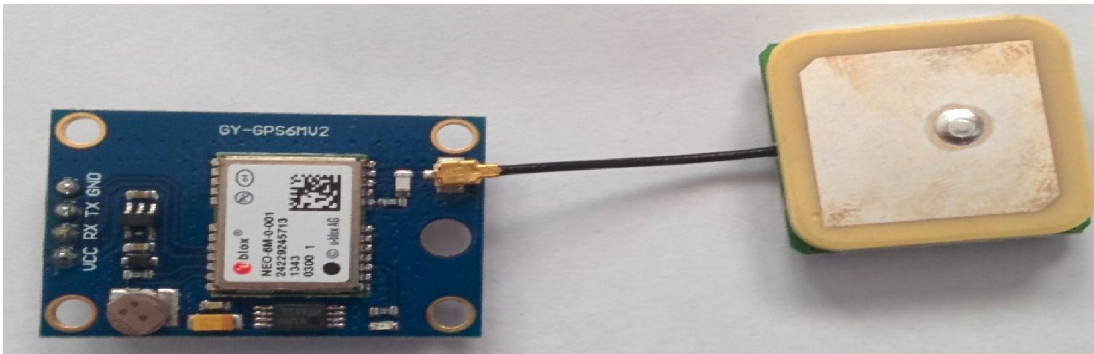


GY-NEO6MV2 GPS Module



This board features the u-blox NEO-6M GPS module with antenna and built-in EEPROM. This is compatible with various flight controller boards designed to work with a GPS module.

Product Specifications

- Power Supply Range: 3 V to 5 V
- Model: GY-GPS6MV2
- Ceramic antenna
- EEPROM for saving the configuration data when powered off
- Backup battery
- LED signal indicator
- Antenna Size: 25 x 25 mm
- Module Size: 25 x 35 mm
- Mounting Hole Diameter: 3 mm
- Default Baud Rate: 9600 bps
- Antenna Socket : IPEX
- Output Protocol : NMEA

Pin Description

GPS pin MBED pin Bambino 210E pin

VCC	Vout	3.3V
RX	P13	UART0_TX
TX	P14	UART0_RX
GND	GND	GND

NMEA Protocol

- GPGGA (Global positioning system fix data)

Field	Name	Format	Unit	Description
0	\$GPGGA	string	-	Message ID, GGA protocol header
1	hhmmss.ss	hhmmss.sss	-	UTC Time
2	Latitude	ddmm.mmmm	-	Latitude
3	N	char	-	N/S Indicator
4	Longitude	dddmm.mmmm	-	Longitude
5	E	char	-	E/W indicator
6	FS	digit	-	Position Fix Status Indicator
7	NoSV	numeric	-	Satellites Used
8	HDOP	numeric	-	Horizontal Dilution of Precision
9	msl	numeric	m	MSL Altitude
10	uMsl	char	-	Units, Meters
11	Altref	numeric	m	Geoid Separation
12	uSep	char	-	Units, Meters
13	DiffAge	numeric	s	Age of Differential Corrections
14	DiffStation	numeric	-	Diff. Reference Station ID
15	cs	hexadecimal	-	Checksum
16	<CR><LF>	char	-	Carriage Return and Line Feed

- GPGSA (GNSS DOP and Active Satellites)

Field	Name	Format	Unit	Description
0	\$GPGSA	string	-	Message ID, GSA protocol header
1	Smode	char	-	Manual or Automatic (for 2D or 3D mode)
2	FS	digit	-	Fix status
...				
18	cs	hexadecimal	-	Checksum
19	<CR><LF>	char	-	Carriage Return and Line Feed

- GPGLL (Latitude and longitude, with time of position fix and status)

Field	Name	Format	Unit	Description
0	\$GPGLL	string	-	Message ID, GLL protocol header
1	Latitude	ddmm.mmmm	-	Latitude
2	N	char	-	N/S Indicator
3	Longitude	dddmm.mmmm	-	Longitude
4	E	char	-	E/W indicator
5	hhmmss.ss	hhmmss.sss	-	UTC Time

6	Valid	char	-	V = Data invalid, A = Data valid
7	cs	hexadecimal	-	Checksum
8	<CR><LF>	char	-	Carriage Return and Line Feed

- GPRMC (Recommended Minimum data)

Field	Name	Format	Unit	Description
0	\$GPRMC	string	-	Message ID, RMC protocol header
1	hhmmss.ss	hhmmss.sss	-	UTC Time
2	Status	char	-	V = Navigation receiver warning, A = Data valid
3	Latitude	ddmm.mmmm	-	Latitude
4	N	char	-	N/S Indicator
5	Longitude	dddmm.mmmm	-	Longitude
6	E	char	-	E/W indicator
7	Spd	numeric	knots	Speed over ground
8	Cog	numeric	degrees	Course over ground
9	date	ddmmyy	-	Date in day, month, year format
10	mv	numeric	degrees	Magnetic variation value
11	mvE	char	-	Magnetic variation E/W indicator
12	mode	char	-	Mode Indicator
13	cs	hexadecimal	-	Checksum
14	<CR><LF>	char	-	Carriage Return and Line Feed

