Application
The G-ROX RTK reference station is a high-quality solution to ensure the best possible performance of your RTK positioning system without any service provider costs. It is a cloud based RTCM service ensuring usability independent of any company’s network policy.

Technology
The G-ROX RTK reference station provides correction data in standard RTCM 3.X format to guarantee precise positioning in every situation without any integration effort. It only requires a power supply and connected GNSS antenna, thus it is ready to use after a short calibration phase.

The reference station can be initially calibrated using two technologies:

- With **RTK correction** from an external provider or existing ANavS G-ROX stations in the near
- With **PPP correction data**, either from Galileo High Accuracy Service (HAS) by satellite signal or HAS-IDD source (terrestrial link), both free of charge

System configuration
The G-ROX system is built on a new modular hardware platform, delivering improved processing capabilities and upgraded interfaces. The system comes with a **survey-grade multi-frequency, multi-constellation GNSS receiver**. The processing unit is part of the G-ROX system. A powerful configuration and visualization software is implemented as a **web app**, easily accessible from different kinds of devices, including laptops and tablets. It is directly hosted on the system with no need for installation of software on your device.

Interfaces
The G-ROX system comes with an integrated **5G** module, providing access to RTK and PPP correction data and enabling remote view and system configuration very user-friendly. Further interfaces are Wi-Fi, Gigabit Ethernet and USB-C.
### GNSS FEATURES

**Constellations**
- Galileo, GPS, Beidou, Glonass
- SBAS (EGNOS, WAAS, GAGAN)

**Concurrently used Constellations** All

**Bands**
- GPS: L1C/A, L1C, L1PY, L2C, L2P, L5
- GAL: E1, E5a, E5b, E5 AltBoc, E6
- BDS: B1I, B1C, B2a, B2I, B3
- GLO: L1CA, L2CA, L2P, L3
- QZSS: L1C/A, L1C, L2C, L5, L6

**Channels** 448
**GNSS data rate** up to 5 Hz
**Jamming detection** Yes

### PHYSICAL & ENVIRONMENTAL

**Dimension** 140 x 200 x 60 mm
**Weight** 1.7 kg

**Input voltage**
- Absolute 9 - 36 V
- Nominal 12 - 24 V

**Power Consumption**
- Peak 16 W
- Average 9 W

**Operating Temperature** -20 to 65°C
**IP-Rating** IP65

### INTERFACES

**Output Format**
- Standardized RTCM 3.X, ROS 2
- Proprietary SBF

**Storage** 32 GB, expandable up to 2 TB

**Communication**
- Gigabit Ethernet
- Wi-Fi
- 5G 2x2 MIMO cellular network
- USB 3.1
- 4 GPIO, PPS and Sync-in

**Powering**
- Variable input voltage
- USB-C Power Delivery (12-20V/3A)

### ADDITIONAL HIGHLIGHTS

**Highly adaptive and flexible** for different needs due to its modular, M.2 card-based configuration structure

**GPIOs:** 4 configurable inputs or outputs to read in additional sensors, use event trigger or output status information

**Precision-Time-Protocol (PTP):** PTP-Master time server to synchronize all your systems in your network

**NTRIP:** Already included NTRIPv2 Client to stream RTK (RTCM 3, OSR) or PPP (RTCM3, SSR) correction data

**No cable chaos:** One unit - all functions ready

**Intuitive and simple handling:** No modems or other external devices required