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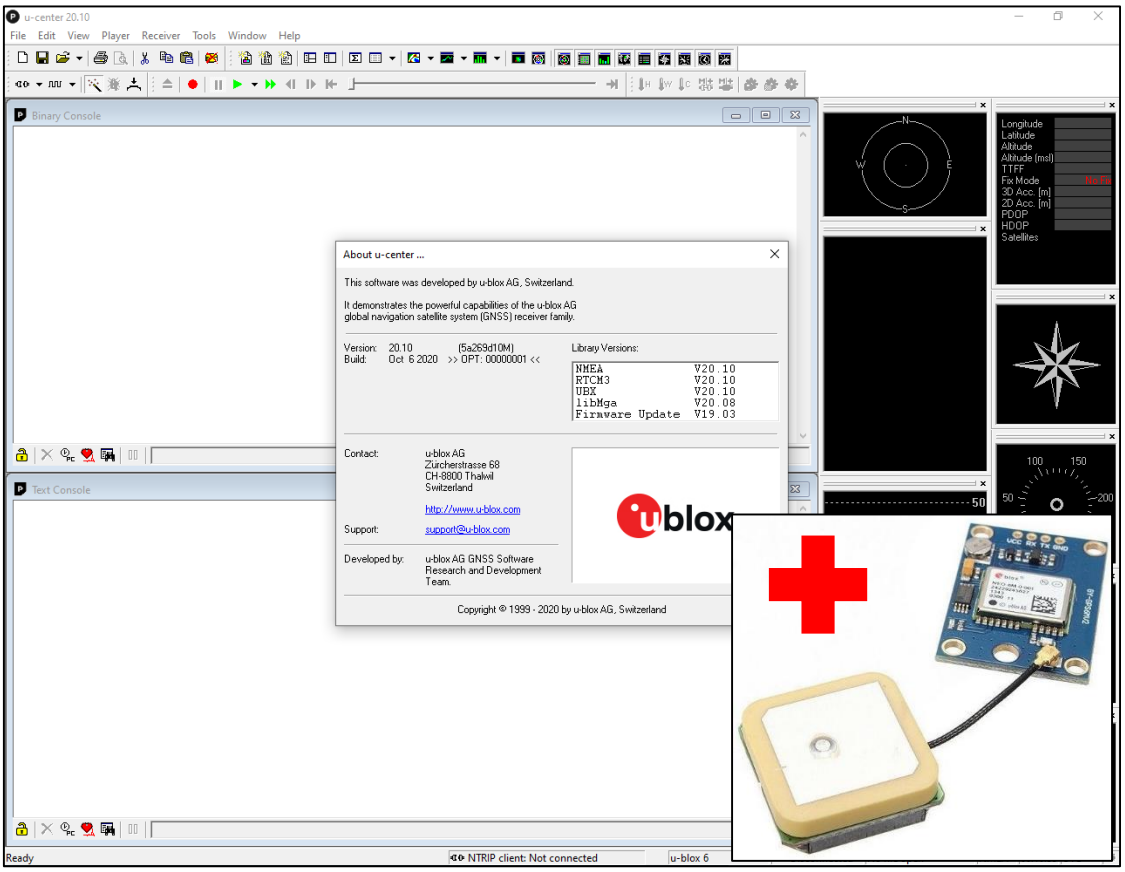
Connecting u-center with GY-NEO6MV2 GPS Module



Introduction:

u-center is highly intuitive GNSS evaluation software that is easy to use, personalized, and compatible with leading u-blox technologies. In this guide we'll guide you on how to connect your GPS module with the provided software for troubleshooting process. With this software you can check the satellite position, signal strength, compass, altitude meter, speed meter & time or date.

