REACH RS3

EMLID

RTK GNSS receiver with tilt compensation

Perfect for land surveying, construction, and engineering tasks

- IMU tilt compensation
- Base and rover
- Dual-band radio and NTRIP
- RTK, PPK, and PPP
- LTE modem and Wi-Fi



MID-TECH SERVICES

www.midtechservices.com

Key features

High-precision IMU

RTK
H: 7 mm+1 ppm V: 14 mm+1 ppm

Tilt
RTK+2 mm+0.3 mm/°

Survey with under 20 mm accuracy at up to 60 degrees of tilt. Reach RS3 is calibration-free and immune to magnetic interference, so metal objects and electronics don't affect accuracy.

Get a Fix in 5 seconds

The receiver gets a cm-accurate solution in ~5 seconds and maintains robust performance even when the sky is partially obstructed or the unit is tilted. Signals tracked: GPS/QZSS, GLONASS, BeiDou, and Galileo.

18 hours of work with tilt compensation

Battery lasts up to 22 hours in logging mode or 18 hours in RTK with tilt compensation. Charges via USB-C from a wall adapter or power bank.

RINEX logging and PPP support

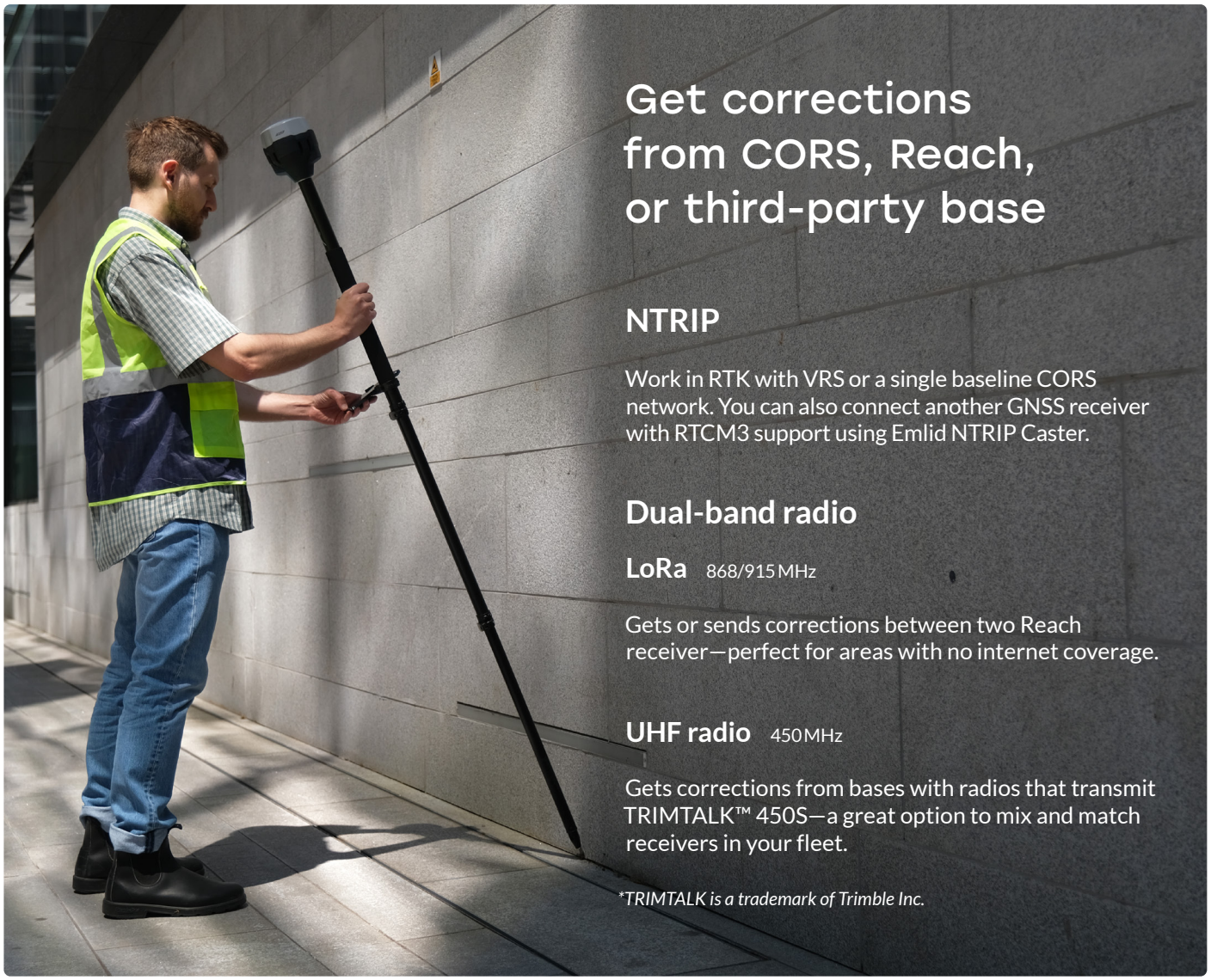
Recording raw data in RINEX format for post-processing or working with OPUS, AUSPOS, and PPP services.

Built-in LTE modem

Insert a SIM card into Reach RS3 and let it broadcast or receive corrections via NTRIP.

Rugged and compact

Dustproof and waterproof to IP67 with an operating temperature range of -20° to 65°C (-4° to 149°F).



