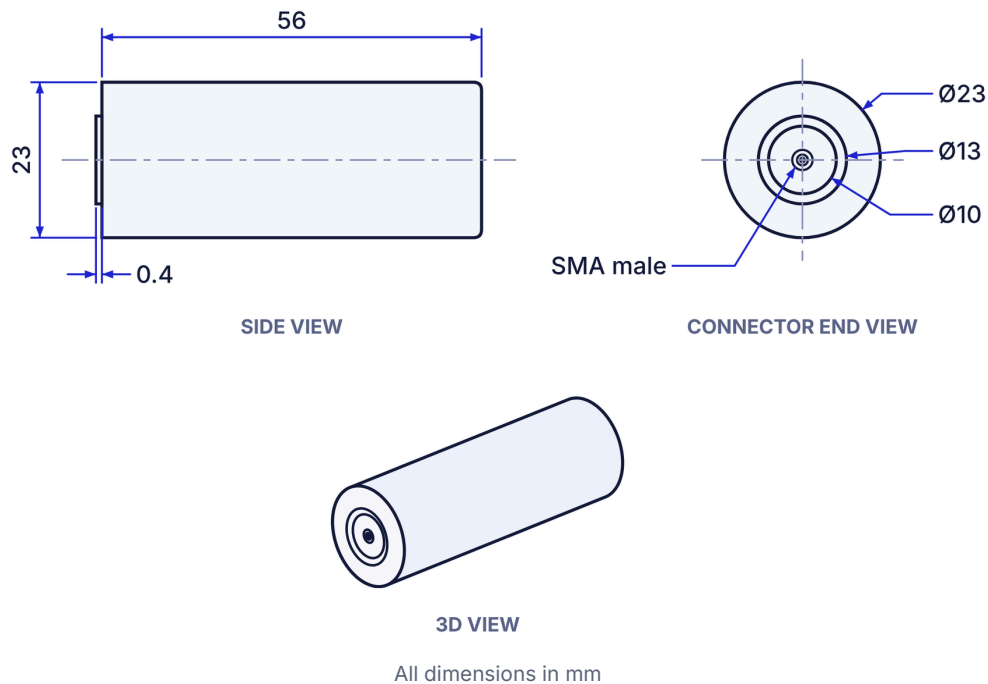


Sealing ring

Radome (top end)



8 Mechanical Drawing



9 Packaging

- ◆ Standard carton quantity: 336 pcs
- ◆ Carton dimensions: 55 × 35 × 33 cm
- ◆ Carton weight: approximately 5 kg gross, 4.5 kg net

10 Compliance

ROHS

Compliant

Conforms to EU RoHS Directive 2011/65/EU as amended by Delegated Directive (EU) 2015/863.

REACH

Compliant

Conforms to EU REACH Regulation (EC) No 1907/2006.

CERTIFICATE

On request

A certificate of conformance is available upon request from sales@synzen.com.tw.

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