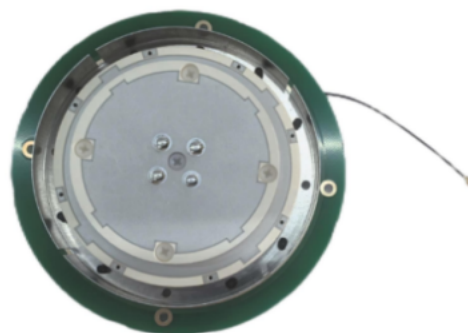


AH21 测量型 GNSS 天线

AH21 Measurement type GNSS antenna



产品描述 PRODUCT DESCRIPTION

AH21 是一款支持全频段 GNSS 测量型天线（内置型），支持北斗二代、GPS 和 GLONASS 的 L1/L2/L5 频段以及 L-Band 卫星导航信号接收。可广泛应用于精密农业、无人机基站、车载导航等高精度导航定位场合。

AH21 is a full band GNSS measurement type antenna that supports L1/L2/L5 satellite navigation signal reception for GPS, Beidou and GLONASS, L-Band as well. It can be widely used in high-precision navigation and positioning situations such as precision agriculture, drone base stations, and vehicle navigation.

技术特点 KEY FEATURES

- 采用多馈点设计，保证了右旋圆极化和相位中心性能，降低测量误差的影响；
Adopting a multi feed point design ensures the performance of right-handed circular polarization and phase center, reducing the impact of measurement errors;
- 天线单元增益高，对低仰角卫星信号接收效果好，保证系统可用卫星数目足够多；
The antenna unit has high gain and good reception effect for low elevation satellite signals, ensuring sufficient number of available satellites in the system;
- 低噪声放大器采用前置滤波技术，有效抑制带外干扰信号，提高系统的可靠性；
The low noise amplifier adopts pre-filtering technology to effectively suppress out of band interference signals and improve system reliability;

主要技术指标 SPECIALIZATIONS

天线特性 ANTENNA	
天线结构 Patch Architecture	四馈点，双层叠加结构 Dual Four-point-feed, Dual Stacked Patch
支持卫星信号 Supported positioning signal bands	GPS: L1/L2/L5; BDS: B1/B2/B3; GLONASS: G1/G2/G3; Galileo: E1/E5a/E5b/E6 L-Band
最大增益 Peak Gain*	$\geq 5.0 \text{Bi}@F_c$
极化方式 Polarization	右旋圆极化（RHCP）
天线轴比@天顶 Axial Ratio@zenith	$\leq 1.5 \text{dB}$

水平面覆盖角度 Azimuth Coverage	360°
特性阻抗 Impedance	50 ohm
相位中心误差 Phase-center accuracy	≤2.0mm
相位中心重复性 Phase-center repeatability	≤1.0mm
低噪声放大器特性 LNA	
工作频段 Frequency Range	1164MHz~1300MHz 1525MHz~1621MHz
低噪放增益 LNA Gain*	24±2.0dB (Typ. @25° C)
噪声系数 Noise Figure*	≤2.0 dB@25°C, Typ. (Pre-filtered)
输出驻波比 Output VSWR	≤1.8:1 typ. 2.0:1max
工作电压 Operation Voltage	3.0~16.0V DC, 推荐 5.0V
工作电流 Operation Current	≤45mA
机械结构与环境特性	
MECHANICAL & ENVIRONMENTAL	
天线尺寸 Dimension	Φ115×22mm (见附图)
射频输出接口 Connector	IPEX, Φ 1.13 线, 线长 L≈90mm
产品重量 Weight	≈150g
安装方式 Attachment Method	螺丝固定
工作温度 Operating Temp	−40℃~+85℃
储存温度 Storage Temp	−45℃~+85℃
湿度 Humidity	95% No-condensing

结构尺寸 STRUCTURE SIZE

