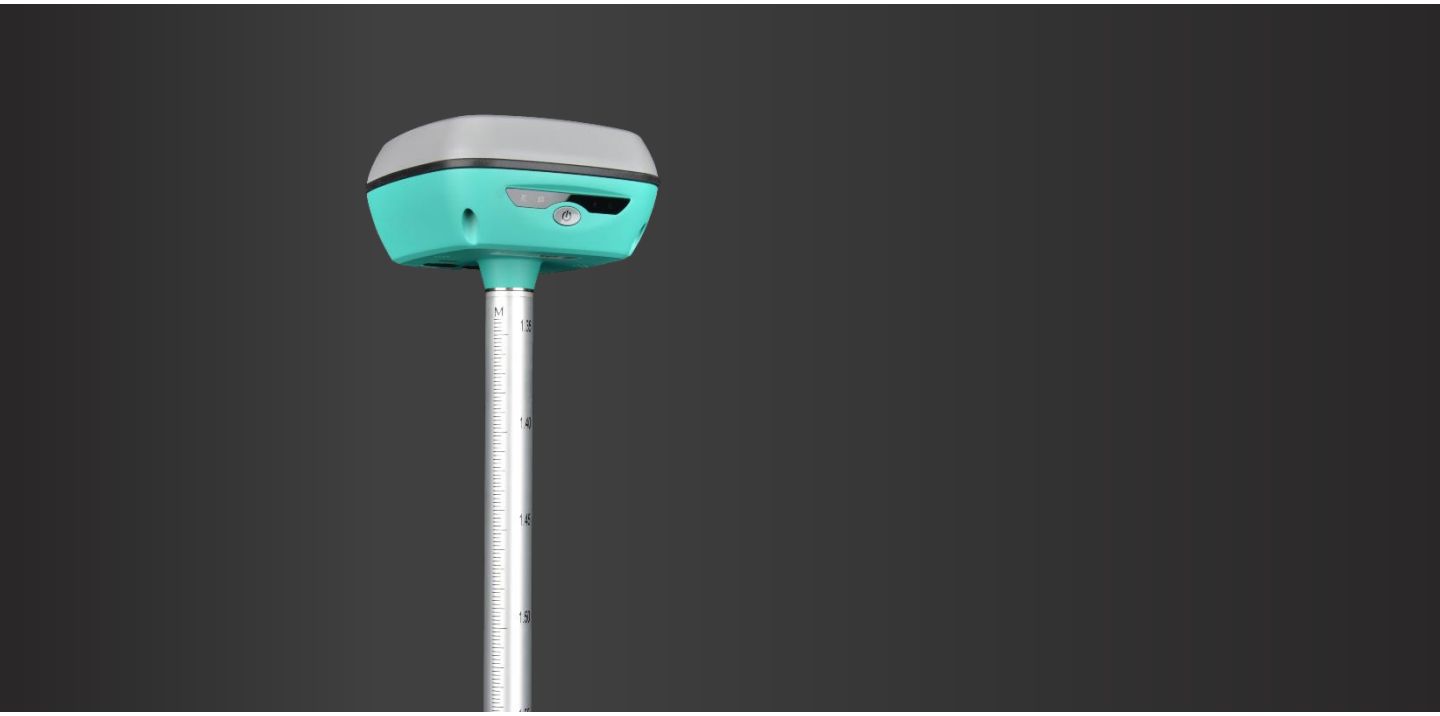
GNSS Positioning System

# QUASAR R93i



The new GNSS positioning system R93i combines user-friendly, ergonomic design with high-end reliability under harsh conditions.

The new GNSS mainboard Mk-803, integrated Linux OS and advanced datalink choices help you to complete your surveying tasks with the highest speed and accuracy. The innovative split-type design avoids the electro-magnetic interference from controller to the mainboard. Its light weight and almost a hand's size, makes it ideal to carry no matter on hand or on the back.

Rimu 2.0

Combined with such innovative technology, R93i provides you an all new tilt compensation solution, which is immune to magnetic interference and calibration-free. No longer need to level the receiver, and worry free about the metallic surroundings.