Get corrections from CORS, Reach, or third-party base

NTRIP

Work in RTK with VRS or a single baseline CORS network. You can also connect another GNSS receiver with RTCM3 support using Emlid NTRIP Caster.

Dual-band radio

LoRa 868/915 MHz

Gets or sends corrections between two Reach receiver—perfect for areas with no internet coverage.

UHF radio 450 MHz

Gets corrections from bases with radios that transmit TRIMTALK™ 450S—a great option to mix and match receivers in your fleet.

**TRIMTALK is a trademark of Trimble Inc.*

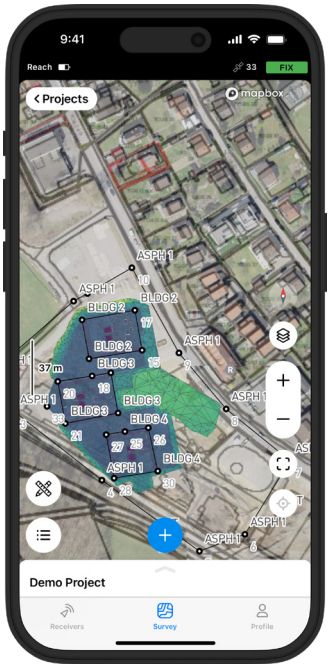
Comes with software for the field and the office

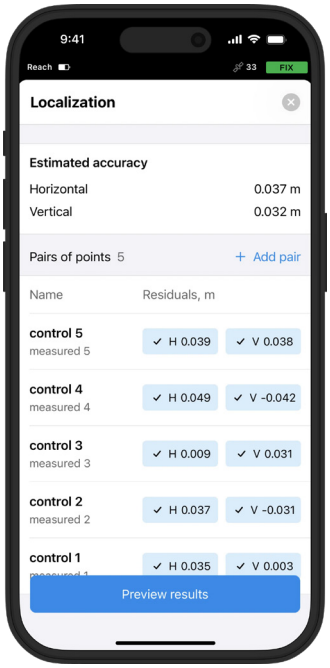
Emlid Flow

iOS and Android

The Emlid Flow mobile app manages all field-related tasks, including receiver configuration, RINEX logging, data collection, and stakeout.

- Points, lines, and polygons
- Localization and base shift
- Survey codes
- Geometry calculations
- Surfaces and cut & fill
- Stakeout reports



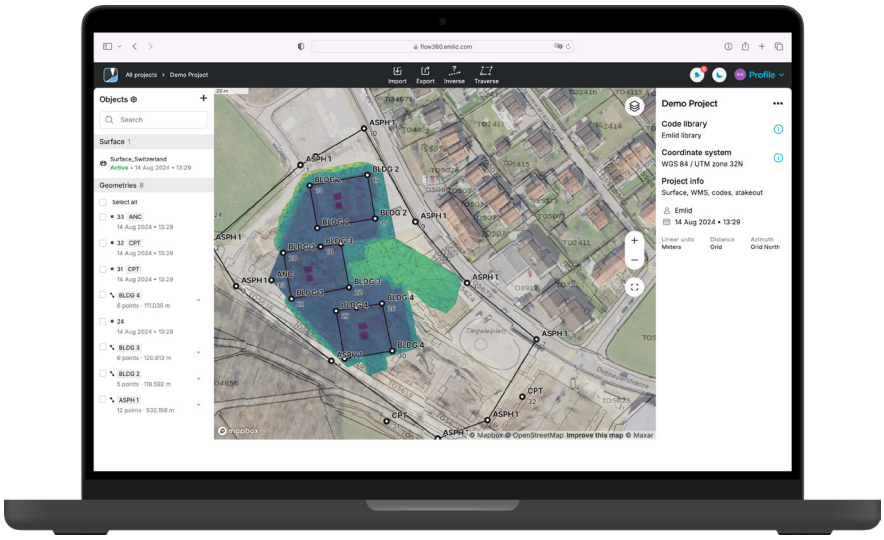


Emlid Flow 360

any browser

With the cloud-based Emlid Flow 360, you can instantly share data between the field and the office.

- Prepare and manage projects
- Always have a backup of your work
- Make simple edits right in the browser



The basic features are free. Professional survey tools are available with the Survey plan. Upgrade your Emlid Flow and Flow 360 with a single subscription. Learn more about features and plans.

Expand your fleet with Reach RS3

Reach RS3

1 × Reach RS3
1 × LoRa antenna
1 × USB cable
1 × Carrying case with strap

Reach RS3 Survey Kit

2 × Reach RS3
2 × LoRa antenna
2 × USB cable
2 × Carrying case with strap

Reach RS3 specifications

POSITIONING

Precision	Static	H: 4 mm+0.5 ppm V: 8mm+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
Signal tracked		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	126x126x142 mm
Weight	950 g
Operating temperature	-20 °C to +65 °C
Ingress protection	IP67 water and dustproof

ELECTRICAL

Autonomy	18 hrs as an RTK rover with tilt compensation, 22 hrs of logging
Battery	LiFePO4 6400 mAh, 6.4 V
Charging	USB Type-C 5 V 3 A

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	410–470MHz
	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, 900/1800MHz
	SIM card	Nano-SIM
Wi -Fi		802.11 b/g/n
Bluetooth		4.0/2.1 EDR
Ports		RS-232, USB Type-C
Data 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
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For more information, visit
www.midtechservices.com