

GNSS Spiral Antenna

AH301H

Datasheet

V 1.0.0

Applicable Product Model
AH301H

Version Note

Version	Details	Contributor(s)	Date	Notes
1.0.0	First edit	Michelle	2024.03.04	

Index

1 Product Introduction	4
1.1 Summarize	4
1.2 Product Applications	4
1.3 Technical Characteristics	4
1.4 Key Technical Indicators	5
2 Structural Dimensions	7
Quality	8
Contact Us	8
Copyright Statement	9

1 Product Introduction

1.1 Summarize

AH301H GNSS multi-star multi-band spiral antenna adopts multi-arm coupling and four-feed point feeding technology to support L1, L2, L5 dual-band satellite navigation signal reception of Beidou II, GPS, GLONASS and GALILEO systems. With built-in low-noise amplifier, adopting two-stage filter, good out-of-band suppression, and strong anti-jamming ability to ensure the normal work in the harsh electromagnetic environment. It can meet the current demand for multi-system compatibility and high-precision measurement.

1.2 Product Applications

Ideal for applications where size and weight are important, such as portable devices like UAVs, micro RTKs, sub-meter handhelds/tablets, etc.

1.3 Technical Characteristics

- The antenna employs a multi-arm feedpoint technology to ensure right circular polarization and phase center performance to reduce the impact of measurement errors;
- The antenna unit is characterized by high gain and small gain roll-off, which is good for low elevation satellite signal reception;
- Sophisticated low noise, high gain amplification and excellent out-of-band rejection;
- Electrostatic protection: 15KV (air discharge);
- Small size and light weight, easy to carry and install.

1.4 Key Technical Indicators

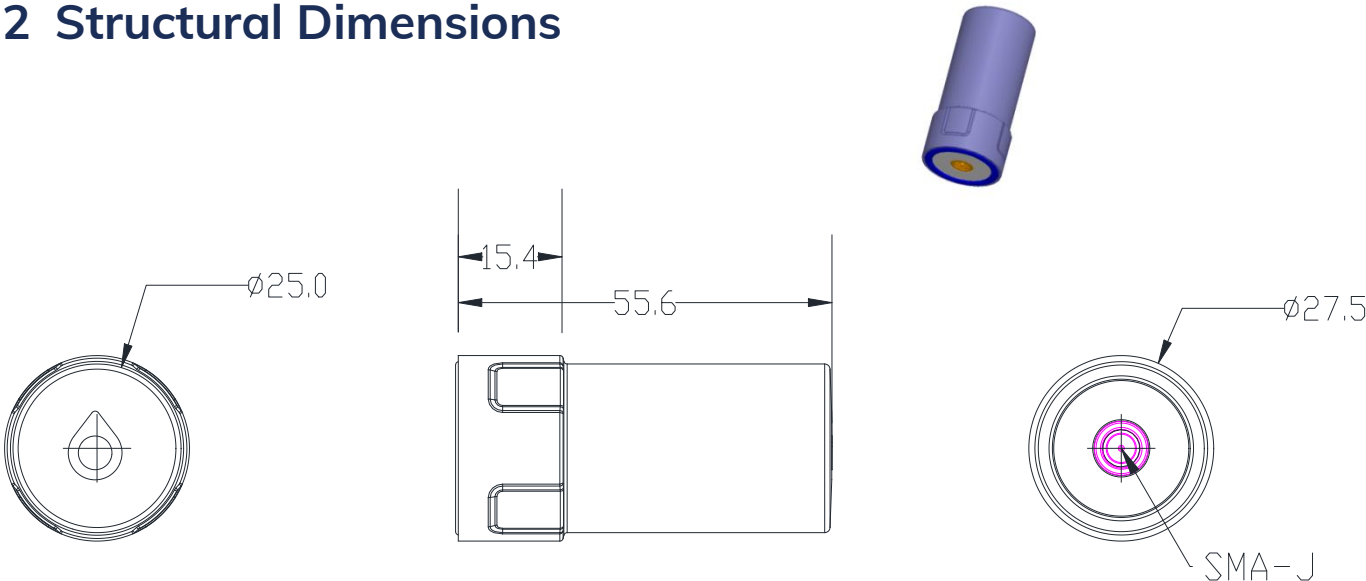
Antenna	
Antenna Structure	Four-arm Spiral
Supported Positioning Signal Bands	BEIDOU: B1/B2/B3; GPS: L1/L2/L5; Galileo: E1/E5b GLONASS: G1/G2
Peak Gain	≥2.0dBi
Polarization	RHCP
Axial Ratio@zenith	≤1.5dB
Azimuth Coverage	360°
Impedance	50 ohm
LNA	
Frequency Range	1164MHz~1278MHz 1559MHz~1606MHz
LNA Gain	35±3.0dB (Typ. @25°C)
Noise Figure	≤1.5 dB@25°C , Typ.
Output VSWR	≤1.8:1 typ. 2.0:1max
Operation Voltage	3.0~6.0V DC, recommended 3.3V or 5.0V
Operation Current	≤45mA
Mechanicals & Environmental	
Dimension	see attached figure
Connector	SMA-J (Internal threaded female needle)
Radome	ABS+PC
Weight	≤18g
Attachment Method	Determined by product form
Operating Temp	-40°C~+80°C
Storage Temp	-45°C~+80°C
Humidity	95% No-condensing

