

DNA-GPS

PowerDNA GPS Receiver System

- Based on the powerful Garmin GPS 16-HVS
- Better than 3 meter accuracy (using WAAS)
- Simple connection to DNA-SL-501 serial interface layer
- 1 PPS synchronized to UTC within 1 μ S
- Product includes DNA-STP-GPS break-out panel
- Requires less than 600 mW
- Compatible with all popular NMEA protocols

10-Year
Availability
Guarantee



General Description:

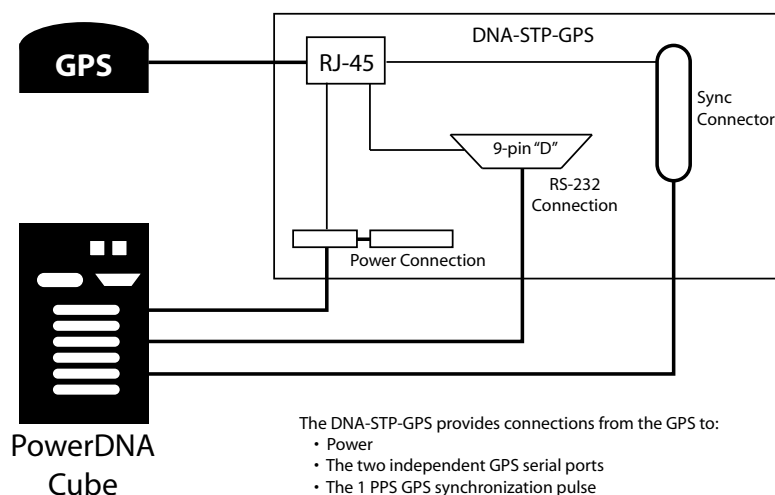
The DNA-GPS provides a high performance GPS receiver capability for PowerDNA and UEILogger Cubes. The GPS provides location information with a positional error less than 3 meters in areas served by the WAAS (most of North America) and 15 meter accuracy worldwide. In addition to providing location information, the GPS is an ideal source of accurate time/date information. Finally, the GPS 1 PPS (pulse per second) output is synchronized to UTC time within ± 1 microsecond. This makes the GPS's 1 PPS signal an exceptionally accurate means to synchronize systems, whether across the room, or across the continent.

The heart of the DNA-GPS is the Garmin GPS 16-HVS. It offers an ideal combination of high accuracy, low power, small size and ease of use. It's even waterproof (1 meter for 30 minutes). To simplify connection of the GPS to the Cube, the DNA-GPS product includes the DNA-STP-GPS break-out board. The DNA-STP-GPS splits the signals on the GPS RJ-45 connector into more easily utilized connectors. It provides the two GPS serial ports on standard DB9 connectors. It maps the 1 PPS signal directly into the cube's sync connector (as well as a BNC). It receives power from a standard cube daisy-chain connector. An on board LED flashes on each 1 PPS signal, allowing a quick visual confirmation of proper GPS operation and satellite synchronization. The DNA-GPS includes all the appropriate cables required to interface the various GPS signals to the Cube.

Technical Specifications:

GPS Receiver	Garmin GPS 16-HVS
Positional Accuracy	<3 meters in DGPS WAAS mode <15 meters in Standard mode
Velocity Accuracy	0.1 knot RMS
Acquisition Times	
Reacquisition	less than 2 seconds
Cold acquisition	approximately 45 seconds
Skysearch/Autolocate*	5 minutes
1 PPS Accuracy	± 1 μ S
1 PPS Display	1 PPS LED flash on DNA-STP-GPS board
Output connection	5 meter cable, terminated in RJ-45. DNA-STP-GPS splits RJ-45 into easily used serial, power and 1 PPS connections
Serial Output Protocol	NMEA 0183 v2 or v3 as well a variety of other ASCII sentences
Size	3.58" diameter, 1.65" high
Weight	11.7 oz, with 5 meter cable
Operating Temperature	-30°C to +85°C
Moisture resistance	IEC 60539 IPX7 (immersion in 1 meter of water for 30 minutes)
Power Supply	+9-36 VDC, less than 600 mW (fully compatible with standard PowerDNA power supplies)

Block Diagram:



Order Info:

Part Number	Description
DNA-GPS	Includes GPS receiver, DNA-STP-GPS break-out panel, DNA-CBL-PSU power supply cable