

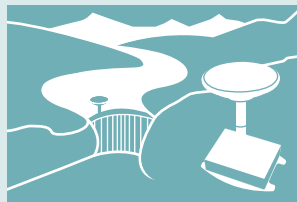
# Leica GMX902

## Streamlined GPS Monitoring for Critical Structures



### Leica GMX902 GPS Monitoring Receiver

The Leica GMX902 is the first high precision dual frequency receiver 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.



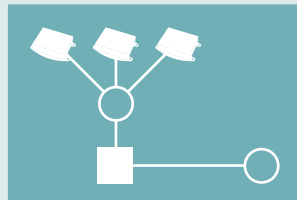
### Tailored for Monitoring

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



### Fast and Precise

- Detects high-dynamic movements, data rate up to 20 Hz
- 12 L1 + 12 L2, code and phase
- SmartTrack technology for high precision



### Integrated

- Metal housing, easy assembly
- Integrated into Leica GPS Spider and GeoMoS 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 is a high-performance GPS receiver, specially developed to monitor sensitive structures such as bridges, dams and crucial topographies such as sliding slopes and volcanoes. It provides precise GPS dual frequency raw data (up to 20 Hz), enabling precise data capture of fast moving objects.

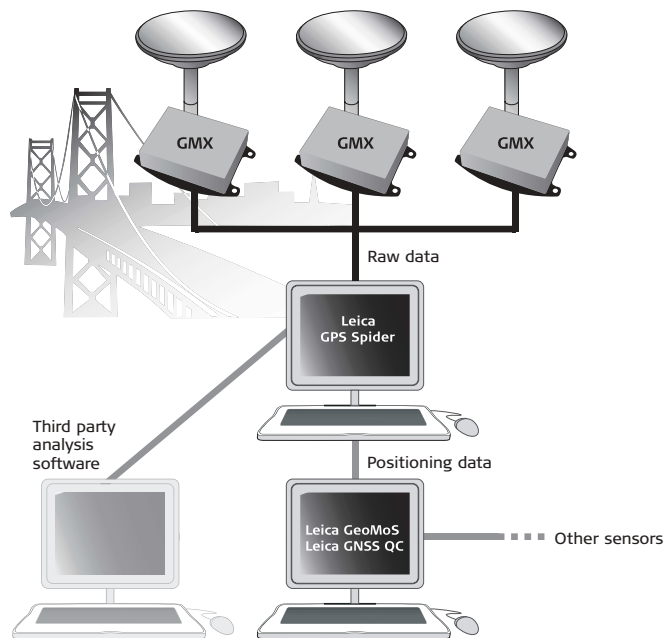
### Focused on the essentials

Designed with a focus on the essential – the reception and transmission of high quality raw data – the Leica GMX902 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 to the various structures.

### Integrated in GPS Spider and GeoMoS

When combined with the Leica GPS Spider advanced GPS processing software for coordinate calculation and raw data storage and the Leica GeoMoS\* monitoring software for analysis of movements and calculation of limit checks, the Leica GMX902 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 GPS Spider.

\*up to 1 Hz



**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

<b>GPS technology</b>	SmartTrack
Type, channels	Dual frequency, 12 L1 + 12 L2, 20 Hz
L1 measurements	Carrier phase full wave length, C/A narrow code.
L2 measurements	Carrier phase full wave length, AS off or on P2 code / P-code aided under AS. Equal performance with AS off or on.
<b>SmartTrack</b>	Time to acquire all satellites after switching on: typically 30 sec.
Advanced GPS measurement technology	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.
<b>Measurement precision</b>	
Carrier phase	L1: 0.2 mm rms L2: 0.2 mm rms
Code (pseudorange)	L1: 20 mm rms L2: 20 mm rms
<b>Status LEDs</b>	Power, tracking, traffic on serial ports
<b>Control software (required)</b>	Leica GPS Spider. For managing single and multiple receivers, for computing positions, and for creating RINEX files for post-processing.
<b>Data output</b>	Leica binary (LB2) raw data, independent for each serial port
<b>Weight</b>	0.8 kg
<b>Size (L x W x D)</b>	16.7 cm x 12.3 cm x 4.0 cm
<b>Temperature range</b>	ISO9022, MIL-STD-810F
Operating	-40° C to +65° C
Storage	-40° C to +80° C
<b>Humidity</b>	Up to 95 %
<b>Rain, dust, sand, wind</b>	IP67 – Protection against blowing rain and dust Waterproof to temporary submersion into water (1 m)
<b>Vibration</b>	10 Hz – 500 Hz, 0.7 mm, 5 g
<b>Bump</b>	25 g, 6 ms
<b>Supply voltage</b>	Nominal 12 V DC
External power input	10.5 V to 28 V DC
Power ports	2
<b>Power consumption</b>	2.4 W, sleep mode 0.007 W
<b>Ports</b>	
External Power	1 LEMO connector with 2 power inputs (y-cable)
Serial	2 LEMO-1 connectors, 8-pin, 4800 – 115'200 baud
Antenna	1 TNC
PPS output	1 LEMO HGP.05.250.CTL
<b>Recommended antenna</b>	Leica AX1202, Leica AT504