



司南导航

QinNav
钦天导航

PRODUCT SPECIFICATION

产品规范

适用于 For

AH323-A7 GNSS + LoRa 二合一天线
AH323-A7 GNSS + LoRa Antenna



REVISION HISTORY / 修订历史

Revision/版本	Modification/更改	Date/日期
1.0	New Release / 新发	2023/09/06

DIRETORY / 目录

REVISION HISTORY / 修订历史 2

DIRETORY / 目录 3

1. Introduction / 简介 4

 1.1. Product Characteristics / 产品特性 4

2. AH323-A7 Product Size / AH323-A7 尺寸 6

3. Product labels / 产品标签 7

Figures

Figure 1. AH323-A7 Product Photo / AH323-A7 实物图 6

Figure 2. AH323-A7 Dimension View / AH323-A7 三视图 6

Figure 3. Label / 标签 7

Tables

Table 1. Product Characteristics / 产品特性 4

1. Introduction / 简介

AH323-A7 is a full-band, full-system two-in-one (GNSS+LoRa) antenna, the antenna has the characteristics of high gain, mini size, high sensitivity, multi-system compatibility and high reliability, it can effectively meet the needs of users. Used with GNSS high-precision module and LoRa module, it can be widely applied to lawn mowers, surveying and mapping, precision agriculture and some other fields.

AH323-A7是一款内置全系统全频GNSS+LoRa的二合一天线，该天线具有高增益、小型化、高灵敏度、多系统兼容及高可靠性等特点，可有效满足用户的使用需求。配合GNSS高精度模块+LoRa模块使用，可广泛应用于割草机、测量测绘及精准农业等领域。

1.1. Product Characteristics / 产品特性

Table 1. Product Characteristics / 产品特性

Characteristics	AH323-A7	
GNSS	BDS	B1/B2/B3
	GPS	L1/L2/L5/L-Band
	Galileo	E1/E5a/E5b/E6
	GLONASS	G1/G2/G3
	QZSS	L1/L2/L5/L6
	IRNSS	L5
	SBAS	L1/L5
LoRa	902MHz~928MHz	
Polarization Mode 极化方式	GNSS 天线:右旋圆极化 GNSS antenna: Right-Handed Circular Polarization 电台天线:垂直极化 Radio antenna: Vertical Polarization	
Horizontal Coverage 水平面覆盖范围	0° ~ 360°	
Port Impedance 端口阻抗	50Ω	
Maximum Gain 最大增益	GNSS: 5dBi LoRa: 0.5dBi	

©2023, QinNav Technology Ltd. All rights reserved. QinNav is the trade mark of QinNav Technology Ltd, registered in People's Republic of China. All other trademarks are the property of their respective owners.

Antenna Axis Ratio 天线轴比		≤ 3.0 dB
Voltage Standing Wave Ratios 电压驻波比		≤ 2.0
Phase Center Error 相位中心误差		± 2 mm
LNA Gain LNA增益		L2: 20 dB ± 2 dB L1: 20 dB ± 2 dB
In-band Flatness 带内平坦度		± 2 dB
Noise Figure 噪声系数		≤ 2.0 dB
Differential Transmission Delay 差分传输延迟		≤ 5 ns
Electrical 电气特性	Voltage 供电电压	+ 3.3 V ~ + 12 V DC
	Electricity 供电电流	≤ 45 mA
Environmental 环境要求	Operating Temperature 工作温度	-40°C ~ +85°C
	Storage Temperature 储存温度	-55°C ~ +85°C
Hardware Interface 硬件接口		GNSS: MMCX-JW LoRa: IPEX
Physical 物理参数	Size 尺寸	Φ122mm*27.6mm

2. AH323-A7 Product Size / AH323-A7 尺寸

In this section, product photo, three-side views and the dimension of AH323-A7 is provided for customers' further hardware design and installation.

本节提供了AH323-A7的实物图，三视图和对应的物理尺寸，便于用户进一步系统硬件设计和安装。

Figure 1. AH323-A7 Product Photo / AH323-A7 实物图

Figure 2. AH323-A7 Dimension View / AH323-A7 三视图

Unmarked dimensional tolerance $\pm 0.3\text{mm}$ / 未标注尺寸公差 $\pm 0.3\text{mm}$

3. Product labels / 产品标签

Label size: 30*15mm

标签尺寸: 30*15mm



Figure 3. Label / 标签

上海钦天导航技术有限公司

QinNav Technology, LTD.

上海市嘉定区澄浏中路618号1号楼B区6楼

6th Floor, Zone B, Building 1, 618 Chengliu Middle Road, Jiading District, Shanghai

官方网站: www.qinnav.com

邮箱: qinnav@qinnav.com

热线: 400-060-8030



司南导航

QinNav
钦天导航