

Leica GMX902 Series

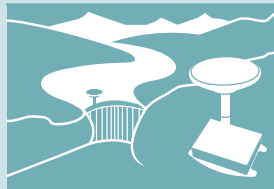
High Speed GNSS Monitoring for Critical Structures

Leica Monitoring
Solutions



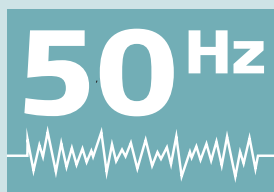
Leica GMX902 Series Streaming Monitoring Receivers

The Leica GMX902 Series are the first high precision multi-frequency, multi-system GNSS receivers designed specifically for monitoring applications. Sensitive structures, such as bridges, dams, sliding slopes and buildings can be monitored around the clock for the smallest of movements.



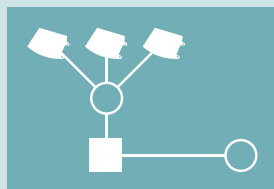
Tailored for Monitoring

- Low power consumption
- Robust
- Designed for continuous measuring operations



Fast and Precise

- Detects high-dynamic movements, data rate up to 50 Hz
- SmartTrack+ technology for high precision



Integrated

- Metal housing, easy installation
- Integrated into Leica GNSS Spider, GeoMoS and SpiderQC software
- PPS output for the synchronization of accelerometers

- when it has to be **right**

Leica
Geosystems

Precise Data Capture of Fast Moving Objects

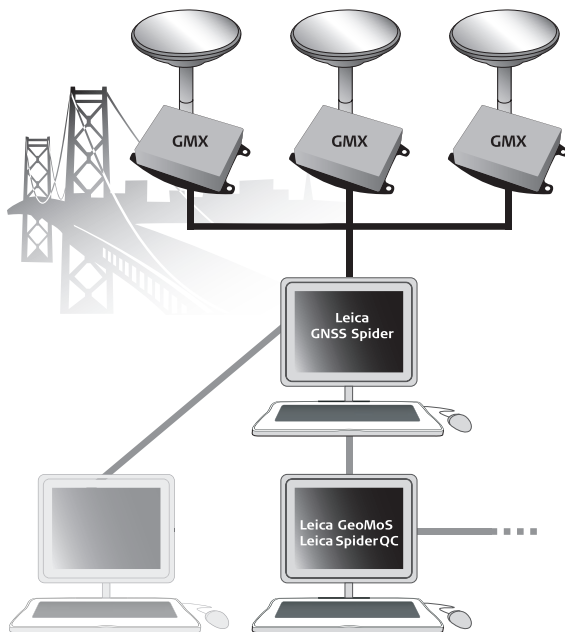
The Leica GMX902 Series are high-performance GNSS receivers, specially developed to monitor sensitive structures such as bridges, dams and crucial topographies such as sliding slopes and volcanoes. The GMX902 GG provides precise GPS/GLONASS L1/L2 frequency raw data up to 20 Hz, whilst the GMX902 GNSS additionally supports GPS L5 and Galileo L1/E5a/E5b/E5a+b (AltBOC) and data rates up to 50 Hz.

Focused on the essentials

Designed with a focus on the essential – the reception and transmission of high quality raw data – the Leica GMX902 Series does not include costly extra functions, therefore it is a universal receiver for structural monitoring. It has a robust water, heat, cold and vibration resistant metal housing that can be easily mounted on the various structures.

Integrated Solution

When combined with the Leica GNSS Spider advanced GNSS processing software for coordinate calculation and raw data storage and the Leica GeoMoS or Leica SpiderQC monitoring software for analysis of movements and calculation of limit checks, the Leica GMX902 Series unfolds its full potential: high-precision measurements, accurate and reliable data processing and data analysis. Third party analysis software can also be easily integrated via the standard NMEA interface of Leica GNSS Spider.



Total Quality Management
– Our commitment to total customer satisfaction.
Find out more about our TQM program from your local Leica Geosystems representative

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Technical data Leica GMX902 Series

GNSS technology	SmartTrack+ Full wavelength carrier phase
Type, channels	
GMX902 GG	72 channels, GPS L1/L2, GLONASS L1/L2, 20Hz
GMX902 GNSS	120 channels, GPS L1/L2/L5, GLONASS L1/L2, Galileo L1/E5a/E5b/E5a+b (AltBOC), 50 Hz ¹
SmartTrack+ Advanced GNSS measurement technology	Time to acquire all satellites after switching on: typically 30 sec. Re-acquisition after loss of lock: typically within 1 sec. High sensitivity: acquires more than 99 % of possible observations above 10 degrees elevation. Low signal noise. Robust tracking. Tracks weak signals to low elevations. Multipath mitigation. Jamming resistant.
Measurement precision	
Carrier phase	0.2 mm rms
Code (pseudorange)	20 mm rms
Status LEDs	Power, tracking, traffic on serial ports
Control software (required)	Leica GNSS Spider. For managing single and multiple receivers, for computing positions, and for creating RINEX files for post-processing.
Data output	Leica binary (LB2) raw data, independent for each serial port
Weight	0.8 kg
Size (L x W x D)	16.7 cm x 12.3 cm x 4.0 cm
Temperature range	ISO9022, MIL-STD-810F
Operating	-40° C to +65° C
Storage	-40° C to +80° C
Humidity	Up to 95 %
Rain, dust, sand, wind	IP67 – Protection against blowing rain and dust Waterproof to temporary submersion into water (1 m)
Vibration	10 Hz – 500 Hz, 0.7 mm, 5 g
Bump	25 g, 6 ms
Supply voltage	Nominal 12 V DC
External power input	10.5 V to 28 V DC
Power ports	2
Power consumption	1.7 W, sleep mode 0.007 W
Ports	
External Power	1 LEMO connector with 2 power inputs (y-cable)
Serial	2 LEMO-1 connectors, 8-pin, 4800 – 230'400 baud
Antenna	1 TNC
PPS output	1 LEMO HGP.05.250.CTL
Recommended antenna	Leica AR10, Leica AR25

¹ Restrictions to the number of tracked satellites and signals may apply when operating at 50 Hz