GEPOS® DAB+ Receiver RTKDAB

Overview

RTKDAB is an integrated hardware and software solution for receiving PPP-RTK GNSS correction data via DAB+ broadcast networks. It enables standard RTK GNSS receivers to utilize the nationwide German GEPOS® correction service provided by the Federal Agency for Cartography and Geodesy (BKG), without requiring a mobile data connection or subscription-based correction service.

The DAB+-broadcast GEPOS® SSRZ correction data are processed by Geo++'s SSR2OBS technology and converted into standardized RTCM OSR correction messages. These corrections are provided to GNSS receivers via NTRIP, Ethernet, Wi-Fi, Bluetooth, USB, or serial interfaces, ensuring reliable high-precision positioning even in areas with limited or unavailable mobile network coverage.

Key Benefits

- Nationwide PPP-RTK correction delivery via DAB+
- Standard RTCM output compatible with existing RTK receivers
- No SIM card or mobile data connection required
- Reliable reception in areas with poor cellular coverage
- Unlimited number of simultaneous receivers
- Simple integration into existing GNSS workflows

Typical Applications

- High-precision GNSS positioning without cellular network coverage
- Cost-free access to the nationwide GEPOS® correction service
- Railway Applications
- Construction and Machine Control
- Utility and Infrastructure Management
- Mobile GIS and Asset Mapping

Specification

DAB+ Features

- Professional DAB+ receiver and service decoder
- Integrated RF filter optimized for DAB+ VHF Band III, Channel 5C
- Reception status feedback via LED and/or 3.5 mm audio output

RTK Features

- Conversion of GEPOS® State Space Representation (SSRZ) corrections into Observation Space Representation (OSR) correction data for Virtual Reference Station (VRS/RTK) applications using Geo++'s latest SSR2OBS technology
- Only NMEA GGA position messages are required as input from the rover.
- RTCM 3 output via TCP/IP, serial interface, or integrated local NTRIP caster
- Both OSR and SSRZ correction streams are available

Hardware

Interfaces

- SMA 50 Ohm DAB+ antenna input
- 1 GbE Gigabit Ethernet
- IEEE 802.11 b/g/n/ac Wi-Fi access point (2.4 GHz and 5 GHz)
- Bluetooth 5.0 with BLE
- USB-A 3.0
- RS-232 (via USB adapter)
- 3.5 mm audio jack (DAB+ audio out)

Power Supply

- 5 V USB-C
- Power consumption: 2.5 W typ.

Mechanical

- Extruded aluminum enclosure
- 120 x 32 x 170 mm
- Weight: 700 g
- IP67 protection (with outdoor case)

Options

Several options can be added to the standard version.

Outdoor RTK Gateway (ORG)

- IP67 outdoor case
- Build in DAB+ channel 5C antenna with ground-plane
- USB-powered active speaker providing acoustic reception feedback
- USB power bank with multi-day battery life per charge

Ordering Information

RTKDAB:
GEPOS™ DAB+ Receiver

Option ORG:
Outdoor RTK Gateway

Geo++ GmbH
Steinriede 8
30827 Garbsen, Germany
www.geopp.de
sales@geopp.de
Tel: +49 (5131) 4689 0

RFmondial GmbH
Appelstr. 9a
30167 Hannover, Germany
www.rfmondial.com
sales@rfmondial.de
Tel.: +49 (511) 330 995 60