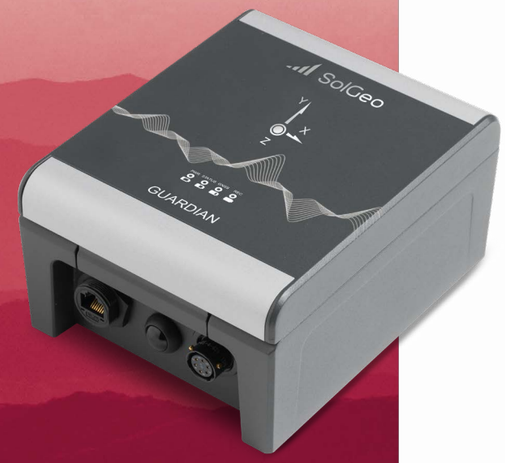
SolGeo

Rev2601

**Solgeo S.r.l**
Via Pastrengo, 9
24068 Seriate (BG, Italy)

Contact now your
dedicated consultant:
sales@solgeo.it
+39 035 4520075

SolGeo




# GUARDIAN DA and DA-Plus ACCELEROGRAPH

The accelerograph Guardian DA is compact, flexible and reliable, equipped with recording software with a web user interface. Guardian is ideal for structural monitoring of buildings with threshold-exceeding alerts

Guardian BB is a compact accelerograph based on MEMS technology for dynamic measurements on structures in compliance with the reference standards DIN 4150-3 and UNI 9916. It uses flash memory to store acceleration data and offers various Internet connecti-vity methods. It can function as an FTP/SFTP client and SFTP server and use standard transmission protocols, such as SeedLink for real-time data transmission to po-pular software applications including SeisComP, Sworm, etc. The device is managed via Seismic Web Configura-tor (SWC), an intuitive and highly usable web interface that allows complete device configuration and provides real-time operating status, data management, and wa-veform display. The operating status is indicated by LED indicators. Threshold exceedance notification is provi-ded via email and/or a dedicated digital output. Two models are available: Guardian DA, for general use, cha-racterized by good dynamics, allows use in a variety of situations, from civil monitoring to bridge and viaduct monitoring. Available with a full scale of 2g, optional-ly 4 and 8g, it also stands out for its competitive price. Guardian DA-Plus stands out for its excellent dynamics and high sensitivity, allowing it to be used in microsei-smic applications, from civil monitoring to monument monitoring. Available with a full scale >10g.

## APPLICATIONS

- Vibration monitoring on buildings
- Modal analysis (OMA)
- SHM (Structure Health Monitoring)
- EEW (Earthquake Early Warning)

# GUARDIAN DA ACCELEROGRAPH

## TECHNICAL CHARACTERISTICS

| | |
|---|---|
| Sensor type | MEMS accelerometer |
| Number of axes | 3, orthogonally oriented |
| Measure range | ±2g, ±4g, ±8g optional on request |
| Samples rate | 10, 25, 50, 100, 200, 250, 500, 1000sps |
| Resolution | 20 bit |
| Dynamic range | 73 dB @1000Sps, 83 dB @100sps, 93dB @10sps (2 g model) |
| Noise density | 22.5µg/√Hz typ. |
| Cross Axis Sensitivity | 1% |
| Non-linearity | 0.1% |
| Offset drift vs temp. | ±0.01mg/°C |
| Full scale drift vs. Temp. | ±0.01%/°C |
| Timing | Internal 0.5ppm drift free run RTC, NTP, optional internal GNSS |
| Recording Mode | Continuous recording with SeedLink Protocol. Configurable event recording when thresholds are exceeded with selectable pre-/post-trigger length. Recording of signal statistics (min, max, average, RMS) with selectable intervals from 10 to 100s. |
| Data Storage | 32 GB internal microSD |
| File formats | Solgeo EVE, MiniSEED, Ascii, CSV |
| Communication | Ethernet 10-100 / WiFi (Client e Access Point) |
| Triggering mode | STA/LTA, threshold level, scheduled |
| Support software | Integrated Seismic Web Configurator (SWC),Optional SeisComP |
| Power supply | 8 ÷ 32VDC |
| Power Consumption | 1.1W typ, @ 12V, with WiFi connection |

