

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