



MLGPS®

Overview

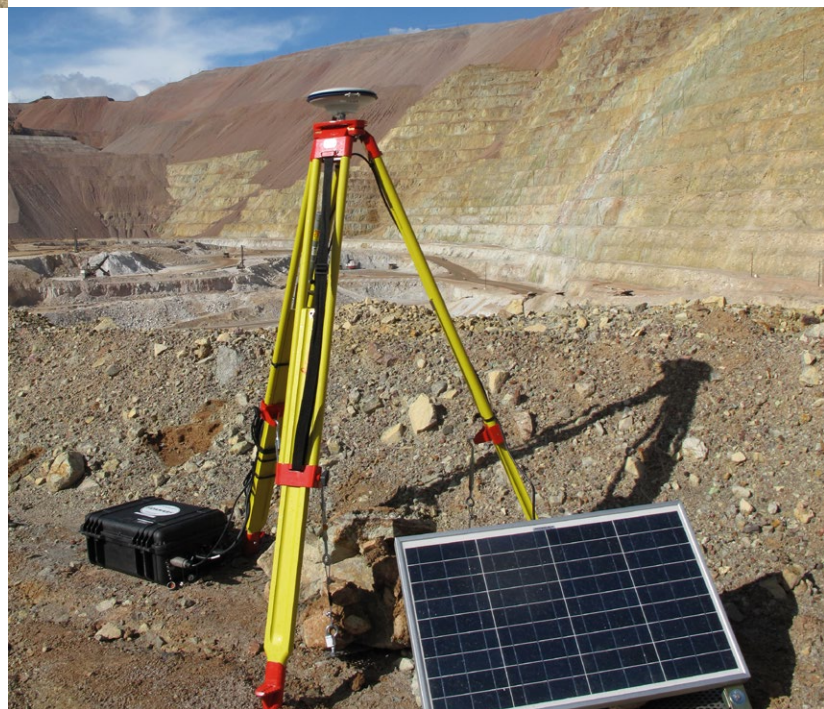
The **Canary Systems® MLGPS®** integrates a multi-function GPS module into a turnkey power control, battery charging and communications platform, specifically designed for geotechnical and structural monitoring applications. It is available in several cost-effective variants including a **portable** version for quick deployments, and a **fixed** version for permanent deployments. All MLGPS units feature a NEMA rated enclosure, battery, and solar panel.

MLGPS uses **differential GPS** to achieve its high precision. The GPS receiver is able to track **GPS L1 and GLONASS L1** signals. An optional upgrade allows for additional constellations such as Galileo, BeiDou-3, QZSS, and IRNSS as well as expansion up to 555 channels.

System Details

MLGPS units ship with a 32GB SD card already inserted into the MLGPS module. The SD card allows the unit to collect and store raw data and utilize **Offline Mode** for more than 300 days of offline storage. This is ideal for units in remote locations with unreliable Wi-Fi connectivity.

MLGPS is capable of reading its own panel temperature, humidity, and recording the status of a switch closure input. Several status LEDs are used for reporting basic system operations including power, charge, GPS status, LAN link, and LAN active. The system also integrates a smart lead-acid battery charge controller. It provides multi-mode adjustable charge control supporting either 6V or 12V battery options.



