

GPS Dead Reckoning Breakout - NEO-M8U (Qwiic)

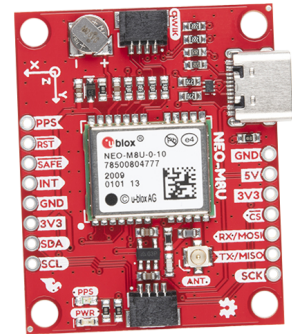
Product Overview

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For the most up-to-date information, visit www.mouser.com or the supplier's website.

Description

SparkFun GPS-16329 GPS Dead Reckoning Breakout – NEO-M8U (Qwiic) Development Board is a high quality GPS board with impressive configuration options. This board includes a NEO-M8U module that takes advantage of u-blox's Untethered Dead Reckoning (UDR) technology. The NEO-M8U module is a 72-channel u-blox M8 engine GNSS receiver that can receive signals from the GPS, GLONASS, Galileo, and BeiDou constellations with ~2.5 meter accuracy. This breakout board maximizes position accuracy in dense cities or covered areas. Under poor signal conditions, continuous positioning is provided in urban environments and is also available during complete signal loss like short tunnels and parking garages.



The GPS-16329 module provides continuous navigation without needing to make any electrical connection to a vehicle and reduces the cost of installation for after-market dead reckoning applications. The GPS Breakout board is equipped with an on-board rechargeable battery that provides power to the RTC on the NEO-M8U. This reduces the time-to-first fix from a cold start (~26s) to a hot start (~1.5s). The battery will maintain RTC and GNSS orbit data without being connected to power for plenty of time.

Features

- Integrated U.FL connector for use with antenna of your choice
- 72-Channel GNSS Receiver
- Built-in accelerometer and gyroscope
- Software configurable:
 - Geofencing
 - Odometer
 - Spoofing detection
 - External interrupt
 - Pin control
 - Low power mode
- Supports NMEA, UBX, and RTCM protocols over UART or I²C interfaces

Specifications

- 2.5m horizontal accuracy
- 30Hz maximum update rate
- Time-To-First-Fix:
 - Cold: 26s
 - Hot: 1.5s
- Maximum altitude: 50,000m
- Maximum G: ≤ 4
- Maximum velocity: 500m/s
- Velocity accuracy: 0.5m/s
- Heading accuracy: 1 degrees
- Time pulse accuracy: 30ns
- 3.3V VCC and I/O:
 - Current consumption: ~29mA continuous tracking, default concurrent mode

Mouser Part Number

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To learn more, visit

<https://www.mouser.com/new/sparkfun/sparkfun-gps-breakout-dev-board/>