Preparation:

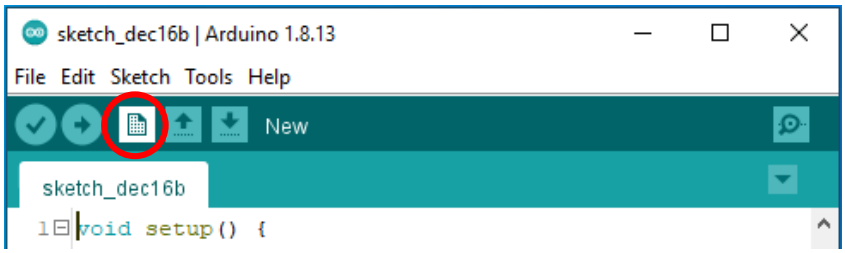
1. GY-NEO6MV2 GPS Module
2. Arduino or Serial Converter / TTL
3. Jumper Wire
4. Arduino IDE V1.8.xx (Software - https://www.arduino.cc/en/software)
5. u-center V21.xx (Software - https://www.u-blox.com/en/product/u-center)

Objective:

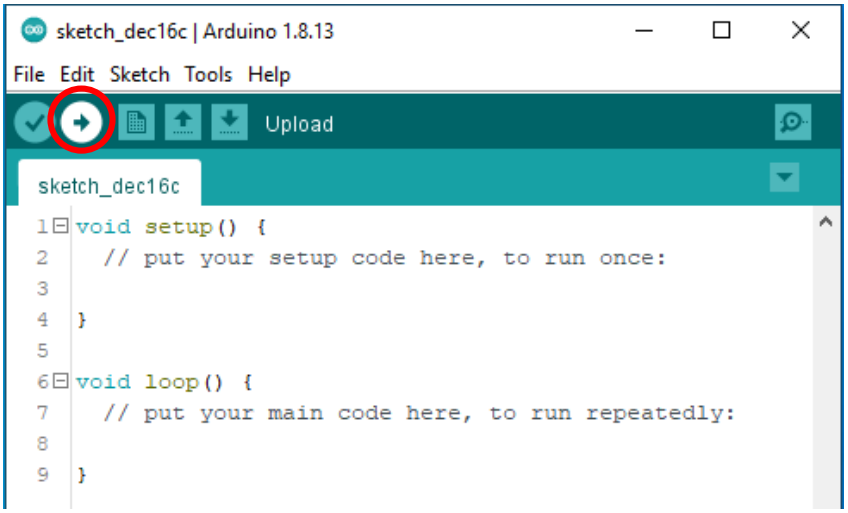
To setup connection between GPS Module with u-center software using Arduino or Serial Converter / TTL. This Guide will split into 3 section A (if you using Arduino), B (if you using USB Serial Converter/ TTL) & C (Software setup).

A. Connecting GPS Module using Arduino

1. Open Arduino IDE and click on **New Sketch** button. After that, a new Arduino IDE tab will open.

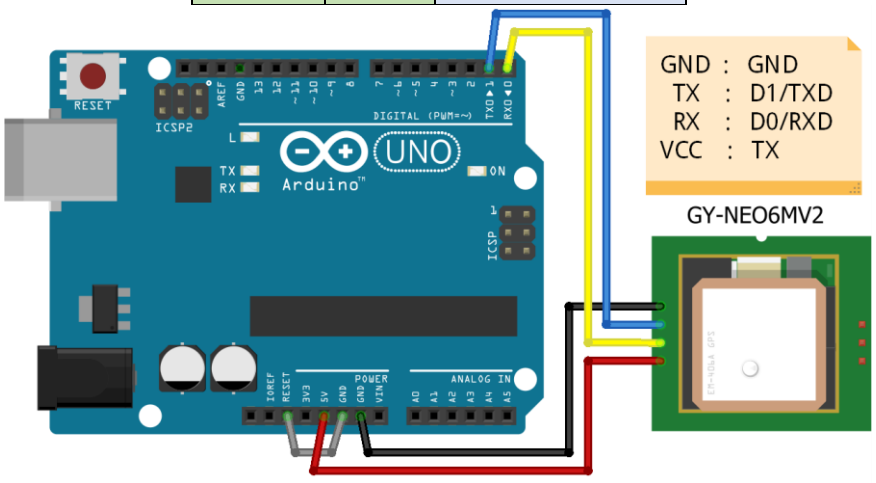


2. **Upload** the recently opened **Blank Code** to Arduino board.