MULTI-FUNCTION
DIFFERENTIAL GPS



SUPPORTS
MULTIPLE BASES



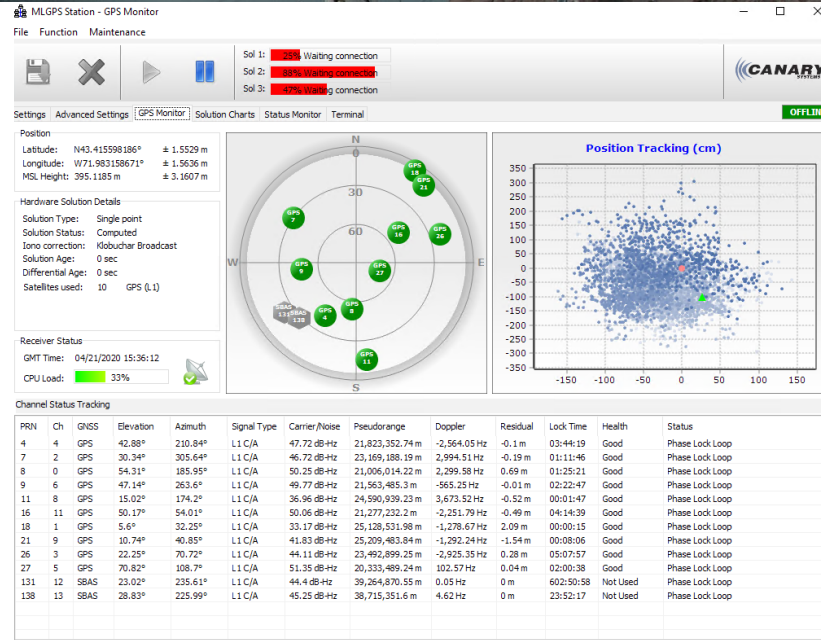
OFFLINE MODE
SD CARD STORAGE

MLSuite® Integration

MultiLogger® Suite software includes a configuration and control interface for connecting MLGPS nodes, so no additional software is necessary. Unlimited **post-processing solutions** can be configured in MLSuite®. The average precision of data depends on the configured averaging time, typically ranging from 15 minutes to 24 hours.

The achievable accuracy in the field depends on a number of variables, including unobstructed sky views and the availability and location of reference stations (need a fixed platform).

Note: precision is given for the horizontal plane, measurements in the vertical axis are typically less accurate.



Specifications

GPS

- Receiver: GPS L1, GLONASS L1
- Channels: 14
- Solutions: Unlimited post-processing solutions
- Average Precisions:
 - 2.5 mm, 0.1 in (24 hr solution)
 - 10 mm, 0.4 in (6 hr solution)
 - 20 mm, 0.8 in (1 hr solution)
 - 25 mm, 1 in (15 m solution)

GPS - Optional Upgrade

- Receiver: GPS L1, GLONASS L1, Galileo, BeiDou-3, QZSS and IRNSS
- Channels: 555

Physical

- Module Dimensions: 7.5 x 3.5 x 1.5 in
- Operating Temperature: -40 to +60 °C
- Operating Humidity: 95% non-condensing

Memory

- Storage Capacity: 32GB SD Card (more than 300 days of raw GPS data)

XPico Wired/Wireless Ethernet

- Ports: RS-232 (DE-9), Ethernet (RJ-45)
- Speed: 300-921.6kbps
- Interface: Ethernet 10Base-T or 100Base-TX (Auto-sensing)
- Standards: WPA, WEP, ARP, UDP/IP, TCP/IP, ICMP, SNMP, AutoIP, DHCP, TFTP, Telnet, HTTP
- Security: 256-bit AES encryption
- Range (line-of-sight): 1.31km (1 mile) with directional antenna

System Power

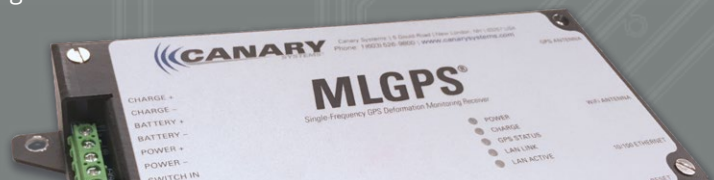
- Voltage: 6VDC or 12VDC @ 750mA max, nominal 70mA-180mA (depending on offline mode configuration)
- Battery: Up to 65Ahr
- Pass Currents: Up to 2A
- Input Voltage Maximum: 40V
- Charge Voltages: 13.8V and 6.9V

Status LEDs

- Power: Status of battery voltage
- Charge: Status of charger output voltage
- GPS Status: GPS link status
- LAN Link: Network link status
- LAN Active: Network activity

System Measurements

- Internal Temp Measurement Range: -40 to +85 °C (-40 to +185 °F) at an accuracy of 0.5 °C (1 °F)
- Temperature Output: °C or °F
- Internal Humidity Measurements Range: 0-100% RH, at an accuracy of +/- 4.5%
- Internal Voltage Measurement: 0-20VDC solar panel, 0-16VDC battery input/output at +/- 0.1VDC accuracy (over temperature range)



Model	MCU	Enclosure Type	Size (L x W x H)	Assembled Weight	Battery	Solar	Receiving	Transmitting
MLGPS-P-24S	MLGPS	Polypropylene	41 x 33 x 18 cm 16 x 13 x 7 in	12.7 kg 28 lbs	24Ahr	30W	RS-232	MLGPS
MLGPS-24S	MLGPS	Polycarbonate	36 x 30 x 15 cm 14 x 12 x 6 in	13.1 kg 29 lbs	24Ahr	30W	RS-232	MLGPS
MLGPS-65S	MLGPS	Steel	61 x 51 x 25 cm 24 x 20 x 10 in	28.1 kg 62 lbs	65Ahr	65W	RS-232	MLGPS