

MAN1216Q43-ST26HF1

RTK Antenna For GNSS

MECSINE 兆讯

RTK Antenna

For L1/L5 G1 B1/B2a E1/E5a

MAN1216Q43-ST26HF1

37 x Φ 47.04 mm

All Use For RF & Microwave

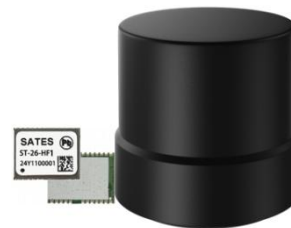
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FEATURES

1. Integrated design of RTK positioning module and helical antenna.
2. Light weight less than 30g.
3. Multi-constellation, multi-frequency support.
4. Wide-voltage input.



DESCRIPTION

The MAN1216Q43-ST26HF1 is an intelligent positioning antenna that integrates an RTK positioning module, a helical antenna, and a geomagnetic sensor. It supports dual-frequency RTK positioning across all satellite constellations, enabling high-precision positioning. Its applications span shared bicycles, drones, automotive navigation, and vehicle management.

MECHANICAL

Characteristic	Specification	Units
Weight	22	g
Dimensions	37 x Φ 47.04	mm
Connector	GH1.25-8P	
Interface Pin Order	1:GND 2:TX2 (NC) 3:RX2 (NC) 4:SDA 5:SCL 6:TX1 7:RX1 8:VCC	

- 2~3 Pin: No Connection; 4~5 Pin: keep open if not used.

ENVIRONMENTAL

Characteristic	Ratings	Units
Operating Temperature Range	-40~+85	°C
Storage Temperature Range	-40~+85	°C
Humidity	95	%

ANTENNA CHARACTERISTICS

Item	Specification	Units
Signal Received	GPS	L1, L5
	GLONASS	G1
	BDS	B1I, B1C, B2a
	Galileo	E1, E5a
	QZSS	L1, L5
Characteristics Impedance	50 (Nominal)	Ω
Polarization	RHCP	
Covering Range	360	°
Peak Gain	2.5	dBi
Out Put VSWR	≤ 2	:1
Axial Ratio (dB)	≤ 3	dB

- Ta: +25 $\pm$ 5°C

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AMPLIFIER CHARACTERISTICS

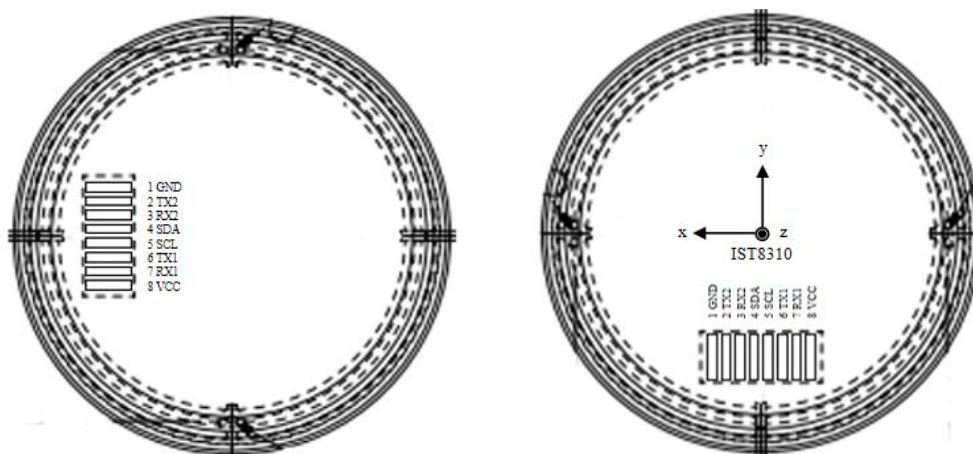
Item	Min.	Typ.	Max.
Gain (dB)		23	
Noise Figure (dB)		1.5	2
Output VSWR (:1)			2

- Ta: +25±5°C

SYSTEM SPECIFICATIONS

Item	Specification	Units
Positioning Module	ST-26-HF1	
Geomagnetic Sensors	IST8310	
Operation Voltage	5 (3.3-16)	V
Power Consumption	150 (Typical)	mW
Single Point Accuracy	Horizontal: <1 (CEP50)	m
RTK Accuracy	Horizontal: 1.0 + 1ppm; Vertical: 2.0 + 1ppm (CEP50)	cm
Sensitivity	Cold Start: -148; Re-acquisition: -158; Tracking: -165	dBm
Time Accuracy	≤ 20	ns
Velocity Accuracy	<0.05 (CEP50)	m/s
Time To First Fix	Cold Start < 30	s
Data Update Rate	10	Hz
Data Format	RTCM 3.2; NMEA 0183 Ver. 4.1	

SHAPES AND DIMENSIONS

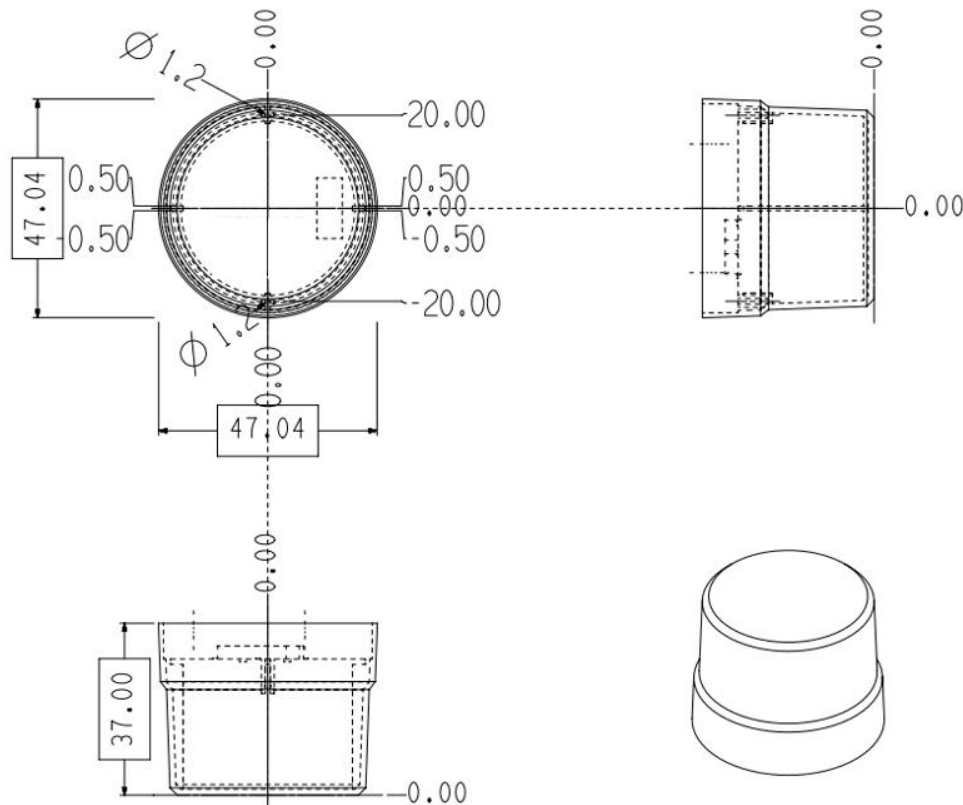


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Units: mm

Revision	Description	Date
Rev0	Preliminary	2025/9/30

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