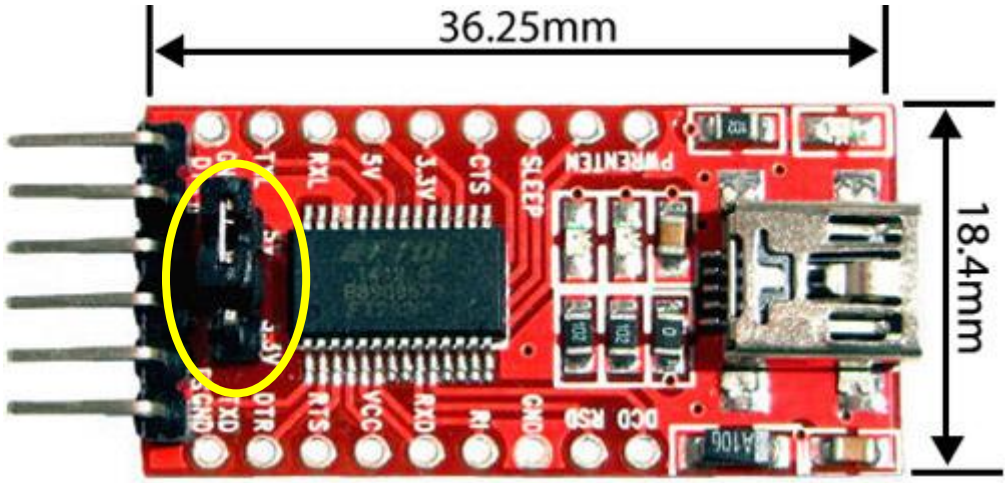
3. Connection setup:

Arduino UNO		GY-NEO6MV2
GND		GND
TX		D1/TXD
RX		D0/RXD
VCC		5V
RESET	GND	-



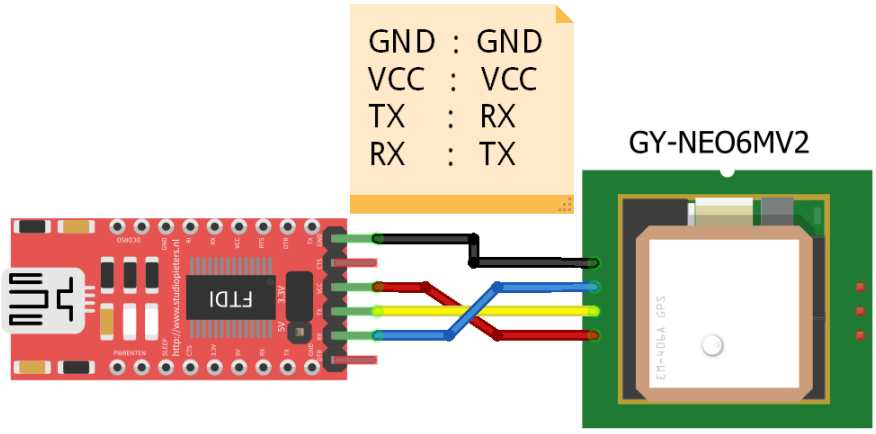
B. Connecting GPS Module using USB Serial Converter/ TTL

1. For this guide we've use FT232RL FTDI USB Serial Converter. Change the Voltage Selection Mini Jumper from 3v to 5v.



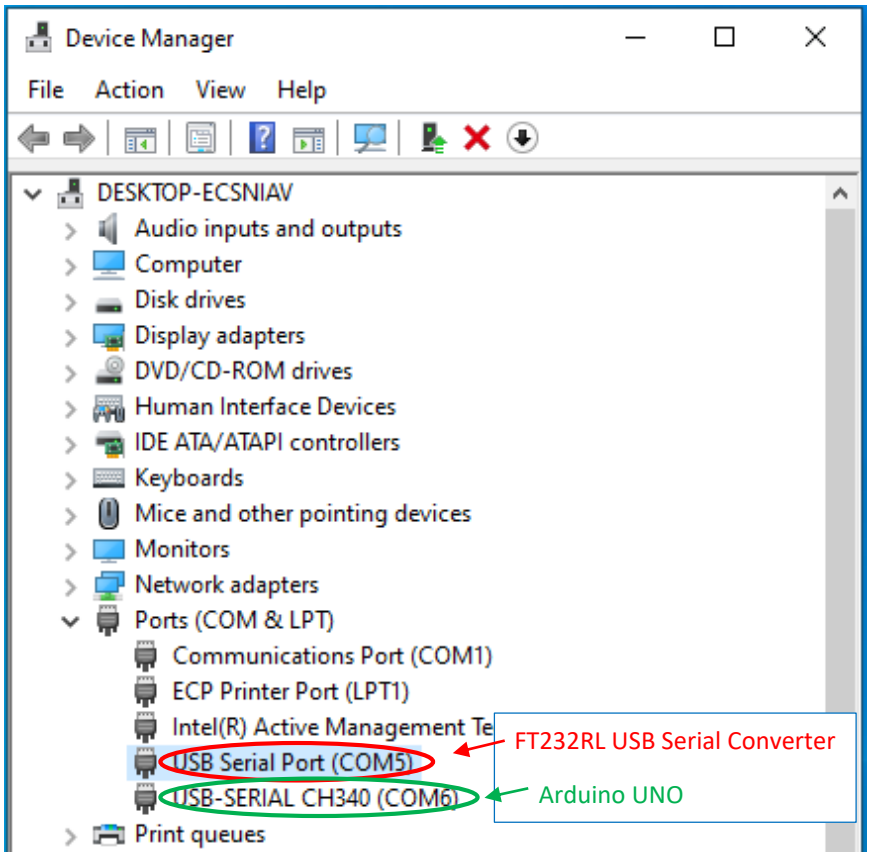
2. Connection Setup:

