

EMLID

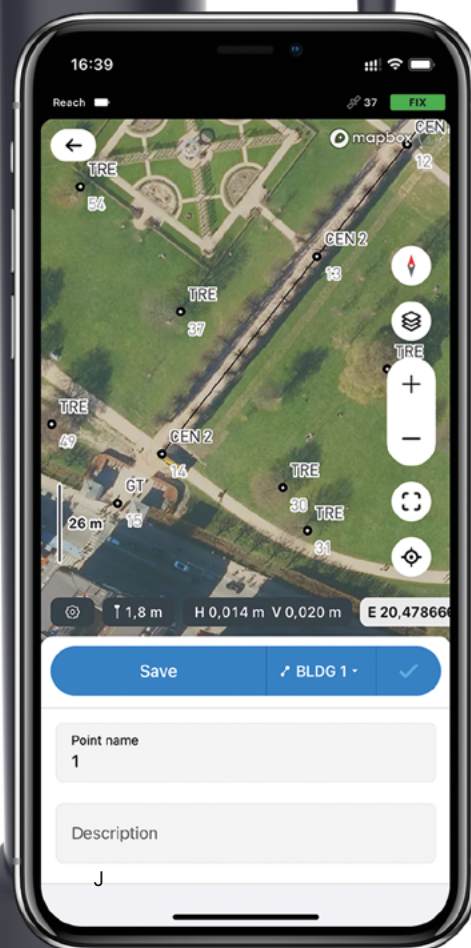
REACH RS3

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	

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

CONNECTIVITY

LoRa radio	Transmit and receive	
	Frequency range	868/915 MHz
	Power	0.1 W
UHF radio	Distance	Up to 8 km
	Receive-only*	
	Frequency range	410–470 MHz
LTE modem	Protocol	TRIMTALK 450S**
	Modulation type	GMSK
	Regions	Global
Wi-Fi	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
	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	

*Requires a 410–470 MHz antenna, sold separately

**TRIMTALK is a trademark of Trimble Inc.



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.