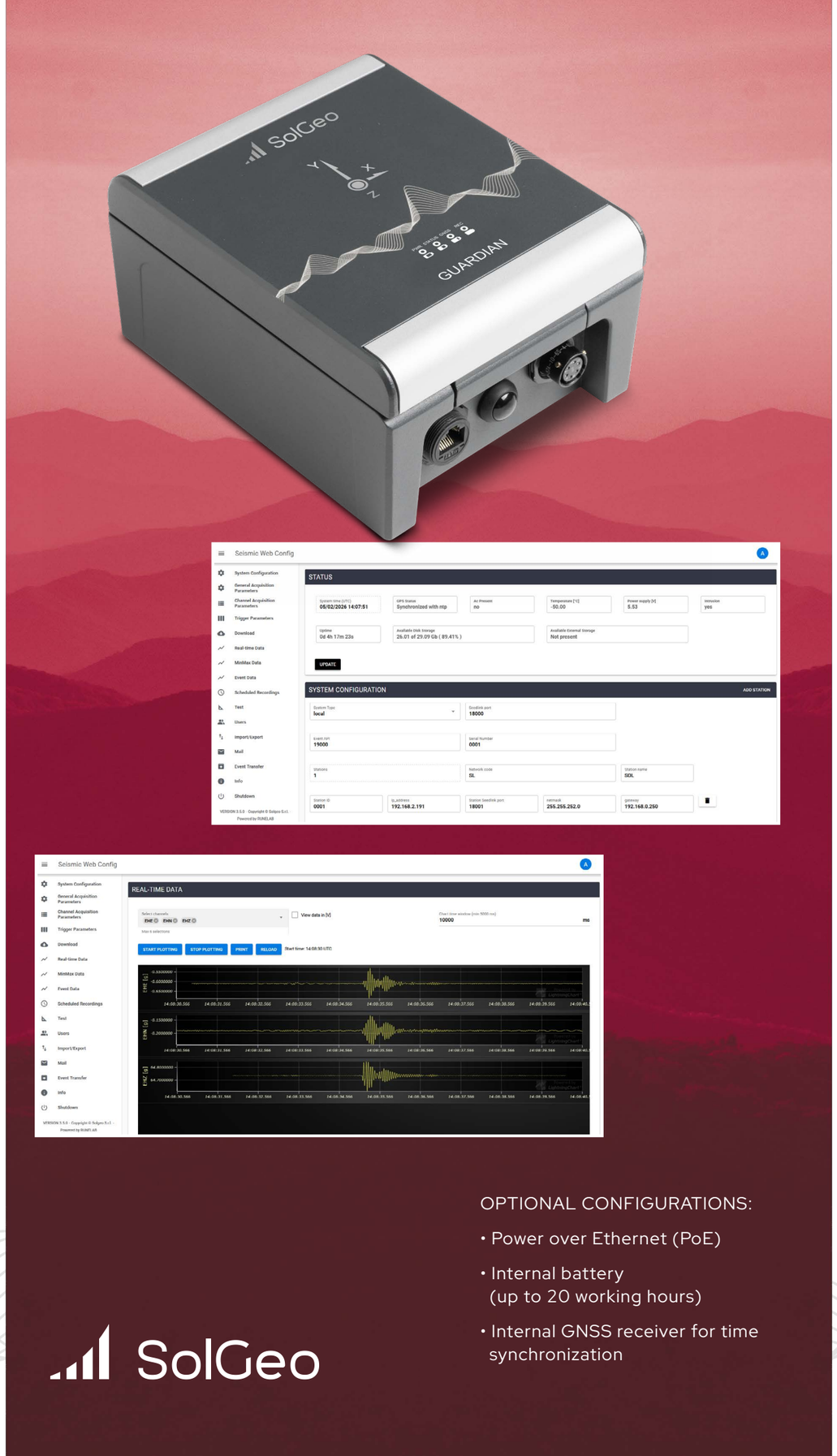
## ENVIRONMENTAL CHARACTERISTICS

| | |
|---|---|
| Operating Temperature | -20 ÷ +70 °C without internal battery<br>-20 ÷ +50 °C with internal battery* |
| Storage Temperature | -40 ÷ +90 °C without internal battery<br>-20 ÷ +50 °C with internal battery |
| Humidity | 0-100% |

## PHYSICAL CHARACTERISTICS

| | |
|---|---|
| Weigh | 1.2 Kg |
| Dimensions (LxWxH) | 130x160x80 mm |
| Enclosure | Aluminium cabinet, painted |
| IP grade rating | IP67 |
| Power connector | 6 terminals MIL-C-26482 |

* during battery charge, the recommended temperature range is less extensive




SolGeo

OPTIONAL CONFIGURATIONS:

- Power over Ethernet (PoE)
- Internal battery (up to 20 working hours)
- Internal GNSS receiver for time synchronization

# GUARDIAN DA-Plus ACCELEROGRAPH

## TECHNICAL CHARACTERISTICS

| | |
|---|---|
| Sensor type | MEMS accelerometer |
| Number of axes | 3, orthogonally oriented |
| Measure range | > ±10g |
| Samples rate | 10, 25, 50, 100, 200, 250, 500, 1000sps |
| Resolution | 28 bit |
| Dynamic range | 125 dB @1000Sps, 141 dB @100sps, 157dB @10sps |
| Noise density | 0,25 µg /√Hz typ @100 sps |
| Cross Axis Sensitivity | 0.2% |
| Non-linearity | 0.03% |
| Offset drift vs temp. | ±0.1mg/°C |
| Timing | Internal 0.5ppm drift free run RTC, NTP, optional internal GNSS |
| Recording Mode | Continuous recording with SeedLink Protocol. Configurable event recording when thresholds are exceeded with selectable pre-/post-trigger length. Recording of signal statistics (min, max, average, RMS) with selectable intervals from 10 to 100s. |
| Data Storage | 32 GB internal microSD |
| File formats | Solgeo EVE, MiniSEED, Ascii, CSV |
| Communication | Ethernet 10-100 / WiFi (Client e Access Point) |
| Triggering mode | STA/LTA, threshold level, scheduled |
| Support software | Integrated Seismic Web Configurator (SWC),Optional SeisComP |
| Power supply | 8 ÷ 32VDC |
| Power Consumption | 1.1W typ, @ 12V, with WiFi connection |

## ENVIRONMENTAL CHARACTERISTICS

| | |
|---|---|
| Operating Temperature | -20 ÷ +70 °C without internal battery<br>-20 ÷ +50 °C with internal battery* |
| Storage Temperature | -40 ÷ +90 °C without internal battery<br>-20 ÷ +50 °C with internal battery |
| Humidity | 0-100% |

## PHYSICAL CHARACTERISTICS

| | |
|---|---|
| Weigh | 1.2 Kg |
| Dimensions (LxWxH) | 130x160x80 mm |
| Enclosure | Aluminium cabinet, painted |
| IP grade rating | IP67 |
| Power connector | 6 terminals MIL-C-26482 |

* during battery charge, the recommended temperature range is less extensive