FT232RL FTDI	GY-NEO6MV2
VCC	VCC
GND	GND
TX	RX
RX	TX

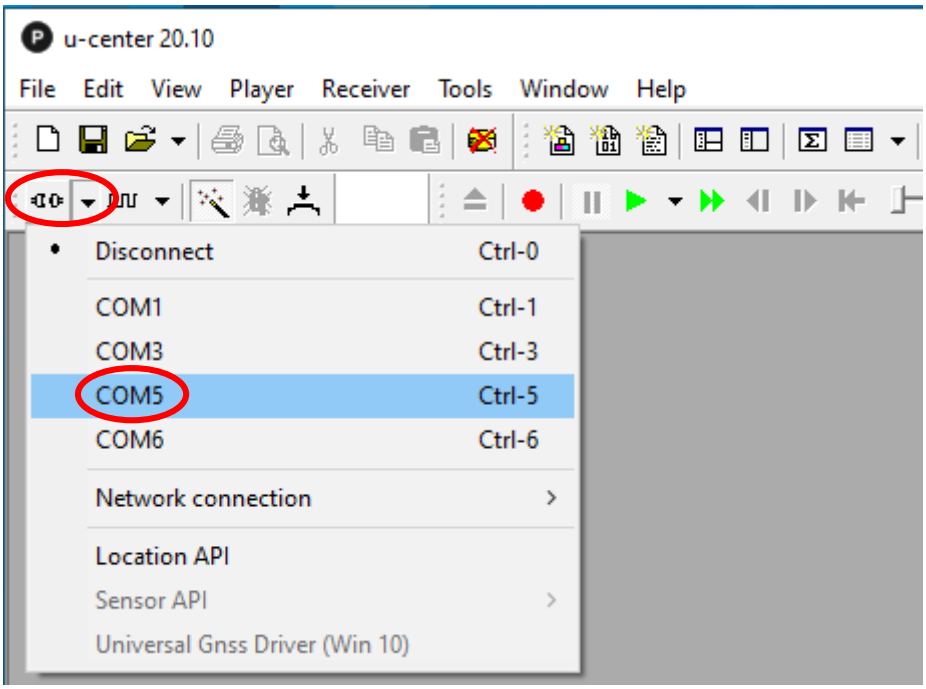


C. Using u-center Program.

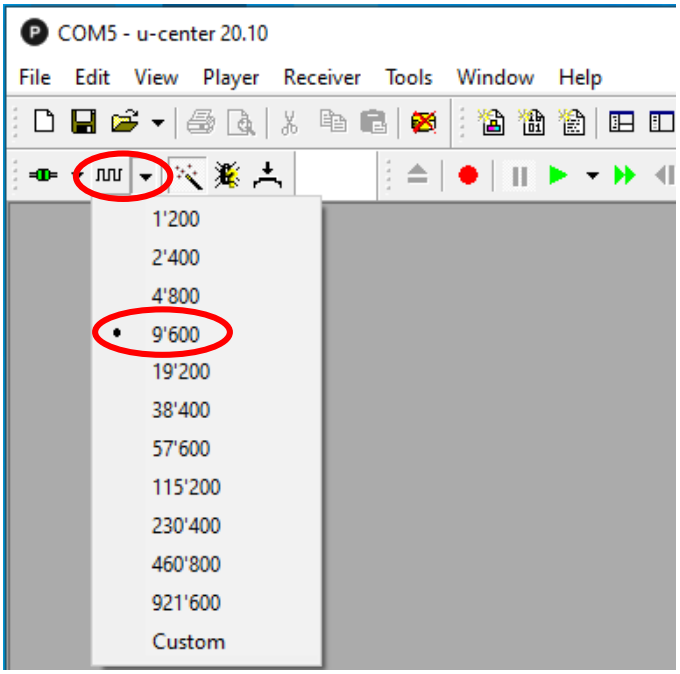
1. After finish installing u-center, connect the Arduino or USB Serial Converter to PC. Open **Device Manager** and navigate to **Ports (COM & LPT)**. This will display your connected devices; PC will register connected devices with COMxx, each PC may vary. For example, our PC register with COM5 & COM6.



