

## R20 GNSS Receiver



### Overview

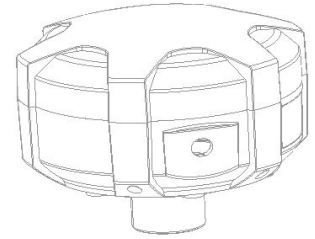
The LianShi R20 GNSS receiver provides you the feature in a flexible and scalable system. It can be easily configured to suit your applications, including base, rover, or a combination of base and rover functionality.

Because of the excellent flexibility and performance, R20 has been widely used in various industries, such as precision agriculture, mechanical control, surveying and mapping, geographic information, construction and mining, UAV (mobile base stations) and so on.

# R20 GNSS receiver

## Features

- Small size, portable and cost-effective;
- Great mobility;
- Flexible radio communication protocol supported;
- Available in base only, rover only, or base and rover configurations.



## DataSheet

### PERFORMANCE

Channel Configuration: 120 channels

Signal Tracking

GPS: L1,L2,L2C

GLONASS: L1,L2

BDS: B1,B2

Galileo: E1,E5b

SBAS

QZSS

Horizontal Position Accuracy (RMS)

Single Point L1: 1.5m

Single Point L1/L2: 1.2m

Code differential GNSS positioning

SBAS: 0.6m

DGPS: 0.4m

Static GNSS surveying

Horizontal: 5mm+1ppm

Vertical: 10mm+1ppm

Real Time Kinematic surveying

Horizontal: 10mm+1ppm

Vertical: 20mm+1ppm

Initialization time: typically<10 seconds

Initialization reliability: typically>99.9%

Maximum Data Rate

Measurements: 50 HZ

Position: 50 HZ

Time to First Fix

Cold start: <50 seconds

Hot start: <35 seconds

Signal Reacquisition

L1: <0.5 seconds (typical)

L2: <1.0 seconds (typical)

Time Accuracy: 20 ns RMS

Velocity Accuracy: 0.03 m/s RMS

Velocity Limit: 515 m/s

### PHYSICAL AND ELECTRICAL

Dimensions: 136mm X 89mm

Weight: 0.7Kg

Power

Input voltage: DC 6V ~ 28V, with polarity reverse protection

Power consumption

≤ 3.0W, in RTK base mode with internal radio in use

### COMMUNICATION PORTS

Full RS-232 serial (Dsub 9 pin) on Port 1 and Port 2

Data Formats

Data output: NMEA-0183, raw data

Differential data: RTCM2.3 / 3.0 / 3.1 / 3.2, CMR, RTCA

### ENVIRONMENTAL

Temperature

Operating -40 °C ~ +70 °C

Storage -45 °C ~ +80 °C

Humidity: 95% non-condensing

Environment protection: IP67

Shock

Designed to survive a 2 m (6.6 ft) pole drop onto concrete.

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