

EMLID

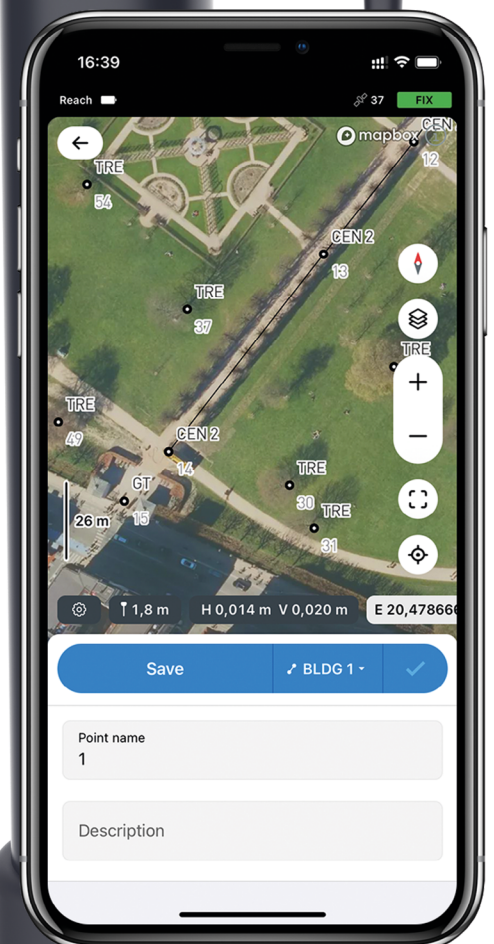
REACH RS3

Datasheet



Key features

- High precision IMU
 - RTK + 2 mm + 0.3 mm/°
 - Immune to magnetic disturbances
- Dual-band radio
 - 868/915 MHz LoRa to receive and transmit corrections
 - 450 MHz UHF to receive corrections
- Tracks GPS/QZSS, GLONASS L1, L2; BeiDou B1, B2; Galileo E1, E5
- Global LTE modem
- NTRIP and RTCM3 to send and receive corrections
- 18 hrs with tilt compensation
- Li-Ion battery, USB Type-C charging
- Comes with the Emlid Flow app



REACH RS3

Technical specifications

POSITIONING

| | | |
|---------------------------|--|---------------------------------------|
| Precision | Static | H: 4 mm + 0.5 ppm V: 8 mm + 1 ppm |
| | PPK | H: 5 mm + 0.5 ppm V: 10 mm + 1 ppm |
| | RTK | H: 7 mm + 1 ppm V: 14 mm + 1 ppm |
| Convergence time | ~5 s typically | |
| Tilt compensation | RTK + 2 mm + 0.3 mm/° | |
| Signals | GPS/QZSS L1C/A, L2C, GLONASS L1OF, L2OF, BeiDou B1I, B2I, Galileo E1-B/C, E5b | |
| Number of channels | 184 | |
| Update rate | Up to 10 Hz | |
| IMU | 6DOF | |

CONNECTIVITY

| | | |
|-------------------------|---------------------------|--|
| LoRa radio | Transmit and receive | |
| | Frequency range | 868/915 MHz |
| | Power | 0.1 W |
| | Distance | Up to 8 km |
| UHF radio | Receive-only | |
| | Frequency range | 410–470 MHz |
| | Protocol | TRIMTALK 450S* |
| | Modulation type | GMSK |
| LTE modem | Regions | Global |
| | Bands | FDD-LTE: 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28, 66 TD-LTE: 38, 40, 41 UMTS (WCDMA/FDD): 1, 3, 2, 4, 5, 6, 8, 19 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 | |
| Protocols | Corrections | NTRIP, RTCM3 |
| | Position output | NMEA, LLH/XYZ |
| Data logging | RINEX, NMEA, LLH/XYZ, UBX | |
| Internal storage | 16 GB | |

*TRIMTALK is a trademark of Trimble Inc.

MECHANICAL

| | |
|-------------------------------|--------------------|
| Dimensions | 126 x 126 x 142 mm |
| Weight | 950 g |
| Operating temperatures | -20 to +65 °C |
| Ingress protection | IP67 |

ELECTRICAL

| | |
|-----------------|---|
| Autonomy | 18 hrs as an RTK rover with tilt compensation, 22 hrs of logging |
| Battery | Li-Ion 5200 mAh, 7.2 V, 37.44 Wh |
| Charging | USB Type-C 5 V, 3 A |



EMLID SOFTWARE AND SERVICES



Emlid Studio

Easy-to-use free software to simplify your post-processing workflow.



Emlid Flow

Mobile app for land surveyors. Available for iOS and Android.



Emlid NTRIP Caster

Stream corrections to your RTK GNSS receivers over the internet.

YOUR LOCAL DEALER



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