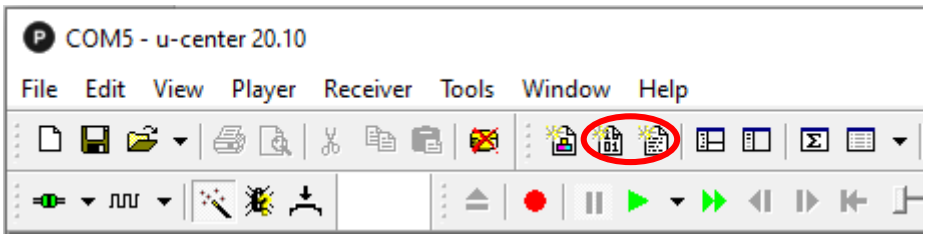
2. Open u-center program, click on **connect** & select **your device earlier**.



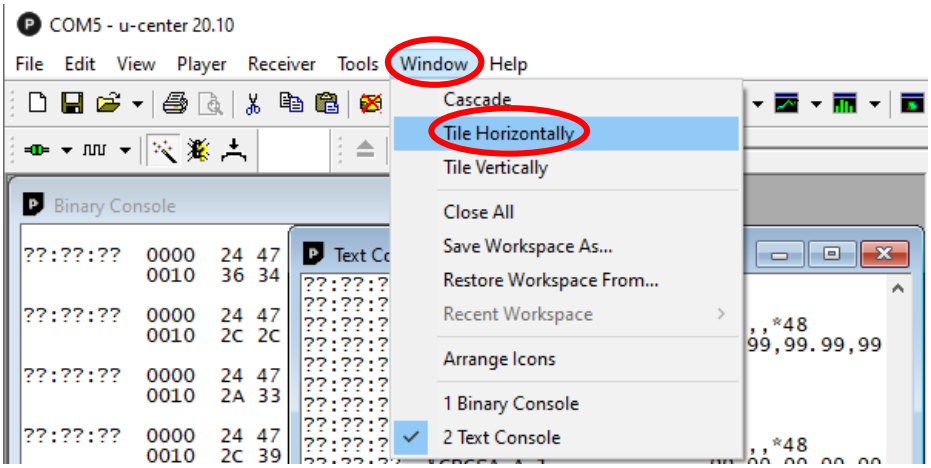
3. Make sure **Baud-Rate 9'600** selected.



