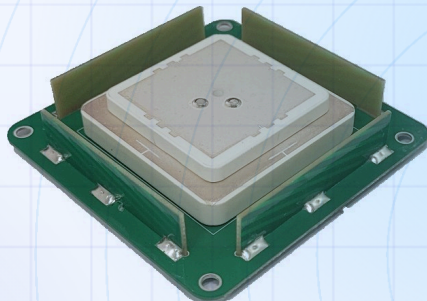




ACTIVE GNSS

HYPERION

Active Multi-band GNSS Patch Antenna

SZA-N-3G27

BANDS

L1 + L2 + L5

LNA GAIN

36 ±2 dB

POLARIZATION

RHCP

SIZE

70 × 70 × 14.1 mm
LOW BAND
1173 to 1281 MHz

Covers GPS L2, L5, Galileo E5, E6, GLONASS L2, L3, BeiDou B2

HIGH BAND
1558 to 1605 MHz

Covers GPS L1, Galileo E1, GLONASS L1, BeiDou B1

Key Features

- Gain: >3.5 dBic 1173 to 1281 MHz; >3.5 dBic 1558 to 1605 MHz
- Axial ratio: ≤5 dB
- LNA gain: 36 dB
- Cable length: 90 mm
- Connector: MHF1 (U.FL compatible)

1 Introduction

HYPERION, a large GNSS active antenna specifically designed for drones and high-precision applications. This advanced antenna delivers a substantial LNA gain of 36 dB, making it ideal for demanding environments where accuracy is paramount.

Despite its remarkable out-of-band rejection capabilities, the HYPERION maintains an impressively low noise figure, significantly minimizing signal degradation that is typical of losses in transmission lines.

For further optimization tailored to specific device environments, Synzen offers custom-tuned patch antennas.

— Features

- ◆ High LNA gain: 36 dB
- ◆ Comprehensive GNSS support: GPS / GLONASS / Galileo / BeiDou
- ◆ Large form factor: 70 × 70 × 14.1 mm
- ◆ Excellent out-of-band rejection
- ◆ Robust design for precision applications

— Applications

- | | |
|-------------------------|-----------------------------|
| ◆ Drones and UAVs | ◆ Autonomous Vehicles |
| ◆ Surveying Equipment | ◆ GIS |
| ◆ Precision Agriculture | ◆ High-Precision Navigation |

2 Mechanical Specifications

Part Number	SZA-N-3G27
Name	HYPERION
Dimensions (mm)	70.0 × 70.0 × 14.1
Antenna Type	Active Ceramic Patch + Cable (RHCP)
Cable Length (mm)*	90.0, 1.13 Ø
Connector*	MHF1 (U.FL Compatible)
Fixing	4 × 3.2 mm Ø fixing holes

*Alternate cable length and connectors available on request

3 Antenna Specifications

Frequency Range (MHz)	Efficiency (%)	Peak Gain (dBic)	VSWR	Impedance
1173 to 1281	>70	3.5	<2.0:1	50 Ω
1558 to 1605	>75	3.5	<2.0:1	

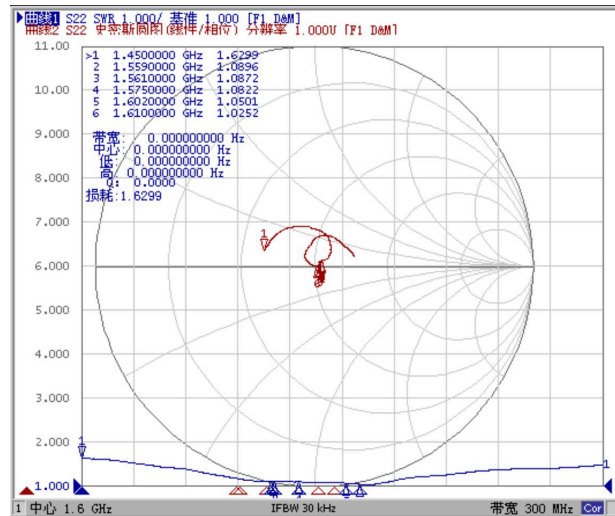
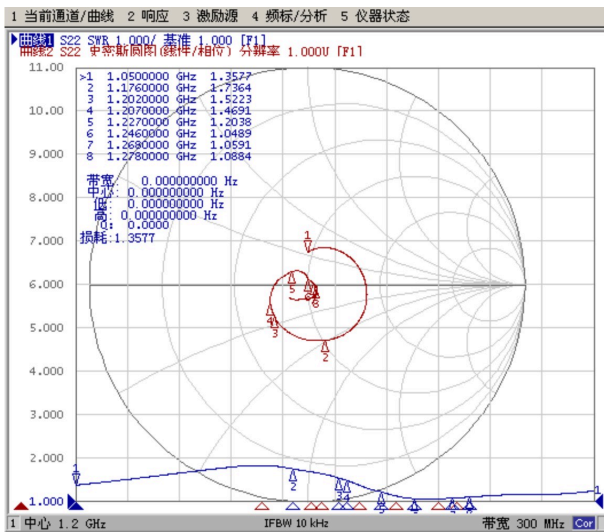
4 LNA Specifications

Frequency Range (MHz)	DC Voltage (V)	Current (mA)	Gain (dB)	VSWR
1173 to 1281 / 1558 to 1605	3.0 to 5.0	25.0 ±5	36 ±2	<2.0:1