Test Code

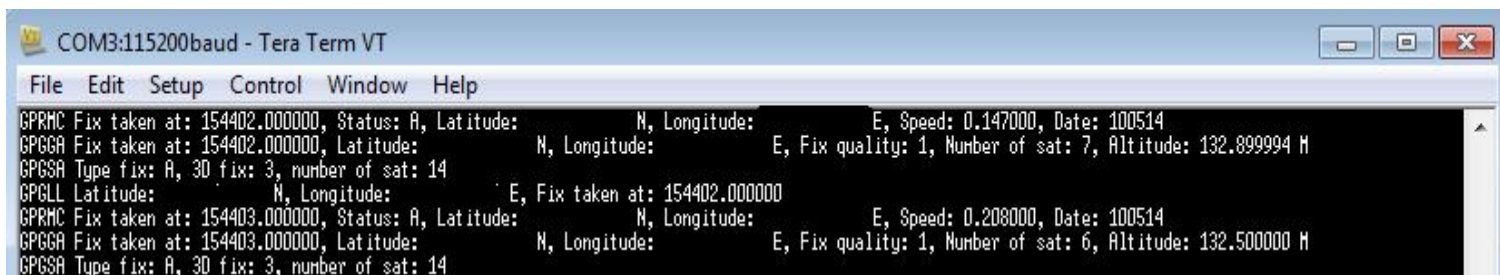
[Import programGPS U-blox NEO-6M Test Code](#)

Test code for GPS U-blox NEO-6M

Last commit 22 Aug 2014 by [Edoardo De Marchi](#)

Output

You need to wait the GPS fix.

