

Reach RS2

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REACH RS2

\$1899

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Description:

Gets a fix in seconds

Reach RS2 gets a fixed solution in just seconds and maintains robust performance even in challenging conditions. Centimeter accuracy can be achieved on distances up to 60 km in RTK, and 100 km in PPK mode.

PPP support

RINEX raw data logs are compatible with PPP services so you can now get centimeter-precise results in any place on Earth. Process RINEX files in an online service and get position with absolute accuracy.

GPS, GLONASS, BeiDou, Galileo, and QZSS

L1OF, L2OF, L1C/A, L2C, E1B/C, E5b, B1I B2I

Built-in 3.5G modem

Reach RS2 features a power-efficient 3.5G HSPA modem with 2G fallback and global coverage. Now corrections can be accessed or broadcasted over NTRIP independently, without relying on Internet connection on your phone.

22 hours on 1 charge

Up to 22 hours of autonomous work when logging data and up to 16 hours as a 3G rover, even in cold weather—no more need to carry spare batteries with you. Reach RS2 can charge from a USB wall charger or a power bank over USB-C.



Surveying with ReachView

The easiest to use software for data collection that is available both for Android and iOS. With ReachView, you can collect and stakeout points and control all the features of Reach receivers, such as setting up a base station, logging RINEX data, and configuring NMEA output.



**Point collection:
create projects, save
points, and export in
industry standard
formats**

Record each position as a point with centimeter precise coordinates. Export projects and open them in GIS or CAD software like AutoCAD, ArcGIS, QGIS, and others.

Formats

DXF, CSV, GeoJSON, ESRI
Shapefile



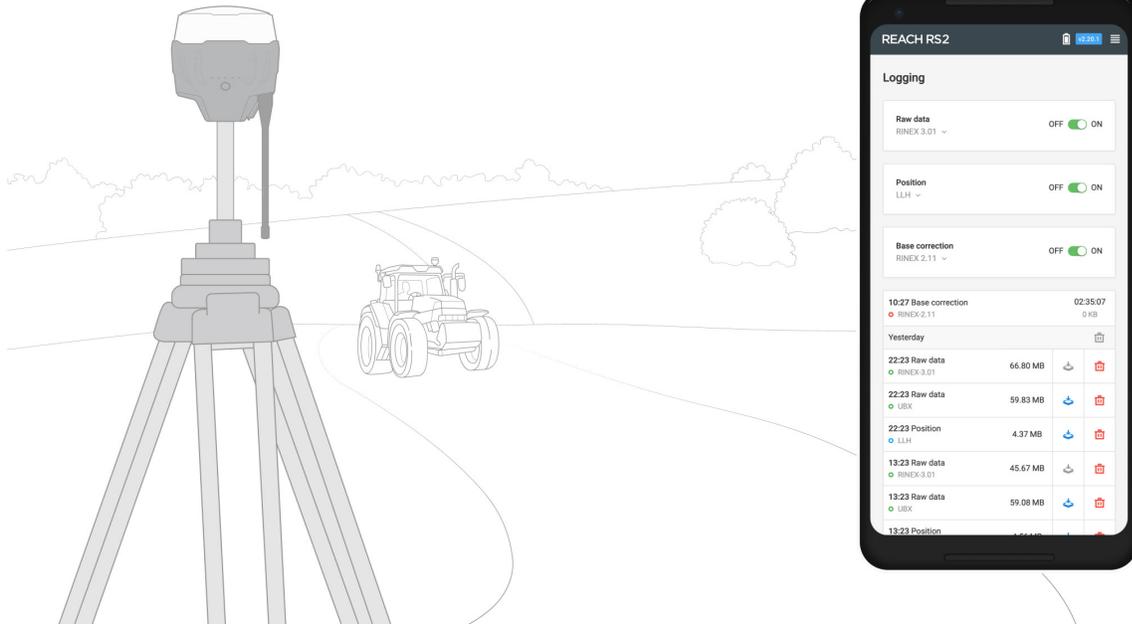
Stakeout: Find points' position on the ground

Stakeout is used to find exact physical locations of points. They can be collected in ReachView or imported from other CAD or GIS software.

