

**AIRACE**  
Technologies Private Limited

**PORTABILITY. PRECISION. RELIABILITY**



**FX6i**

**The Next Generation GNSS RTK Receiver  
With Tilt Compensation & Laser.**

[www.airace.in](http://www.airace.in)

**Deasigned by Airace in India**

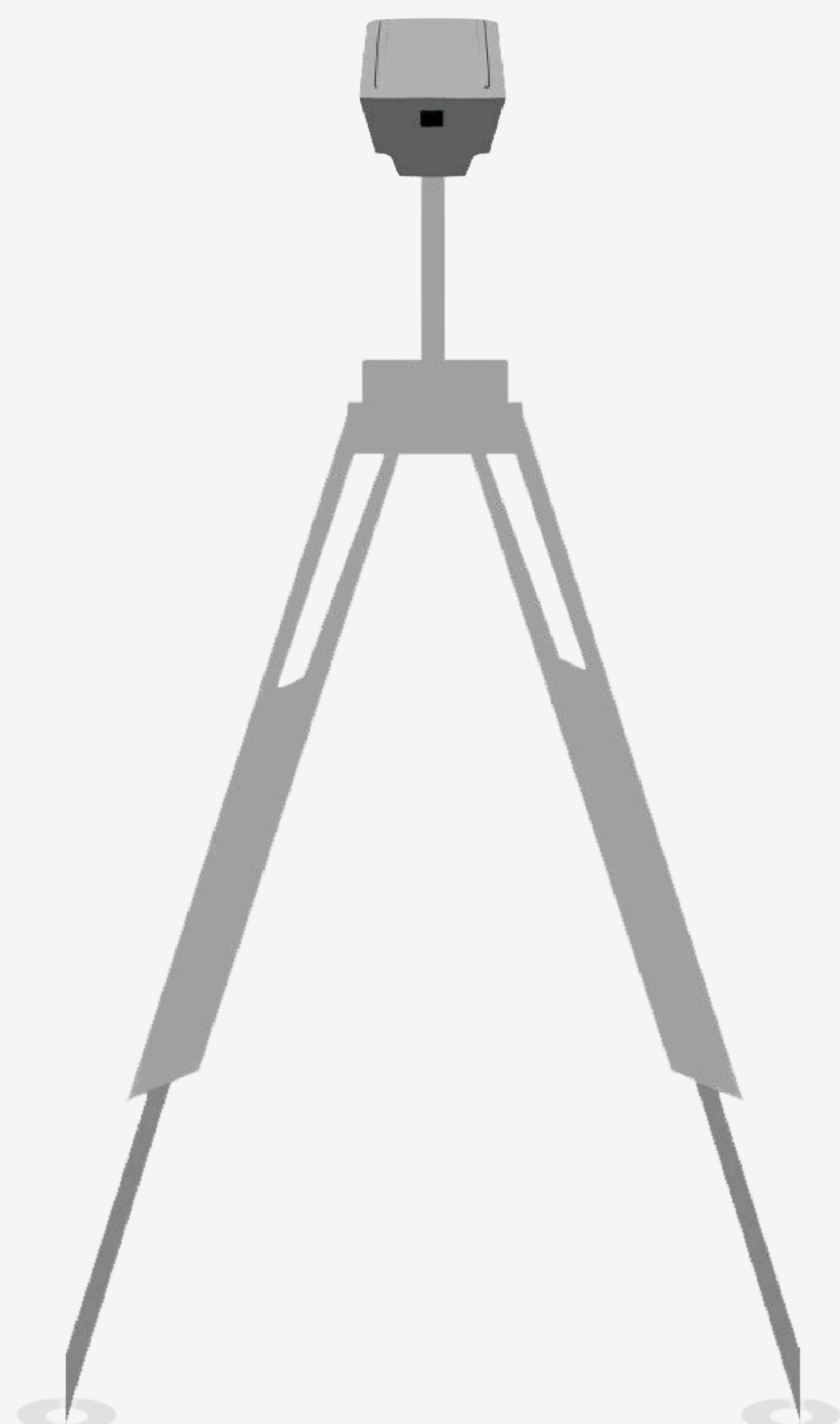
# The only RTK receiver you will ever need

Delivering high-precision positioning, data collection, and data processing services to a diverse range of industries.

