Reach RS4

All-band RTK GNSS receiver with tilt compensation and centimeter precision

Design set-out | Topo survey | As-builts | Cut & fill

- Next-gen tilt compensation
- L1/L2/L5/L6
- 672 channels
- 2W dual-band radio
- 16 hours on one charge

Key features

Cm-level accuracy, even under canopy

672 channels and full-band reception deliver reliable centimeter precision, even under canopy or in urban areas.

5x faster IMU

Activates with just a couple of moves and remains stable throughout the survey. Work freely with unlimited pole tilt—no calibration, no magnetic interference.

Quick release mount

A secure, backlash-free connection to the survey pole ensures consistent accuracy in every setup.

16 hours on one charge

Work all day without interruption—recharge via USB-C or power bank.

2W dual-band radio

915 MHz LoRa for licence-free connections and 450 MHz UHF for a licensed operation of up to 2W. Both bands can be used for sending and receiving corrections.

Magnesium alloy body

Made from durable materials, protected with IP68, and tested in temperatures from -40 to +65 °C, the RS4 is field-ready anywhere.

Free lifetime support

Expert help

Get support from our application engineers, with answers in under 24 hours and tutorials to guide you at every step.

Active community

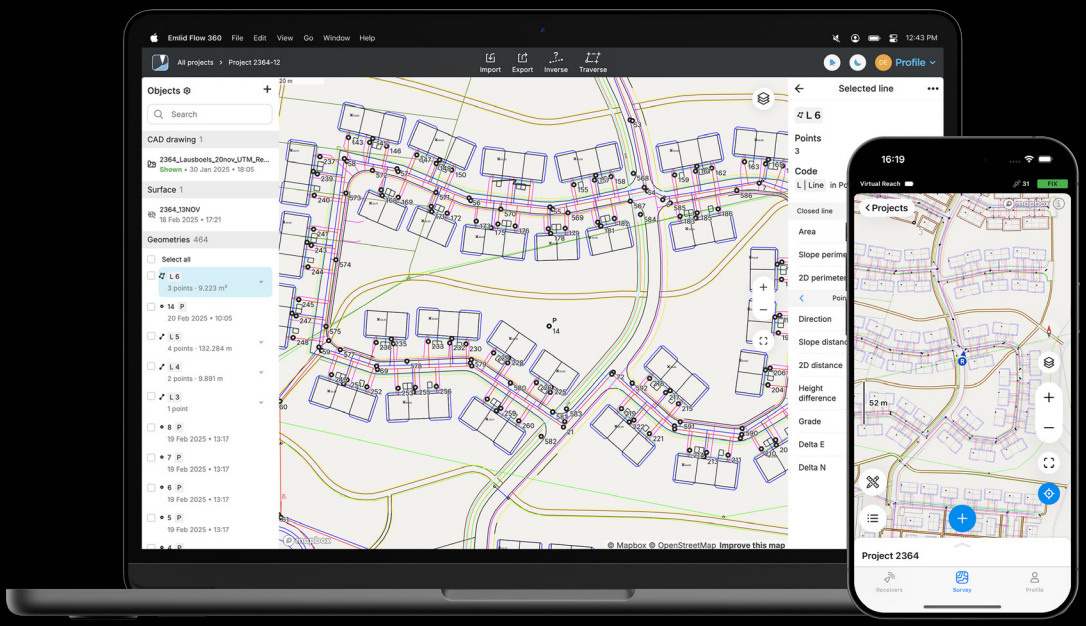
We have over 10,000 users from various backgrounds. Join a global network of Emlid users sharing knowledge, experience, and real-world solutions.

Emlid Flow: keep the field and the office in sync

iOS / iPadOS | Android | Any browser

Emlid Flow is a mobile app designed for fieldwork, offering instant sync with the cloud-based Emlid Flow 360 platform.

Ensure that the whole team is working with the latest data and monitor progress in real time.



Execute projects on site

- Lay out CAD designs
- Measure slopes and cut & fill
- Gather topo data and elevations
- Mark out centerlines, offsets, and curves
- Stake out boundaries

Coordinate your team

- Invite team members, share projects and manage access
- Monitor real-time progress
- Exchange data with instant sync

Specifications

Mechanical

Dimensions	128.6 x 128.6 x 99.3 mm
Weight	920 g
Operating t°	-40 to +65 °C
Ingress protection	IP68

Positioning

Precision	Static	H: 7 mm + 1 ppm V: 14 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 + 2mm + 0.3 mm/°
Signal tracked		GPS: L1C/A, L2C, L5 GLONASS: L1OF, L2OF Galileo: E1-B/C, E5a, E6 BeiDou: B1I, B1C, B2a, B3I QZSS: L1C/A, L1C/B11, L2C, L5 NavIC: L1-SPS Data, L5-SPS
Number of channels		672
Update rate		Up to 10 Hz

Electrical

Autonomy	16 hrs as RTK rover with tilt, 22 hrs of logging
Battery	Li-Ion 5000 mAh, 7.2 V, 36 Wh
Charging	USB Type-C (PD): 5V—3A, 9V—3A, 12V—3A, 15V—3A

Connectivity

Emlid radio*		
LoRa radio	Frequency range	868/915 MHz
	Distance	Up to 8 km
UHF radio	Frequency range	410 - 470 MHz
	Protocols	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 TD-LTE: 38, 39, 40, 41 UMTS (UHPS/FDD): 1, 2, 5, 8 Quad-band, 850/1900, 900/1800 MHz
	SIM card	Nano-SIM
Wi-Fi		802.11a/b/g/n
Bluetooth		Bluetooth 5.1 (BR/EDR + LE)
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

*The exact power and the available frequency range are subject to regional regulations.

**TRIMTALK is a trademark of Trimble Inc.

Learn more at emlid.com