Process of stakeout in ReachView has two steps: map view and bulls-eye. Map's purpose is to help you navigate to points on long distances. When you get closer than 40 cm to the point, bulls-eye turns on to make it easier for you to visually match receiver and point.

Formats

| CSV, DXF and GeoJSONs



Logging in RINEX: record raw data, position, and base correction logs

Record raw data, position and base correction logs with an update rate up to 10 Hz. Point collection and recording of RAW data are independent processes and can be used simultaneously. ReachView has a simple and intuitive interface for logging configuration and control.

We provide our version of RTKLib for PPK. It's free and can be downloaded from our docs.

| 16 GB

storage

| 160+ days

of logging at 1 Hz

Connectivity

Real-time position streaming in NMEA

Reach provides data in standard NMEA that is used by most GIS apps. Simply connect your device to Reach over Bluetooth or with a cable, and turn on “Position output” in ReachView.



Reach can turn on and off automatically

Reach is able to turn on and off in sync with an external battery connected over RS-232. This helps when the power button is hard to reach. For

PPP for Opus

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Compatible apps

MachineryGuide, AgriBus-Navi, Efarmer, Agripilot, and others

Position streaming

Interfaces

RS-232, TCP, Bluetooth

example, if the receiver is placed on the roof of a tractor.



NTRIP or another Reach as a base station

Reach RS2 needs a base station as a source of corrections. That's a requirement for centimeter accuracy in RTK and PPK. Base might be either another Reach RS2 receiver or an NTRIP service. VRS is also supported.

Reach RS2 works seamlessly with other Reach receivers over any link.

Input and output corrections

Interfaces

TCP, LoRa, Bluetooth, RS-232, NTRIP

Formats

RTCM3

Max distance from a base

Over 60 km in RTK

100 km in PPK

Any place on Earth with PPP



Engineered to be tough

Reach RS2 is designed to work even in the

most challenging environments

| IP67

RS2 is waterproof up to 1m depth. All connectors are completely sealed and protected from water and dust with silicone plugs.

| -20°C...+65°C

We extensively tested Reach RS2 in conditions that simulate coldest winters and hottest summers.

| Polycarbonate body

Polycarbonate, an extremely durable material that is used in bulletproof glass, makes Reach RS2 impact-resistant.

Related products



Standalone
1x Reach RS2 with full package
\$1899
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Specifications

 [Reach RS2 Datasheet](#)

627 kb (we send it for translation separately)

Mechanical

- Dimensions
126×126×142 mm
- Weight 950 g
- Operating t° -20...
+65 °C
- Ingress protection
IP67 (water and
dust)

Electrical

- Autonomy
16 hrs as 3.5G RTK
rover, 22 hrs
logging
- Battery
LiFePO4 6400
mAh, 6.4 V
- External power
input
6–40 V
- Charging
USB Type-C 5 V, 2
A
- Certification
FCC, CE

Positioning

- Static H: 4 mm + 0.5
ppmV: 8 mm + 1 ppm
- PPK H: 5 mm + 0.5
ppmV: 10 mm + 1
ppm
- RTK H: 7 mm + 1
ppmV: 14 mm + 1
ppm
- Convergence time
~5 s typically

Connectivity

- LoRa radio
 - Frequency range
868/915 MHz
 - Power 0.1 W

Data

- Corrections NTRIP,
RTCM3
- Position output
NMEA, LLH/XYZ

GNSS

- Signal tracked
GPS/QZSS L1C/A,
L2CGLONASS L1OF,
L2OFBeiDou B1I, B2I
Galileo E1-B/C, E5b

- Distance Up to 8 km
- 3.5G modem
 - Regions Global
 - Bands Quad-band, 850/1900,900/1800 MHz
 - SIM card Nano-SIM
- Wi-Fi 802.11b/g/n
- Bluetooth 4.0/2.1 EDR
- Ports RS-232, USB Type-C
- Data logging RINEX with events with update rate up to 20 Hz
- Internal storage 16 GB160+ days of logging at 1 Hz
- Number of channels 184
- Update rates 10 Hz GNSS
- IMU 9DOF