

GPS Master Development System Software User's Guide



Introduction

This software is designed to interface with a Linx GPS /GNSS module Master Development System and to display the location and navigation data provided by the module. Documentation for the module can be found by clicking the “Software Help” label at the top of the main window.

The Program Interface

When the program starts, the screen in Figure 1 appears.



Figure 1: The Initial Screen

The Master Development system board should be plugged into a USB port on the computer. Start by selecting the COM port from the drop-down menu (1). The software establishes a connection to the board through the USB interface and initiates communication with the module. If successful, the button is displayed as “Reading GPS” (2). If the attempt fails, the button is displayed as “GPS Paused”.

Please note that the data routing switch on the development board must be set to “USB CONTROL”.

Once connection has been established, the software displays the information received from the GPS module, as shown in Figure 2.

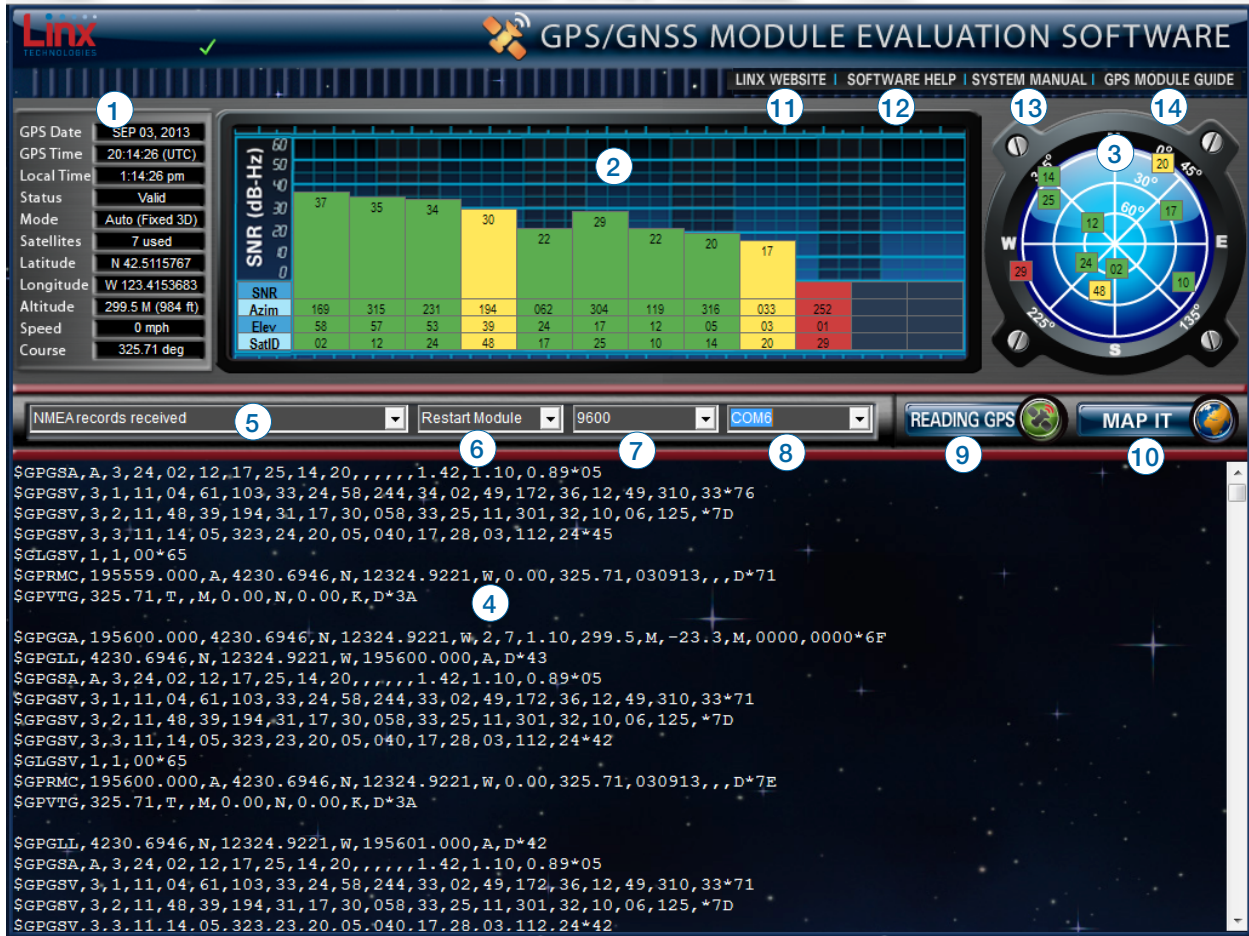


Figure 2: The Connected Screen

1. This area displays the data from the module. This includes the navigation and position information, as well as time, date and satellite data.
2. This is a list of information on the available satellites displayed in a bar graph format. This includes the satellite ID, its azimuth and elevation, and its signal to noise ratio. Each satellite is color coded according to how the receiver is using it. A satellite that is being tracked and used for a position fix is green. A satellite that is being tracked, but not used for a fix is in yellow. A satellite that is not being tracked or used is in red. The more satellites that are used for a fix, the more accurate the fix.
3. This is a polar plot showing the location of the satellites in view relative to the receiver's position. The satellite's ID number is shown and is color coded as described above.
4. This is a box that shows the NMEA data received from the module.

5. This drop-down menu controls how receiver output messages are displayed in the message display window. This does not control what the module outputs, just how the data is displayed in the window.

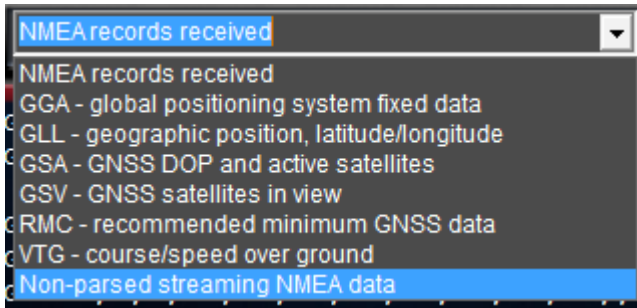


Figure 3: The NMEA Data Display Menu