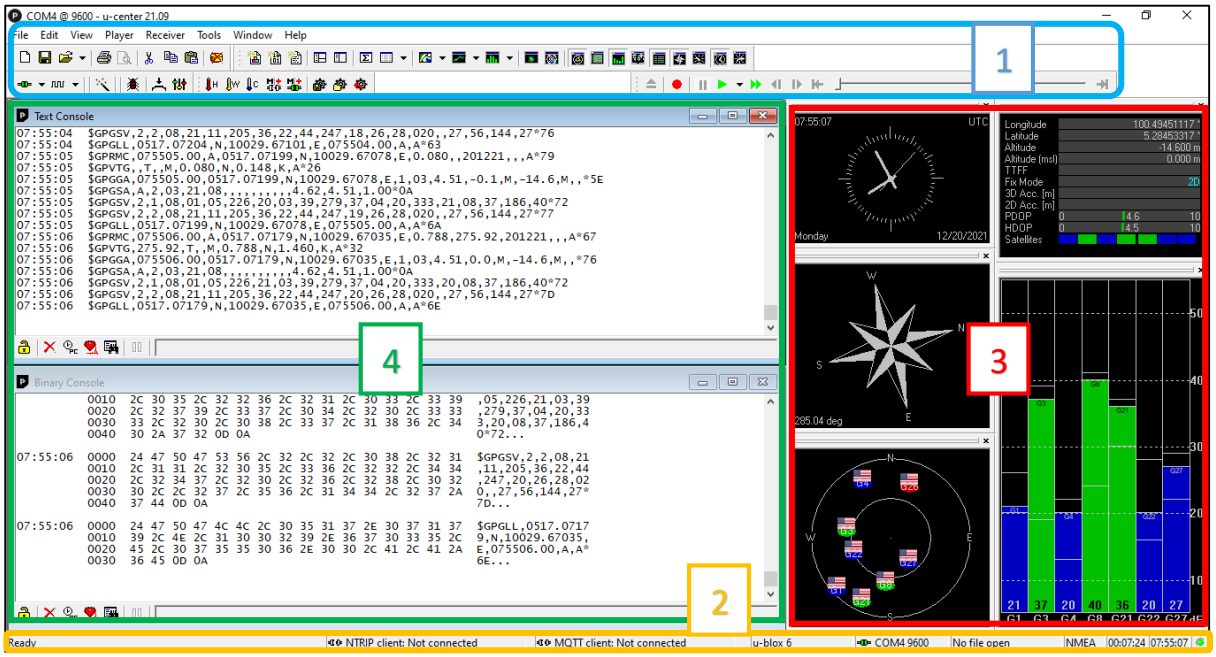
4. Click on **Binary Console** & **Text Console** to view your GPS module data.



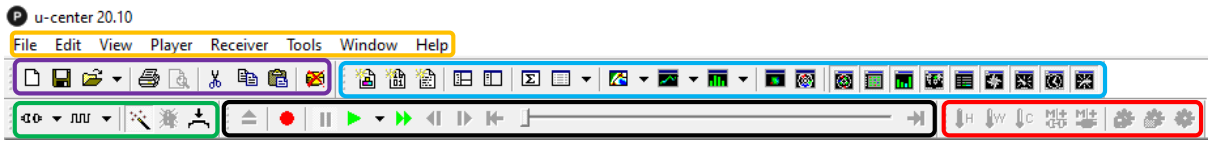
5. Click on **Windows > Tile Horizontally**, to organize recently opened **Binary Console** & **Text Console** tab.



D. UI Description



1. Toolbar / Menu Bar

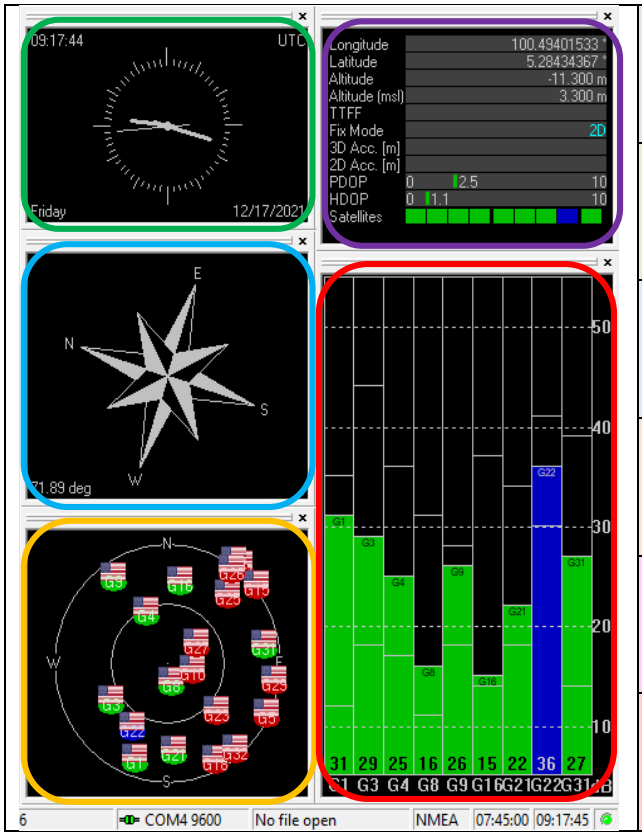


Color	Title	Description
Orange	Standard Menu Bar	Access all U-Center features
Purple	Standard Toolbar	For opening, saving & print current view
Blue	Views Toolbar	Toggle or Disable views windows
Green	Communication Toolbar	Select serial connection Port & Baud rate
Black	Log File Toolbar	Record & Replay Status Log
Red	Action Toolbar	Send Cold, Warm & Hot Start command to GPS