## FX6i-Laser



### FX6i With Laser RTK System



## Portable and lightweight

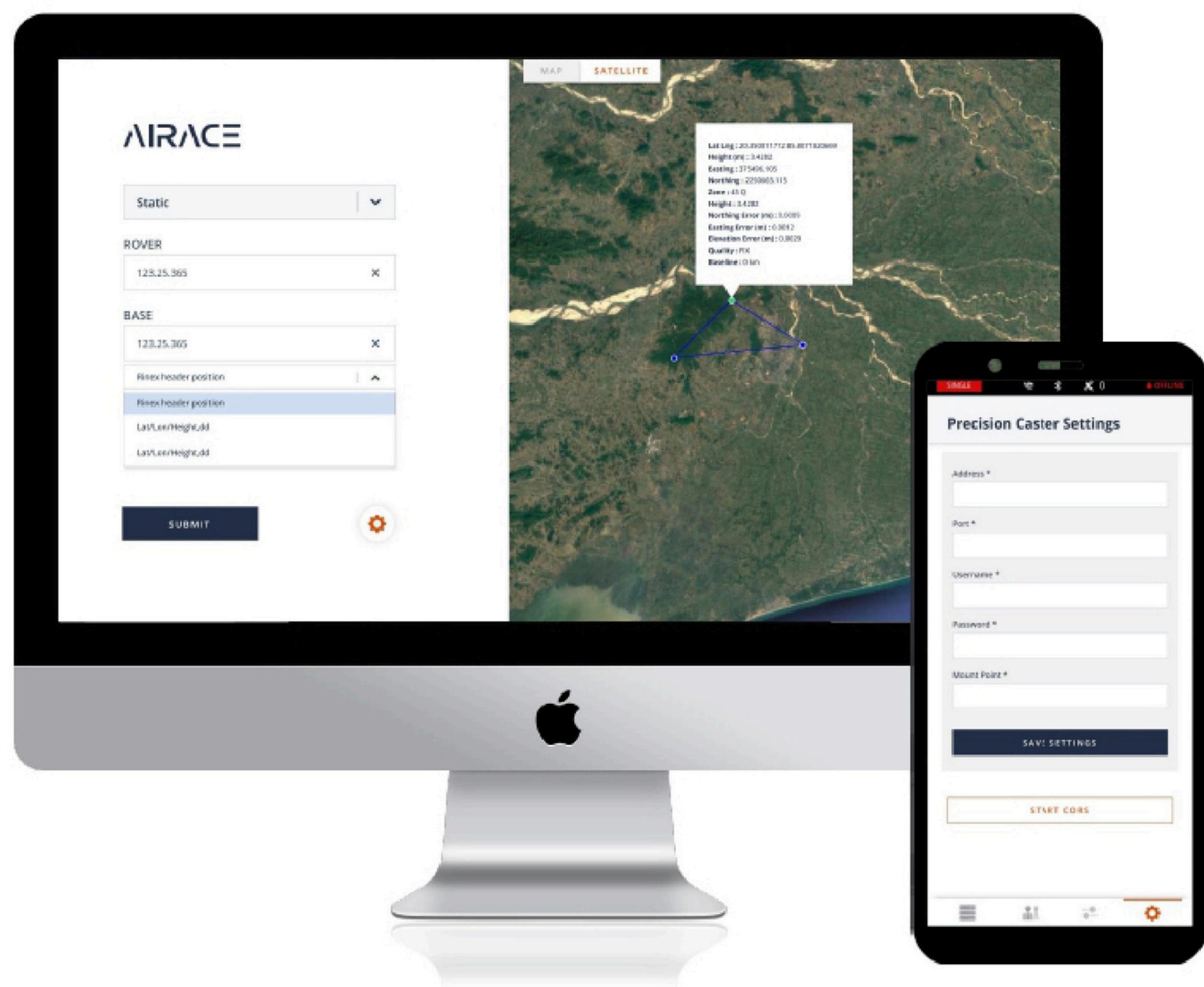
Designed with lightweight and compact features, making them highly portable and easy to use without the need for bulky and cumbersome equipment.

## Millimetre accurate data

Intelligent processing techniques include factors such as signal quality, atmospheric interference, and satellite geometry to provide highly accurate and reliable positioning information.

## Anyone on the team can use RTK

The interface is designed to be intuitive and easy to navigate with clear and concise instructions.



## AIRACE ONE (MOBILE APPLICATION)

With Airace One, quickly set up the GNSS receiver and start collecting points or stake them out.

- Support multiple coordinate systems.
- Record millimetre-precise coordinates for each point.
- Export and import data in the CSV, DXF, and shapefile formats used by CAD, GIS, and other professional software.
- Share collected data using mail, or smart messaging system from your phone.
- COGO (Coordinate Geometry) functions and essential surveyor tools for smooth workflow.

## AIRACE GEOSTUDIO

Airace Geostudio is all-in-one desktop application for PPK, Static, Network baseline processing.

- Support multiple co-ordinate system.
- Support multiple Geoid models.
- Enable seamless processing of Rinex files.
- Export data in CSV, PDF, SHP, KML and DXF.

## AIRACE ONEHUB

Airace Onehub provides complete ground to cloud synergy.

- Image digitization, CAD tools, and major GIS functionalities.
- Remote fleet management.
- Real time monitoring of survey operations.
- Remote data import, export and sharing functionalities.

DOWNLOAD OUR APPLICATIONS



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## MULTI CONSTELLATION SUPPORT

The product is equipped with satellite signal support for GPS, GLONASS, BeiDou, Galileo, QZSS, SBAS & NAVIC systems, ensuring reliable and accurate positioning capabilities.

## PPP COMPATIBILITY

With compatibility for Precise Point Positioning (PPP) services, the product allows users to obtain precise points anywhere on Earth, even in remote locations.

## RINEX FILE PROCESSING

The Airace Geo Studio software enables seamless processing of Rinex files, allowing users to obtain positions with absolute accuracy, further enhancing data analysis and surveying capabilities.

