PRECISE

Enjoy a PRECISE, RELIABLE, and EASY experience!

Redefining CORS with Unmatched Precision and Reliability.

Super-high Fix Rate
99.9%

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Enhanced by
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PRECISE C

GNSS Reference Receiver

Redefining CORS with Unmatched Precision and Reliability.

PRECISE C is a lightweight split GNSS receiver designed for the safety monitoring industry, featuring miniaturisation, low power consumption, low cost, high update rate, Gigabit network port, high satellite search quality, etc. Used with a small 3D choke antenna, it can be used as a reference and monitoring station in harsh monitoring scenarios, and is widely used in the fields of bridge monitoring, dams in reservoirs, and other precision structures monitoring.

Full constellation tracking

Support main stream GNSS satellite positioning system, support the new frequency of Bei Dou 3, signal stability and reliability;

High frequency monitoring

20Hz high frequency monitoring data output as standard, up to 50Hz supported (authorisation required);

Simple appearance

The whole machine is lightweight and compact, combined with a small 3D choke antenna for use as a lightweight reference station;

Front - end resolution

Supports distributed front-end solving to reduce the burden on the server and improve the number of server devices accessed;

Powerful performance

The mainframe uses a stable Linux operating system and is equipped with a Cortex-A8 processor with strong processing power;

Remote control

Device monitoring, setup and upgrades are achieved through the cloud, reducing the professional requirements of on-site installers.

SATELLITE PERFORMANCE

Channels	800
GPS	L1C/A, L1C, L1P, L2C, L2P, L5
BDS	B1I, B2I, B3I, B1C, B2a, B2b, ACEBOC
GLONASS	G1, G2, G3
GALILEO	E1, E5a, E5b, ALTBOC, E6
QZSS	L1C/A, L1C, L2C, L5, LEX
SBAS	
L-Band	
Refresh Rate	20Hz

Time to First Fix (TTFF)

Cold Start	60s
Hot Start	10s
Recapture Time	<1s

System Configuration

Operating System	Linux+A8
Internal Storage	32G on board, no TF card slot
Bluetooth	BT5.0+EDR Backwards Compatible/BLE
WIFI	802.11 b/g/n/ac

System Configuration

Satellite light	Slow green flash indicates normal operation Fast flashing green indicates no satellite receiving
Storage Light	Flashing green indicates storage in progress (synchronised with recording rate)
Transmission light	Flashing green indicates transmission in progress (synchronised with the transmitted data rate)
Power light	Constant green indicates normal

ACCURACY

Static	H: 2.5mm+0.5ppm V: 5mm+0.5ppm
Network PPK	H: 8mm±0.5ppm (RMS) V: 15mm±0.5ppm (RMS)

Electrical Parameters

Input Voltage	8~36V with reverse connection and surge protection

Data Interfaces

GNSS	1xTNC female, external GNSS antenna
ETH	1xRJ45, 10/100/1000 Mbps
COM	1xLemo-0 female, 9 pin, DB9
PWR	1xLemo-0 female, 2 pin, Power Input

Environmental Performance

Working Temperature	-30°C ~ +65°C
Storage Temperature	-40°C ~ +80°C
Waterproof and Dustproof	IP67
Drop	Resistant to 2m free fall (concrete hard floor)
Humidity	95 per cent non-condensing

PHYSICAL

Dimension	131mm * 36.5mm * 97mm
Weight	435g

PRECISE AN2

Miniaturised Anti-Multipath Antenna

Redefining CORS with Unmatched Precision and Reliability.

Applicable Frequency Bands

GPS L1/L2，BDS B1/B2/B3, Galileo E5

This antenna is a full-band measurement antenna covering GPS L1/L2, GLONASS L1/L2, BDS B1/B2/B3, Galileo E5.

It meets the needs of multi-system compatibility of measurement equipment and extremely high precision micro-deformation measurement.

It is mainly used in some occasions where there is a very high requirement for measurement accuracy and the surrounding environment has a multipath influence, such as seismic prediction, high-precision differential reference stations and other demanding applications.

Precision Redefined, Reliability Ensured

1 Accurate Alignment, Minimal Error

Multi-feedpoint design and fully symmetrical structure ensure the phase center aligns with the geometric center, reducing measurement error.

