

# MagStation

## MFAM Base Station



The MagStation is Geometrics' latest and most advanced magnetometer base station, designed for high-sensitivity, stationary monitoring of the Earth's total magnetic field. Built around our proven MFAM technology, the MagStation delivers precise, reliable magnetic data for a wide range of geophysical and scientific applications.

This self-contained system includes an integrated GPS, onboard data storage, and a built-in wireless access point—offering a streamlined user experience. To enhance the user experience even further, the MagStation operates seamlessly with MagNav, our intuitive user interface software. MagNav is compatible with most standard Android devices and enables real-time magnetic field visualization.

Designed to integrate effortlessly with other Geometrics magnetometers, the MagStation ensures synchronized data collection across systems. Its precise, time-aligned recordings—accurate to within 1 ms—allow for effective correction of both diurnal magnetic variations and higher-frequency disturbances due to spherics.

The MagStation's sensor is exceptionally stable and does not require periodic factory recalibration or adjustment, minimizing maintenance while maximizing data integrity.

## FEATURES & BENEFITS

- **Quick Deployment** – Compact and lightweight, with integrated GPS, onboard data storage, and built-in Wi-Fi enables rapid setup in the field.
- **Adjustable Sampling Rate** – Samples at rates allowing for the capture and removal of noise from geomagnetic storms and space weather events.
- **Low Power Consumption** – Will run for days with 12V car battery.
- **Wireless Control** – Operate and monitor the system wirelessly through MagNav, a dedicated app that runs on Android devices.
- **All-Weather Performance** – Engineered to perform in extreme conditions.
- **Duplicate Sensors** - Improve data reliability



MagStation working in the Alaska winter  
Photo Courtesy of Esther Babcock from Logic Geophysics

## HIGH-PERFORMANCE, SIMPLE DESIGN

For simplicity in the field, the MagStation contains the GPS, Wi-Fi, and memory on board. All operations are accessed through an Android based application.

**Operating Principle:** Laser pumped cesium vapor (Cs133 non-radioactive) total field scalar magnetometer

**Operating Range:** 20,000 to 100,000 nT

**Gradient Tolerance:** 10,000 nT/m

**Operating Zones:** Worldwide Operation

**Dead Zone:** Single polar deadzone (parallel with the LED panel); +/-30° typical; +/-35° guaranteed

**Noise/Sensitivity:** 2pT/√Hz<sub>rms</sub> typical; 5pT/√Hz<sub>rms</sub> Guaranteed; Global 20pT/√Hz<sub>rms</sub>

**Sample Rate:** 5 Hz, 10 Hz, 20 Hz, and 25 Hz

**Output:** W-Fi

**GPS:** 50% CEP ≤ 1.5 m; ≤ 1.0 m with SBAS; can also serve as a RTK base broadcasting RTCM3 correction data via Bluetooth

**Total Weight:** 2 kg (~4 lbs) without the tripod

**Length:** 0.94 m (37 inches)

**Power:** External Batteries; Nominal 12V  
Absolute Range: 10V to 16V  
7W at room temperature

## ENVIRONMENTAL

**Operating Temperature:** -20°C to +50°C (-4°F to +122°F)

**Storage Temperature:** -45°C to +70°C (-49°F to +158°F)

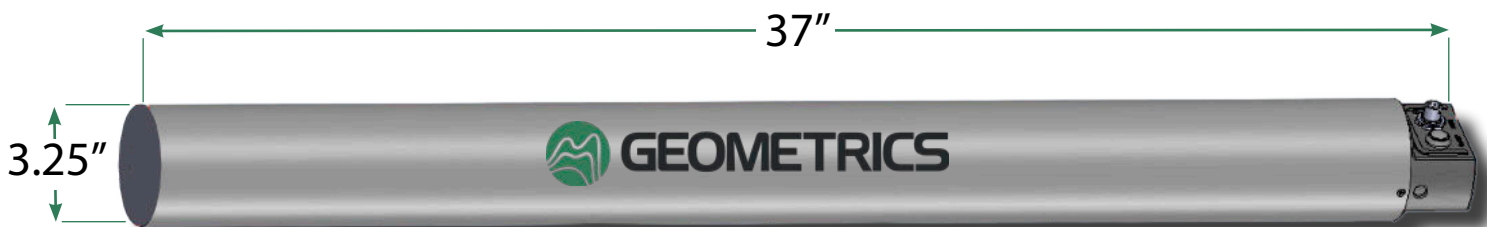
**Water Tight:** IP4 rated; rain-proof

## ACCESSORIES

**Standard:** Carrying case, Tri-pod, external battery cable, AC adapter, USB with Survey Manager software and manuals

**Optional:** Li-Po batteries, battery charger, Android tablet

**Warranty:** 1 year



MagStation(0525)

Specifications subject to change without notice.