## LONG BATTERY LIFE

The product is equipped with a large 10,000mAh battery that provides backup power for over 24 hours of continuous operation, ensuring extended usage without frequent recharging.

## EFFICIENT WIRELESS COMMUNICATION

Featuring a powerful yet energy-efficient Wi-Fi and Bluetooth module, the product enables bi-directional communication between the receiver and a smartphone. This facilitates easy data transfer, configuration, and control of the device.

## CONVENIENT CHARGING OPTIONS

The product can be conveniently charged using a regular phone USB charger or any power bank, allowing for easy charging on the go without the need for specialized equipment.

## UHF RADIO

The device is equipped with 1 Watt UHF radio modem that provides long range Radio RTK Upto 5kms as compared to traditional radio at fraction of power.

## LASER

The Airace FX6i Receiver features an in-built laser distance module designed to overcome the limitations of traditional satellite positioning, particularly in challenging environments, thereby significantly improving accuracy, reliability, and versatility.

# PRODUCT SPECIFICATION

## Receiver Specification:

SIGNAL TRACKING & SIGNAL RECEIVED	GPS - L1, L1 C/A, L2, L2 C, L2 E, L2 P, L5 GLONASS - L1, L2, L2 C/A, L2 P, L3 BEIDOU - B1, B2, B2a, B2b, , B3 GALILEO - E1, E5 a, E5 b, E5 ab, E6 SBAS WAAS, EGNOS, BDSBAS, MSAS, GAGAN, SDCM QZSS - L1c/a, L1c, L5, L2c, L6 NAVIC - NAVIC L5 L-BAND
NUMBER OF CHANNELS:	672+ channels
UPDATE RATE:	Up to 20 Hz
MEMORY:	Internal memory of 32 GB
RTK & PPK BASELINE:	Up to 100KM
PPP POSITIONING:	Any point on Earth
IMU POSITIONING:	9 DOF, Calibration Free (0° - 60° tilt compensation RTK Mode) +/- 5 mm +0.4mm/°
LASER POSITIONING	≤ 5cm (20m range, ≤ 45° tilt in RTK mode)

## Physical Specification:

DIMENSIONS:	119.5 mm (H) x 138.5 mm (W) x 138.5 mm (L)
WEIGHT	479 grams
OPERATING TEMPERATURE	-40°C to 65°C
STORAGE TEMPERATURE	-40°C to 85°C
WATER/DUST PROOF	IP67 rated (waterproof and dustproof)
HUMIDITY	5% to 95% non-condensing
DUST TEST COMPLIANCE	IEC-60529
WATER INTRUSION TEST COMPLIANCE	IEC-60529
VIBRATION/SHOCK TEST COMPLIANCE	MIL-STD-810 F
TESTING LAB	NABL ACCREDITED

## Data Format:

RTCM 2.X, RTCM 3.0, RTCM 3.1, RTCM 3.2, VRS, NTRIP
NMEA 0183, LLH/XYZ
RINEX, NMEA

## Communication :

BLUETOOTH:	Bluetooth 5.0 for wireless connectivity
WI-FI:	Built-in Wi-Fi 2.4 GHz & 5 GHz, 802.11 b/g/n for network communication & data transfer
NETWORK COMMUNICATION:	4G (Via certified android controller) TDD-LTE/ FDD-LTE/ WCDMA/ GPRS/ GSM (900MHz & 1800 MHz), WCDMA 2100MHz/900MHz, LTE BAND 1,3,7,8,20
TYPE C:	USB Type C port for charging & data transfer
NMEA OUTPUT:	NMEA-0183 output for compatibility with external devices over Bluetooth
OPERATING SYSTEM:	free RTOS
STARTUP TIME:	5 SECONDS
RADIO RANGE	Upto 5 kms

## Power Supply :

RECHARGEABLE BATTERY:	Lithium-ion battery 10,000 mAh (included)
OPERATING PERIOD:	Rover Mode - 24 hours Base Mode - 15 hours
CHARGING TIME:	LESS THAN 4 hrs

## Positioning Performance :

HIGH PRECISION STATIC (PHASE) LONG OBSERVATION	3 mm + 0.1 ppm (horizontal) 3.5 mm + 0.4 ppm (vertical)
FAST STATIC/PPK	3 mm + 0.5 ppm (horizontal) 5 mm + 0.5 ppm (vertical)
REAL TIME KINEMATIC (RTK)	6 mm + 0.5 ppm (horizontal) 10 mm + 1 ppm (vertical)
TILT	RTK+5mm+0.4mm/* tilt (up to 60*)RMS
RTK-NETWORK/CORS	6 mm + 0.5 ppm (horizontal) 10 mm + 1 ppm (vertical)
PPP	4 cm+1ppm or better with Network RTK (Horizontal+ Vertical)
LASER RTK	≤ 5cm (20m range, ≤ 45° tilt in RTK mode)
DGPS ACCURACY	25 cm + 1 ppm RMS (horizontal) 40 cm + 1 ppm RMS (vertical) SBAS: typically <2m 3DRMS

## CORPORATE OFFICE:

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