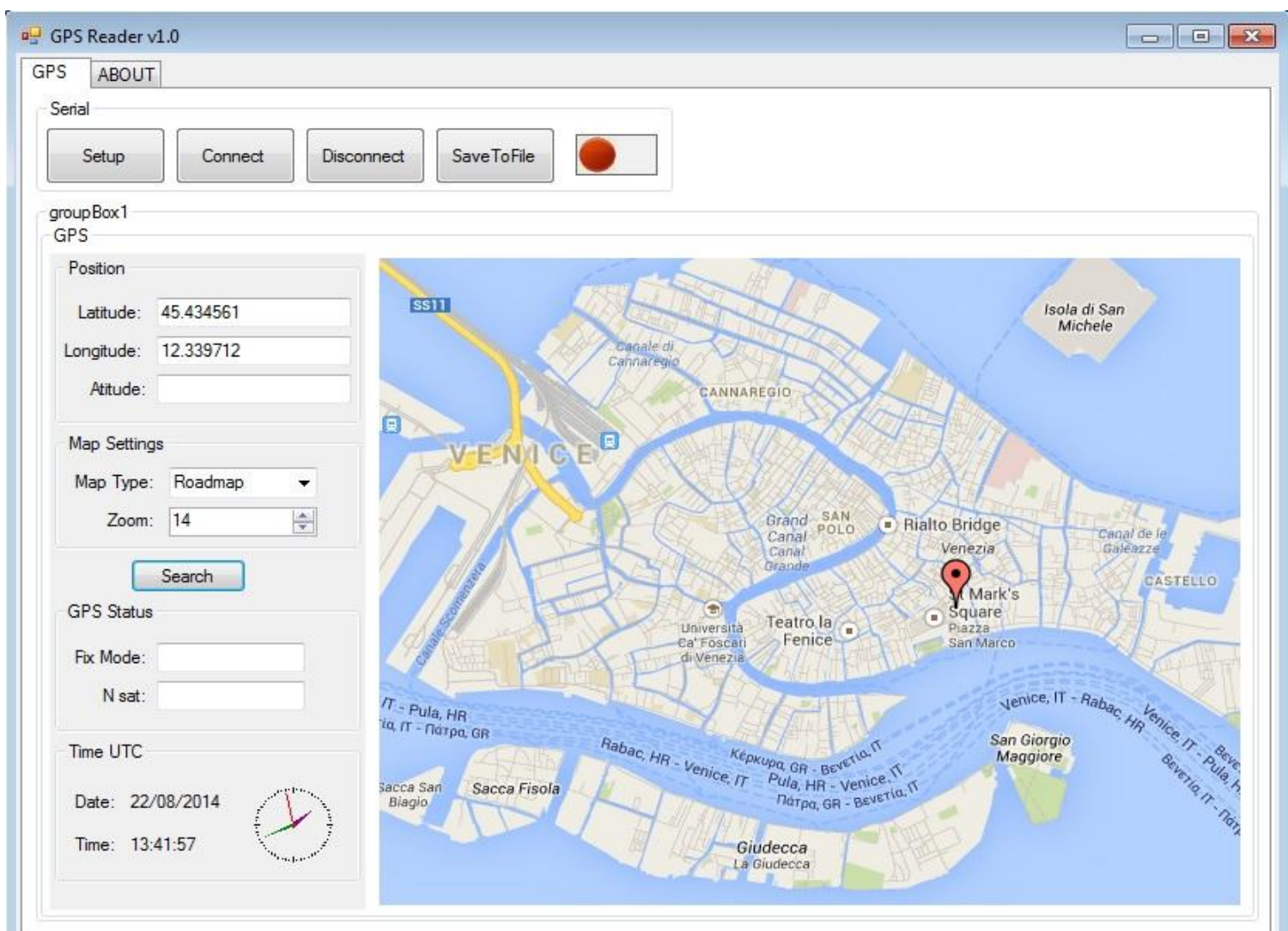


C# Program

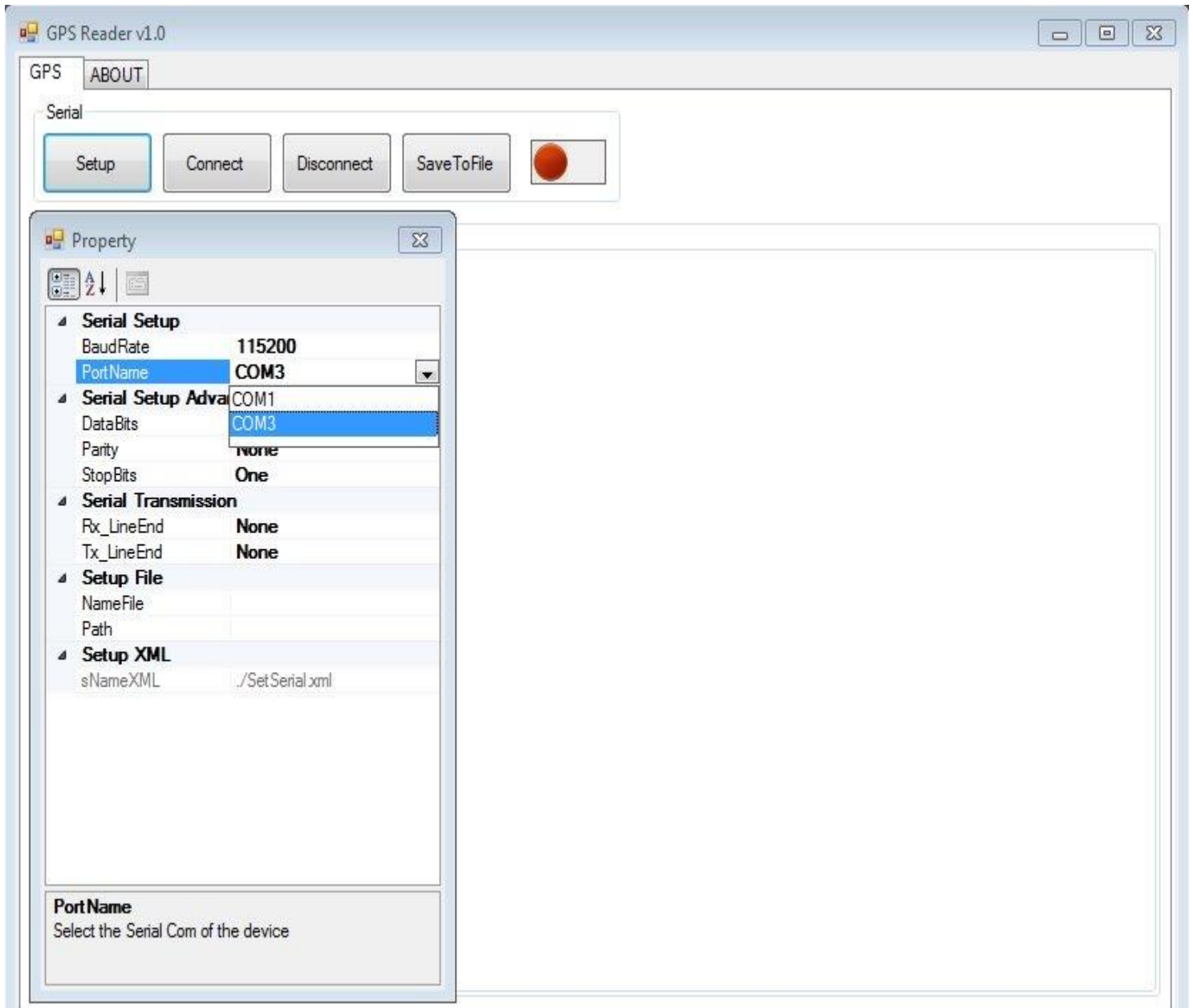
You can download the program here: [GPS Reader v1.0](#)

Is required Microsoft .NET Framework 4.5 or above.

This program works also without gps device. Simply enter the latitude and longitude and then press "Search".



With the gps device you must first press the button "Setup" and set the Port Com and the baud rate.



In the end when the gps makes the fix you press "Search" for see the place.

GPS Reader v1.0

GPS ABOUT

Serial

Setup

Connect

Disconnect

SaveToFile



groupBox1

GPS

Position

Latitude: 30

Longitude: 70

Altitude:

Map Settings

Map Type: Roadmap

Zoom: 7

Search

GPS Status

Fix Mode: A

N sat: 21

Time UTC

Date: 22/08/2014

Time: 14:27:09

