

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	126x 126x 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

E38 SURVEY SOLUTIONS

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