The all NMEA records received option displays all of the NMEA messages from the module. The messages are grouped by update.

Individual messages can be displayed with each parameter broken out for detailed viewing.

Raw (non-parsed) receiver output can be displayed for development debugging and troubleshooting.

Please see the module's data guide for more information on these and other options.

6. The Restart module menu allows the user to force the receiver into specific start modes; Hot Start, Warm Start, Cold Start or En. Defaults.
7. This menu gives the available baud rates of the module. It may be necessary to increase the baud rate and decrease the number of messages displayed if an update rate higher than 1Hz is available and going to be used. The display on the development system board only operates at 9,600bps.
8. This menu shows which COM port the computer is using to communicate with the module. This can be changed if there are more than one modules connected to the computer.
9. This button starts and stops communication with the module.
10. Clicking this button opens the Google Maps web site and the current position is displayed. All of the features of Google Maps are enabled, such as multiple views, zooming, and printing. Note that the PC running the software must be connected to the Internet for this to open. If the coordinates are not valid, then a message box will open stating the invalid coordinate error.
11. Clicking this label opens the Linx Technologies website where additional information can be found (www.linxtechnologies.com).

12. This label opens this software guide as a PDF file from the Linx Technologies website in the computer's default browser. An active internet connection is required and Adobe Acrobat Reader should be installed on the system.
13. This label opens the Master Development System User's Guide as a PDF file from the Linx Technologies website in the computer's default browser. An active internet connection is required and Adobe Acrobat Reader should be installed on the system.
14. This label opens the module's data guide as a PDF file from the Linx Technologies website in the computer's default browser. An active internet connection is required and Adobe Acrobat Reader should be installed on the system.

For questions or support, please email techsupport@linxtechnologies.com or call +1 541 471 6256 or +1 800 736 6677.