2 Advanced Structure, Multipath Suppression

Special structural design achieves excellent multipath suppression, high phase center stability, and repeatable performance.

3 High Cross-Polarization, Strong Signal Resistance

Exceptional cross-polarization ratio offers robust resistance to multipath interference.

4 Wide Voltage Range, Continuous Functionality

Integrated voltage regulation circuit enables stable operation across a wide input voltage range.

5 Pre-Filter Amplification, Enhanced Reliability

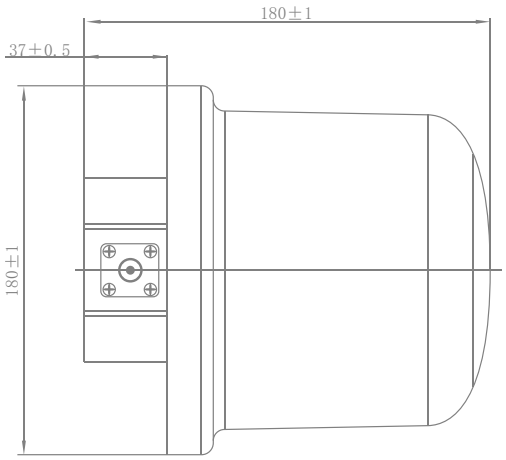
The low noise amplifier adopts a pre-filtering scheme, filtering signals before amplification to suppress out-of-band interference, preventing amplifier saturation and improving system reliability.

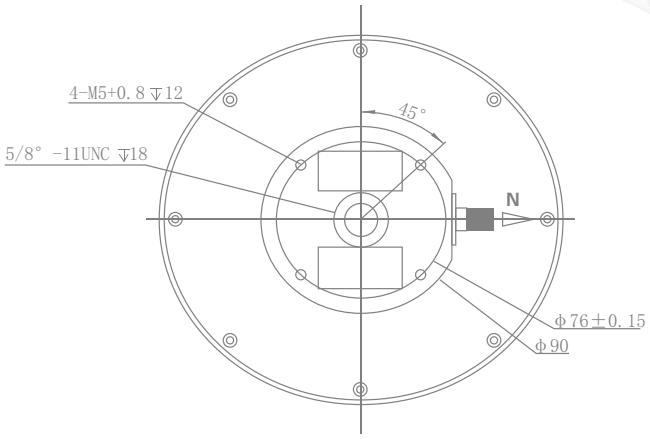
6 Dual Protection, Stable Operation

Built-in lightning protection circuit safeguards the amplifier, ensuring reliable performance in harsh outdoor environments.

7 Seamless Sealing, Durable Design

Unique waterproof and dustproof design achieves IP67 rating, fully sealing core components for reliable long-term outdoor use.





Electrical Specifications

Frequency Range (MHz)	GPS L1 & GLONASS L1 & BDS B1: 1557MHz~1612MHz GPS L2 & GLONASS L2 & BDS B2 & BDS B3: 1164MHz~1278MHz
Polarization	Right-hand circular polarization
	elevation90°≥6.0 elevation10°≥-2 elevation30°≥0
Gain(dBi) Axial Ratio (dB)	≤3dB(elevation≥40°) ≤6dB(10°≤elevation<40°)

Cross poar Ratio (dB)	±60°≥25
Phase Center Error (mm)	<2
LNA Gain (dB)	40±2
V.S.W.R	<2.0:1
Noise Figre (dB)	<2.0
DC Voltage (V)	3.3~12
Current (mA)	<65
Impedance (Ω)	50

Structural characteristics

Dimension(mm)	Φ180x180
Connector	TNC-K
Weight(Kg)	<2.5

Environmental requirements

Relative Humidity	95%
Operating Temperature (℃)	-40~+85
Store Temperature (℃)	-55~+85

