

GMB

Programmable GNSS RTK receiver with LTE modem

The compact GNSS receiver with integrated LTE modem is also ideal for small machines. The compact design without external antennas is easy to integrate into a mobile work machine, the system allows the implementation of individual software applications according to customer requirements.



By means of RTK correction service a position determination with 2.5 cm accuracy is possible.

The Völkel GMA makes a machine accessible via the Internet. It communicates with the Völkel cloud server via LTE. The bidirectional communication enables the transmission of user and machine data, as well as remote diagnosis and secure remote maintenance.

Properties:

- Uses all common navigation satellite systems (GPS, GLONASS, Galileo, Beidou)
- integrated, dual-frequency capable GNSS antenna
- RTK correction via NTRIP client
- Modem for 4G (LTE) and 2G (GSM)
- integrated cell phone antenna
- Völkel SIM card with national roaming
- Can be flexibly expanded with customer-specific software applications
- Powerful ARM controller and embedded Linux system
- integrated inclination sensor

Technical data:

GNSS Accuracy	with RTK: 0,03 m + 1ppm CEP95 (or 0,01m + 1ppm CEP) uncorrected: 4,5m CEP95 (or 1,5m CEP)
GNSS Systems / Signals	GPS: L1, L2 GLONASS: L1, L2 GALILEO: E1, E5 BEIDOU: B1, B2

GNSS Position refresh rate	up to 20 Hz
GNSS Time to First Fix	Cold Starts: 24 s; Aided Start: 2 s
Mobile data connection	LTE Cat1 with 2G fall back (EU, other regions on request)
Microcontroller	ARM Cortex - A5, 536MHz with 256MB RAM
Mass storage	4GB
Inputs	1 activation input with 4,7 k Ω pull-down
Interfaces	RS232, maximum baud rate: 115kBaud (NMEA0183) CAN 2.0B, maximum baud rate: 1Mbit/s (NMEA2000) Ethernet, maximum data rate: 100Mbit/s USB 2.0 Host High Speed 480Mbit/s
Supply	UB = 8 ... 32V
Power consumption	approx. 0,23A at 12V; standby: 4mA and 13mA (red LED on)
Interfaces	M12 8-pole for power supply and interfaces M12 5-pin for USB M12 4-pin D-coded, Industrial Ethernet
Degree of ingress protection	IP69k
Operation temperature range	-40 ... 85°C (housing temperature)
Housing dimensions	(L/B/H) 176mm x 125mm x 72mm
Weight	~0,6kg
EMV	Directive 2014/30/EU Road vehicles: ISO 10605, ISO 7637-1, ISO 7637-2, ISO 7637-3 Construction machinery: DIN EN ISO 13766-1 Agriculture and forestry machinery: DIN EN ISO 14982 Industrial use: DIN EN 61000-6-2, DIN EN 61000-6-4
Industrial environments	Vibration: DIN EN 60068-2-6 Shocks, permanent repeat shocks: DIN EN 60068-2-27 Rough handling shocks: DIN EN 60068-2-31 Cold: DIN EN 60068-2-1 Dry heat: DIN EN 60068-2-2 Temperature change: DIN EN 60068-2-14 Damp heat: DIN EN 60068-2-30

GMB housing dimensions