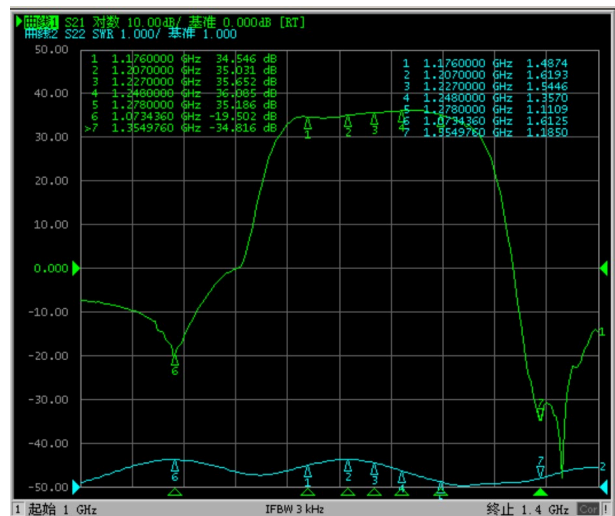
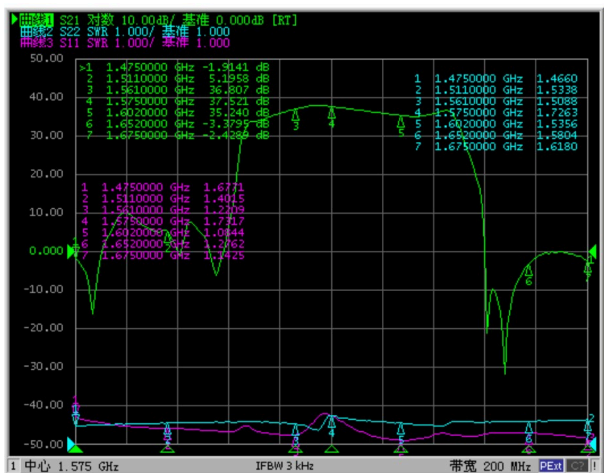
5 Environmental

Operational Temperature	-40 to +85°C
Storage Temperature	-55 to +85°C
Relative Humidity (Storage)	65 ±20% RH
Moisture Sensitivity Level (MSL)	1
RoHS and REACH compliant	Yes

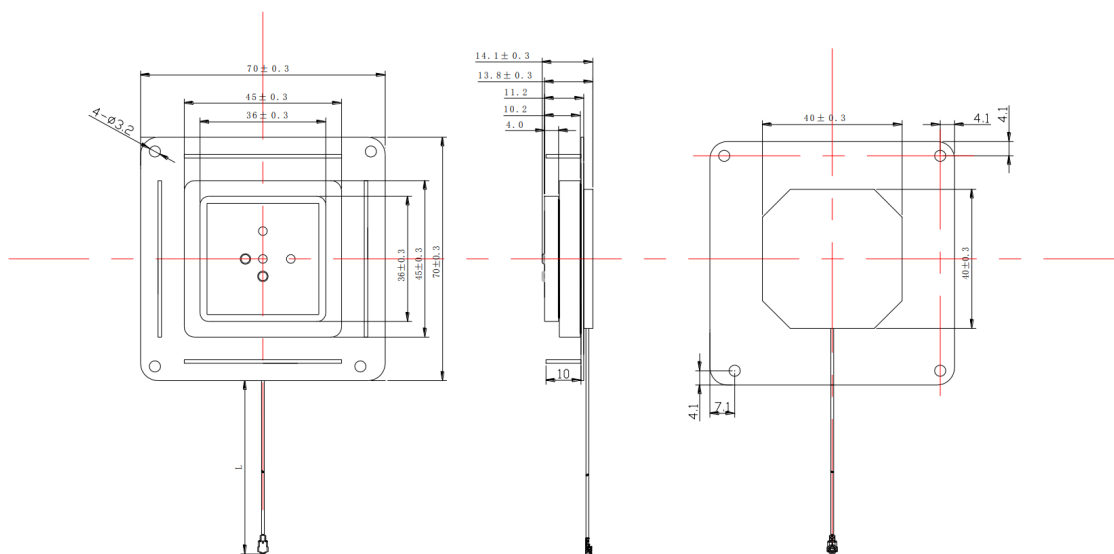
6 Return Loss / Smith Chart



7 LNA Performance



8 Mechanical Drawing

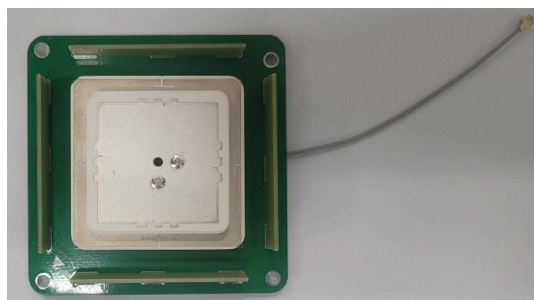


$L=78 \pm 5\text{mm}$

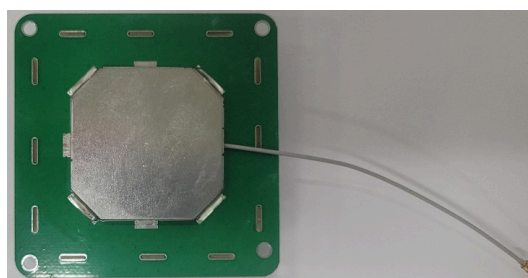
All dimensions in mm

9 Top and Bottom View

Top



Bottom



10 Packaging



11 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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