PRECISE AN4

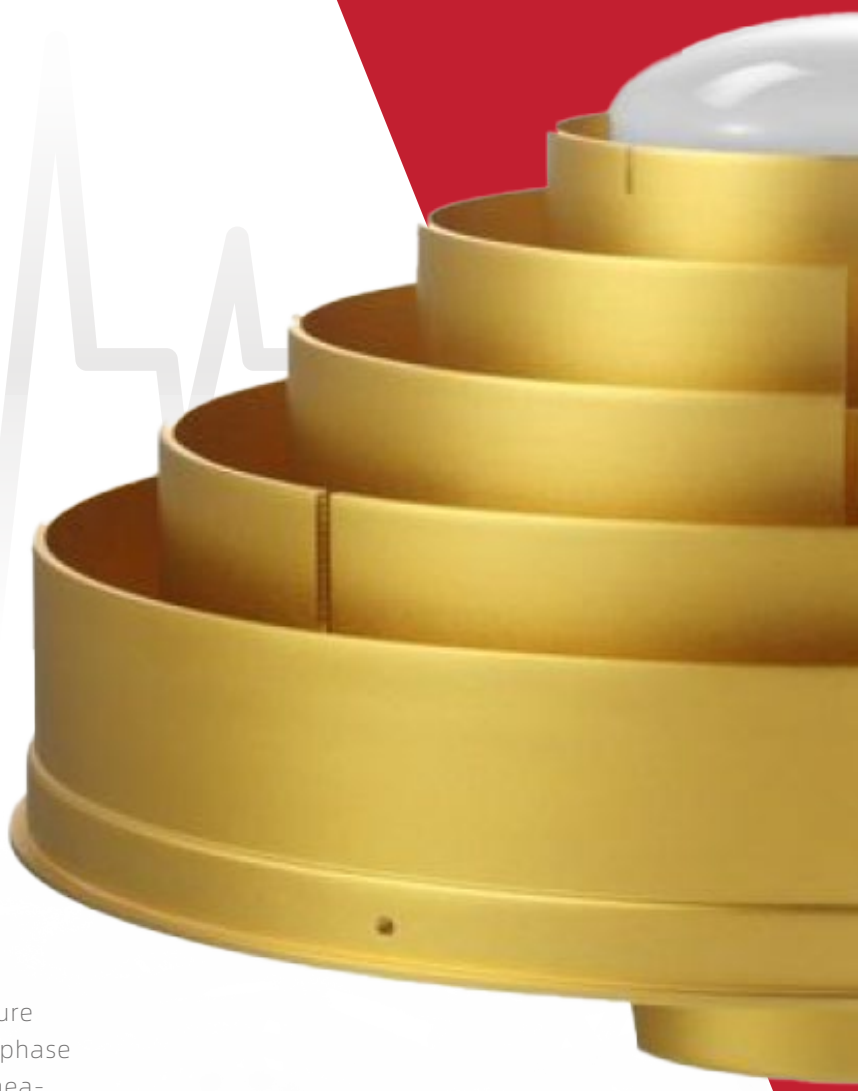
Reference Station Antenna

Redefining CORS with Unmatched Precision and Reliability.

PRECISE AN4 is a 4-system full-band 3D choke antenna compatible with GPS, GLONASS, BDS, and GALILEO. Designed to meet the demands of high-precision measurement equipment, it ensures seamless multi-system compatibility and exceptional accuracy.

The AN4 is ideal for a wide range of high-precision applications, including geodetic mapping, oceanographic surveying, waterway and dredging surveying, seismic monitoring, bridge deformation monitoring, landslide monitoring, and terminal container operations.

Engineered for Precision
Trusted for Stability



Full-Band Signal Compatibility

Supports the complete frequency bands of four major GNSS systems and L-Band signals, ensuring seamless multisystem compatibility and interoperability to meet diverse application needs.

Sub-Millimeter Phase Center Stability

Features a unique three-dimensional choke structure and a four-feedpoint design to precisely align the phase center with the geometric center. This minimizes measurement errors and achieves sub-millimeter stability, making it ideal for high-precision applications such as reference stations, bridge deformation monitoring, and geological analysis.

Robust and Reliable Structure

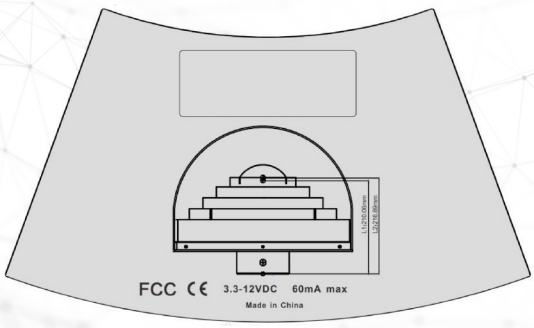
Constructed with fiberglass composite materials and a multi-layer protection design, the antenna achieves an IP67 protection rating. It is highly resistant to dust, UV rays, and water, with a proven MTBF exceeding 30,000 hours, ensuring reliable operation in extreme environments including high/low temperatures, high humidity, and salt spray.

