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, QZSS)
- 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 + 1 ppm CEP95 (or 0,01 m + 1 ppm CEP)
		uncorrected	4,5 m CEP95 (or 1,5 m CEP)
	Time to First Fix	Cold start	24 s
		Supported start	2 s
	Systems / Signals		GPS
			GLONASS
			Galileo
			Beidou
			QZSS
	Position update rate		up to 20 Hz
Radio connections	Mobile data		LTE
			2 G as fall back (EU, other regions on request)
Environment	Supply		UB = 8 … 32V
	Operating temperature		-40 … 70 ° C (Housing temperature)
	Activation signal		4,7 kΩ Pull-Down
Interfaces	RS232		Max. 115 kBaud (NMEA0183)
	CAN		2.0 B, max. 1 Mbit/s (NMEA2000)
	Ethernet		maximum data rate: 100 Mbit/s
	USB		2.0 Host High Speed, 480 Mbit/s
Housing	Dimensions		(L/B/H) 176 mm x 125 mm x 72 mm
	Weight		approx. 0,6 kg
	Material		Base plate and front panel made of anodised aluminium Plastic cover
	Connector		M12 8 pin for supply and interfaces M12 5 pin for USB M12 8 pin X-coded, Industrial Ethernet
	Protection class		IP69k
Protection types	EMC	Road vehicles	Directive 2014/30/EU, ISO 10605, ISO 7637-1/2/3
		Construction machines	DIN EN ISO 13766-1
		Agricultural and forestry machinery	DIN EN ISO 14982
		Industrial use	DIN EN 61000-6-2, DIN EN 61000-6-4
	Mechanical, climatic resistance	Cold	DIN EN 60068-2-1
		Dry heat	DIN EN 60068-2-2
		Oscillation	DIN EN 60068-2-6
		Temperature changes	DIN EN 60068-2-14
		Shock	DIN EN 60068-2-27
		Continuous shock	DIN EN 60068-2-27
		Damp heat	DIN EN 60068-2-30
		Shocks due rough handling	DIN EN 60068-2-31

GMB housing dimensions