## Powered by Mk-803

New generation of powerful GNSS mainboard Mk-803 with 965 channels enables R93i to support a wide range of satellite signals, including GPS, GLONASS, BeiDou, Galileo, QZSS, SBAS, etc, with greater single stability and positioning accuracy.

## X-Link

The new internal UHF radio - X-Link - now offers a optimal solution to this palm-size receiver, delivering a further and more stable differential data link.

## Linux OS

Powered by the new generation of embedded Linux operating system, R93i has a greatly improved RTK performance and efficiency. One unique core processing mechanism is able to response to more than one command at one time.

## WiFi and Web Server

By connecting through the integrated WiFi of R93i, you can log on an user-friendly management platform on the browser of your phone or computer. All status monitoring and parameter settings can be achieved in a fast and easy way.

## RECEIVER SPECIFICATION

| | |
|---|---|
| Channels | 965 |
| GPS Tracking | L1, L1C, L2C, L2P, L5 |
| GLONASS Tracking | G1, G2 |
| BeiDou Tracking | B1, B2, B3 |
| Galileo Tracking | E1, E5A, E5B, AltBOC |
| QZSS | L1, L2C, L5 |
| SBAS | L1 |
| Positoning Rate | 1-20Hz |

## RECEIVER ACCURACY

| | |
|---|---|
| Code Differential | Horizontal 0.25m±1ppm (rms)<br>Vertical 0.50m±1ppm (rms) |
| Static | Horizontal 2.5mm±0.5ppm (rms)<br>Vertical 5mm±0.5ppm (rms) |
| Real-Time Kinematic | Horizontal 8mm±1ppm (rms)<br>Vertical 15mm±1ppm (rms) |
| Network RTK<br>*By controller | Horizontal 8mm±0.5ppm (rms)<br>Vertical 15mm±0.5ppm (rms) |

## IMU MEASUREMENT *not equipped in Lite Version

| | |
|---|---|
| Tilt Range | Up to 60° |
| Accuracy | < 2cm (within 30°)<br>< 5cm (within 60°) |

## COMMUNICATION

| | |
|---|---|
| I/O | 5pin LEMO external power + RS232<br>7pin LEMO USB (OTG) + Ethernet<br>Radio antenna interface |
| UHF Radio Module | X-link 1W<br>410-470MHz |
| Protocol | TrimTalk 450s, TrimMark3,<br>PCC EOT, SOUTH |
| WiFi | 802.11b/g/n<br>Hotspot<br>Data Link |
| Bluetooth<br>NFC | Bluetooth 2.1 +EDR and 4.0<br><10cm |

## INTERFACES

| | |
|---|---|
| Button | One |
| LED Indicator | Bluetooth, Data Link, Satellite, Power |

## DATA STORAGE

| | |
|---|---|
| Type & Storage | SSD 8GB<br>External USB pen drive |
| Date Transfer | USB transfer<br>Supports FTP/HTTP download |
| Format (Differential) | CMR+, sCRMx, RTCM 2.1, RTCM 2.3, RTCM 3.0, RTCM 3.1, RTCM 3.2 |
| GPS Output Format | NMEA 0183, PJK plane coord., binary code, Trimble GSOF |
| Network Model | VRS, FKP, MAC<br>NTRIP fully supportable |

## POWER SUPPLY

| | |
|---|---|
| Battery | Internal Li-on, 6800mAh, 3.7V<br>PowerCase supported |
| Operating Time | Static mode 8h<br>Rover mode 6h |

## PHYSICAL

| | |
|---|---|
| Dimension | 85mm (H), 135mm (W) |
| Weight with batt. | 970g |
| Operating Temp. | -45° C to 60° C |
| Protection Class | IP67 |
| Shock | 2m drop on hard surface |
| Vibration | 40G 10ms sawtooth wave |

## Recommended Partners


**Rugged Controller H6**

Android 8.1
5" touch screen
4GB/32GB
Alphanumeric keypad
IP67

SurvX

Android software SurvX
Easy-to-use work flow
Useful survey tools
Google map supported
DXF, DWG import & display


**External Radio S1**

10/25W Output
SOUTH/Trimtalk Protocol
403-473MHz
Bluetooth 4.0
IP67

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