

66-Channel LS20031 GPS Receiver Module

The Locosys LS20031 GPS receiver integrates a MediaTek MT3329 66-channel GPS chip with a ceramic antenna to create a complete GPS module that can track up to 66 GPS satellites at a time. The GPS module supports up to a 10Hz update rate, a built-in micro battery for rapid satellite acquisition (external power is still required for normal operation), and more than 6 different NMEA ASCII sentences that are output to a TTL-level serial port.



Overview

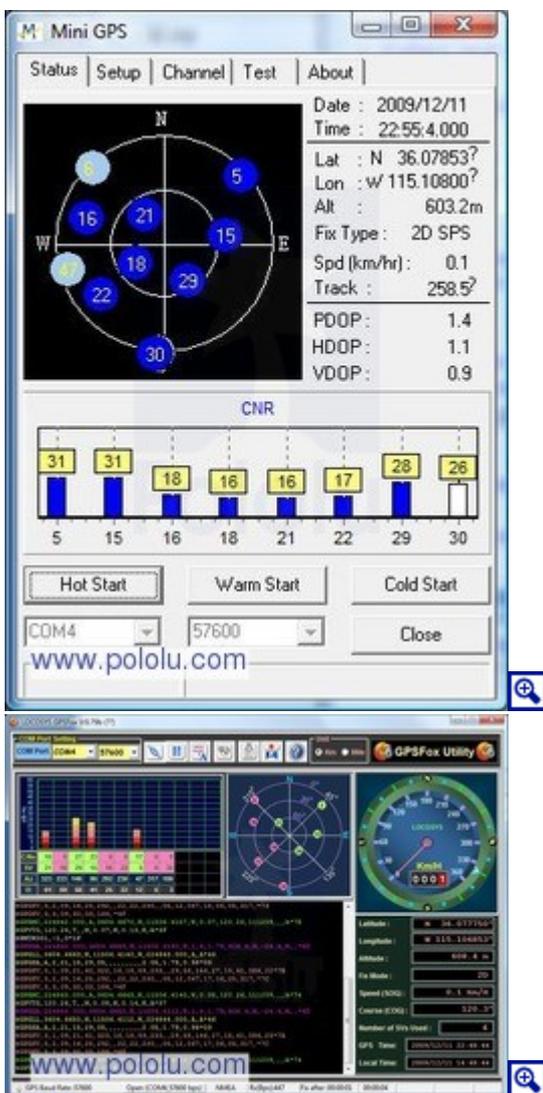
The LS20031 global positioning system (GPS) receiver module from Locosys receives GPS data on up to 66 channels and outputs the data in more than 6 different National Marine Electronics Association (NMEA) GPS sentences to a TTL-level serial port at a rate of up to 10 Hz. Since the GPS module has an integrated ceramic antenna, you don't need to buy an external antenna or worry about the many different antenna connectors. The module can typically acquire a fix from a cold start in 35 seconds, and by saving information about the satellites it was last connected to the LS20031 acquire a hot-start fix in less than 2 seconds.



Features

- 35 second cold start, less than 2 second hot start

- Supports 66-channel GPS
- Up to 10Hz update rate
- 3 to 4.2 V operating range
- Built-in micro battery to preserve system data for rapid satellite acquisition
- Red LED indicator for GPS fix or no fix
- MediaTek MT3329 receiver chipset
- Capable of SBAS (WAAS, EGNOS, MSAS)
- Supports assisted GPS (AGPS)



Configuration

The LS20031 GPS receiver module's firmware is initially set to a 5Hz update rate, a 57600bps serial communication rate, and is set to output GGA, GLL, GSV, GSA, RMC, and VTG NMEA

sentences. After connecting the LS20031 GPS receiver to a computer using a serial port or [USB-to-serial adapter](#), you can use the [Mini GPS windows application](#) (483k zip) to change these default settings. You can change the baud rate, or turn off the NMEA sentences you don't need. The [MTK packet user's manual](#) (79k pdf) provides a list of ASCII packets that you can send to the LS20031 to configure it from within an embedded application.

The [GPSFox](#) (925k zip) windows application from Locosys displays the serial GPS data in a fancy format, but, unlike the the Mini GPS application, it can't configure the LS20031 GPS receiver module.

Note: This is a 3.3V device. External components (such as voltage dividers) are required when interfacing with 5V systems.