Waterproof	IP67
------------	------

Note:

The seal needs to be well pressed against the antenna support plane, which is the first requirement to achieve the IP67 protection rating.

2 Structural Dimensions



tolerance $\pm 0.2\text{mm}$

● Quality

Cognizant of our commitment to quality, we operate our own factory equipped with state-of-the-art production facilities and a meticulous quality management system. We hold certifications for ISO9001, ISO14001, ISO27001, OHSAS18001, BSCI.

Every product undergoes stringent testing, including transmit power, sensitivity, power consumption, stability, and aging tests. Our fully automated module production line is now in full operation, boasting a production capacity in the millions, capable of meeting high-volume production demands.

● Contact Us

Shenzhen Minewsemi Co., Ltd. is committed to swiftly delivering top-quality connectivity modules to our customers. For assistance and support, please feel free to contact our relevant personnel, or contact us as follows:

Web: www.minewsemi.com

Email: minewsemi@minew.com

Linkedin: www.linkedin.com/company/minewsemi

Shop: <https://minewsemi.en.alibaba.com/>

Tel: +86 0755-28010353

Address: 3rd Floor, I Building, Gangzhilong Science Park, NO.6, Qinglong Road, Longhua District, Shenzhen, China

**Click the icon to view and download
the latest product documents electronically.**



● Copyright Statement

This manual and all the contents contained in it are owned by Shenzhen Minewsemi Co., Ltd. and are protected by Chinese laws and applicable international conventions related to copyright laws.

The certified trademarks included in this product and related documents have been licensed for use by MinewSemi. This includes but is not limited to certifications such as BQB, RoHS, REACH, CE, FCC, BQB, IC, SRRC, TELEC, WPC, RCM, WEEE, etc. The respective textual trademarks and logos belong to their respective owners. For example, the Bluetooth® textual trademark and logo are owned by Bluetooth SIG, Inc. Other trademarks and trade names are those of their respective owners. Due to the small size of the module product, the "®" symbol is omitted from the Bluetooth Primary Trademarks information in compliance with regulations.

The company has the right to change the content of this manual according to the technological development, and the revised version will not be notified otherwise. Without the written permission and authorization of the company, any individual, company, or organization shall not modify the contents of this manual or use part or all of the contents of this manual in other ways. Violators will be held accountable in accordance with the law.

MINEWSEMI

Tel: 0086-755-2801 0353

Email: minewsemi@minew.com

Web: www.minewsemi.com

Address: 3rd Floor, Building I, Gangzhilong Science Park, Qinglong Road, Longhua District, Shenzhen 518109, China

