

FEATURES

- Eight-channel receiver
- One pulse per second output
- Position to 25 meters spherical error

The Geotech Instruments Model **GPS-3** is a high performance eight-channel GPS receiver and antenna in a weatherproof enclosure. The antenna can be mounted up to **1000 m** away from the digitizer/recorder of the SMART-series due to the RS422 communication interfaces. The unit is based on the Trimble Acutime 2000 GPS Smart Antenna and uses the TSIP time format protocol.

The **GPS-3** provides position, elevation, velocity, and time information to a high degree of accuracy. The unit is a GPS Standard Positioning Service (SPS) receiver that uses the C/A code on the L1 frequency carrier.

Applications include portable and permanent seismic stations and all systems requiring a low-cost, low-power, all weather synchronized UTC timing and position source.

GLOBAL POSITIONING SYSTEM

MODEL GPS-3



GLOBAL POSITIONING SYSTEM MODEL GPS-3 SPECIFICATIONS

ACCURACY

| | |
|---------------|--|
| 1 PPS | 1 microsecond. A dwell time of 2-3 minutes after satellite lock-on is needed before the 1 PPS is within specification. |
| Position | 25 meters CEP (SPS), 2 meters CEP (DGPS) |
| Datum | WGS-84 |
| Velocity | 500 m/s |
| Reaction Time | 2.5 to 3.5 minutes (average) |

INTERFACE

| | |
|-----------|--|
| Type | Serial port with 1 PPS output |
| Interface | RS-422, allowing for connection cables of up to 1000 m long |
| Baud Rate | 300, 1200, 2400, 4800, 9600 baud; factory default is 4800 baud |
| Data Bits | 7 or 8 |
| Stop Bits | 1 or 2 |
| Parity | None, odd or even |

POWER REQUIREMENTS

| | |
|-------------------|--|
| Operating Voltage | 8 to 36 volts DC; 12 VDC provided by the SMART-series digitizers/recorders |
| Power Consumption | less than 1.3 watt, typical |

ENVIRONMENTAL CHARACTERISTICS

| | |
|-----------------------|---------------------------|
| Operating Temperature | -40° to 85°C |
| Storage Temperature | -55° to 105°C |
| Humidity | 0 to 100%, non-condensing |

PHYSICAL CHARACTERISTICS

| | |
|----------------------|--|
| Dimensions (nominal) | Antenna: 155 mm diameter x 127 mm high (6.1 in diameter x 5.0 in high) ¾ inch NPT female spigot on bottom surface for mounting. |
| Weight | 363 g, without cable |
| Cable | 100 ft (33 m) cable included |