Superior Tracking in Complex Environments

With high gain and a wide beam width, the antenna ensures strong satellite signal reception even at low elevation angles. It performs reliably in obstructed environments, such as wooded areas or urban landscapes, maintaining a stable GNSS signal lock.

Exceptional Anti-Interference Performance

Constructed with fiberglass composite materials and a multi-layer protection design, the antenna achieves an IP67 protection rating. It is highly resistant to dust, UV rays, and water, with a proven MTBF exceeding 30,000 hours, ensuring reliable operation in extreme environments including high/low temperatures, high humidity, and salt spray.



Detail Specification

Antenna Performance

Frequency range	GPS L1/L2/L5 BDS B1I/B2I/B3I/B1C/B2a/B2b GLONASS L1/L2/L3 GALILEO E1/E5a/E5b/E6 QZSS L1/L2/L5/L6 IRNSS L1/L5 L-Band
Impedance	50 ohms
Polarisation mode	right-handed circular polarisation
Antennae axial ratio	≤3dB
Horizontal plane coverage angle	360°
Output VSW	≤2.0
Maximum Gain	7dBi
Phase centre error	±1mm

Low Noise Amplifier Indicators

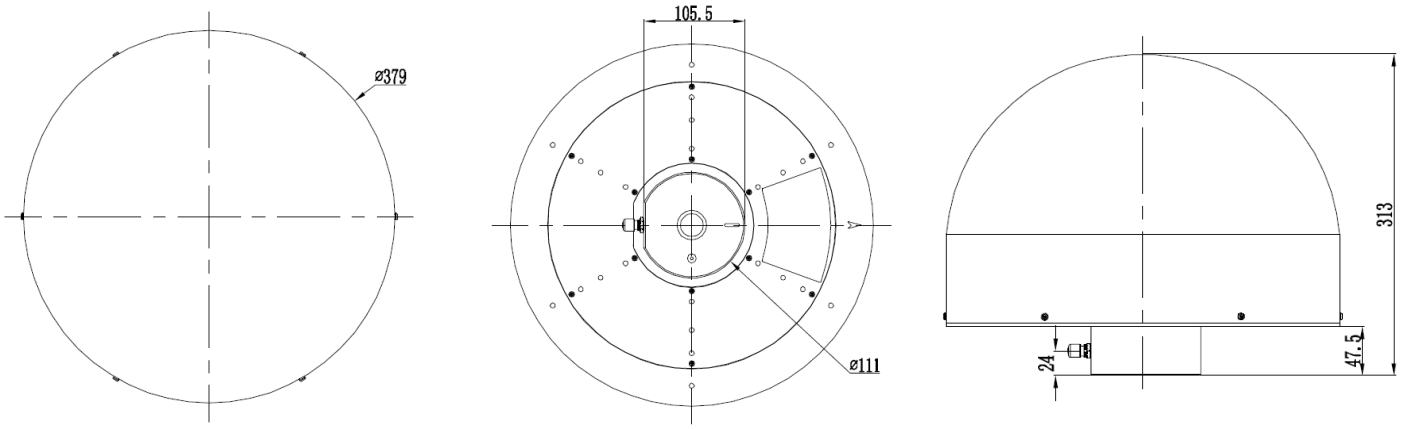
Gain	50±2dB
Coefficient of noise	≤2dB
Output VSW	≤2.0
In-band spectrum ripple	±2dB
Operating voltage	+3.3～+12VDC
Operating current	≤60mA
Differential transmission delay	≤5ns

Physics

Antenna Size	ϕ379*312mm
Weight	Bare machine 9.3kg Packed 10.5kg
Connector type	TNC Negative
Installation	5/8"*11 teeth (base with pointing north)

Working environment

Working temperature	-40℃～+85℃
Storage temperature	-55℃～+85℃
Humidity	95% No condensation

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