2. Status Bar

Color	Description
Red	Standard Status Bar / Status Display
Yellow	NTRIP Client / Server Information
Green	Receiver / GPS Model
Purple	Port Information
Orange	File
Black	Protocol Information
Blue	Operating Time & UTC / GPS Time
Pink	Receiver Status

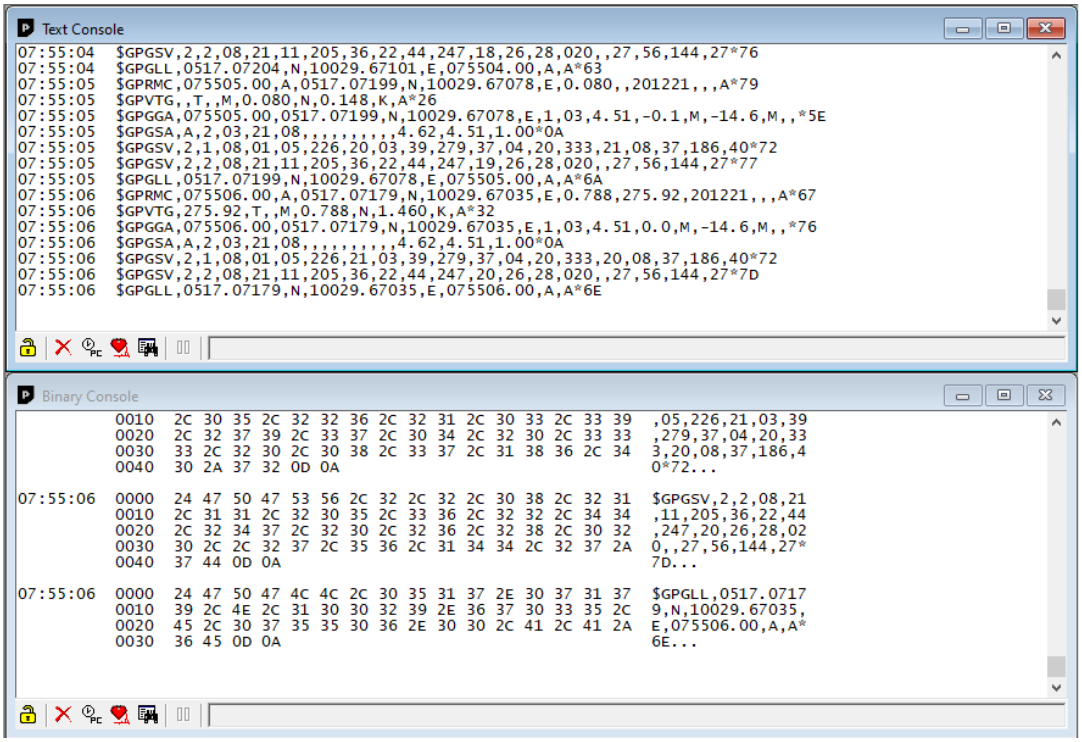
3. View Windows



Color	Description
Green	Shows Clock & Date
Blue	Show Compass
Orange	Shows current satellite position
Purple	Shows Data Acquired
Red	Satellite Level / Strength

4. Console Windows

Console Windows will show all data acquired from GPS module, user can select the data representation whether in Packet, Binary or Text.



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Important Notes & Tips

1) Never power up GY-NEO6MV2 GPS Module more than 5VDC. This module operating voltage range are from 3.3v to 5v. NEO6M runs at 9600 Baud rate.

2) Use the GPS on an open space to avoid interferences. Alternatively, user can upgrade the high-end Antenna for better signal quality & reception.

3) This module is equipped with small rechargeable battery; it is used for the secure storage of configuration data on a EEPROM. Normally if the module hasn't used for long period of time it will constantly discharge. If the battery completely depleted, GPS Module will take longer time to lock on due to recharging process (Normally known as GPS Cold Start).

4) Sample image below as on the Left when the GPS not connected and on the Right when GPS connection Fixed (The Blue bar turn to Green when connected / Fixed):