

# **GNSS Spiral Antenna**

**AH203**

**Datasheet**

V 1.0.0

<b>Applicable Product Model</b>
AH203

## Version Note

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

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# 1 Product Introduction

## 1.1 Summarize

AH203 GNSS multi-star multi-band spiral antenna adopts multi-arm coupling and four-feed point feeding technology to support L1 and L5 dual-band satellite navigation signal reception of Beidou II, GPS, GLONASS and GALILEO systems. With built-in low-noise amplifier, adopting multi-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;
- 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/B2a; GPS: L1/L5; Galileo: E1/E5a GLONASS: L1
Peak Gain	≥1.5dBi
Polarization	RHCP
Axial Ratio@zenith	≤1.5dB
Azimuth Coverage	360°
Impedance	50 ohm
LNA	
Frequency Range	1176.45±10.23MHz 1559MHz~1606MHz
LNA Gain	25±3.0dB (Typ. @25°C)
Noise Figure	≤1.5 dB@25°C , Typ.
Output VSWR	≤1.8:1 typ. 2.0:1max
Operation Voltage	2.5~16.0V DC, recommended 3.3V or 5.0V
Operation Current	≤10mA
Mechanicals & Environmental	
Dimension	See attached figure
Connector	SMA-J (Internal threaded female needle)
Radome	ABS+PC
Weight	≤11g
Attachment Method	Through the connector
Operating Temp	-40°C~+80°C
Storage Temp	-45°C~+80°C
Humidity	95% No-condensing

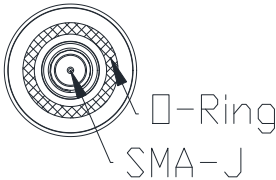
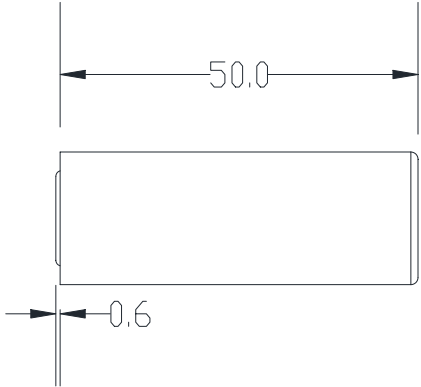
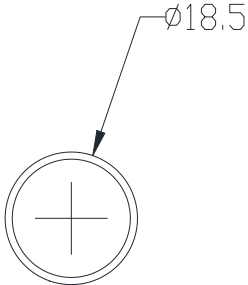
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Waterproof	IP67
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**Note:**

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±0.3mm

## ● 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:

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