AirPrime GNSS Tool

User Guide

SIERRA WIRELESS®

41111068
Rev 5.0

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Revision History

Revision number	Release date	Changes
1.0	June 23, 2017	Creation
2.0	May 09, 2018	Added Download ROM on page 12 Updated: • Instances of EPO to AGPS • UI layout
3.0	November 06, 2018	Added support for XA12xx and XM1210
4.0	February 26, 2019	Overhauled Operation
5.0	April 08, 2020	Updated screenshots Added support for XS1110 and XP2210 Removed support for Google Map Revised AGPS to AGNSS

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1: Introduction

The GNSS tool is a graphic user interface (GUI) to be used with XA11xx, XA12xx, XM11xx and XM12xx GNSS modules.

This GUI allows you to monitor GNSS information and execute commands to the module for analysis and toadjust settings for the listed features.

System Requirements

- Microsoft Windows OS
  - Windows 7 (32-bit and 64-bit)
  - Windows 8 (64-bit)
  - Windows 10 (32-bit and 64-bit)
- Microsoft .NET Framework 4.6
- Microsoft Visual C++ 2015 Redistributable Package (x86)

2: Operation

USB Driver Installation

Before setting up the connection, please make sure the proper driver is installed in your PC. For Sierra Wireless' Development Kit, please download the VCP driver (CP210x USB to UART Bridge VCP Drivers) from https://source.sierrawireless.com/resources/airprime/software/cp210x-windows-drivers/.

If the Development Kit you use is not from Sierra Wireless, please make sure you have the appropriate driver.

XA12xx and XM12xx USB driver (not location sensor driver) installation is optional. USB drivers can be downloaded from:

- https://source.sierrawireless.com/resources/airprime/software/xm-xa12xx-usb-driver---boot-mode
- https://source.sierrawireless.com/resources/airprime/software/xm-xa12xx-usb-driver---user-mode

Main Screen

When the GNSS Tool software is launched, you will see the screen below.

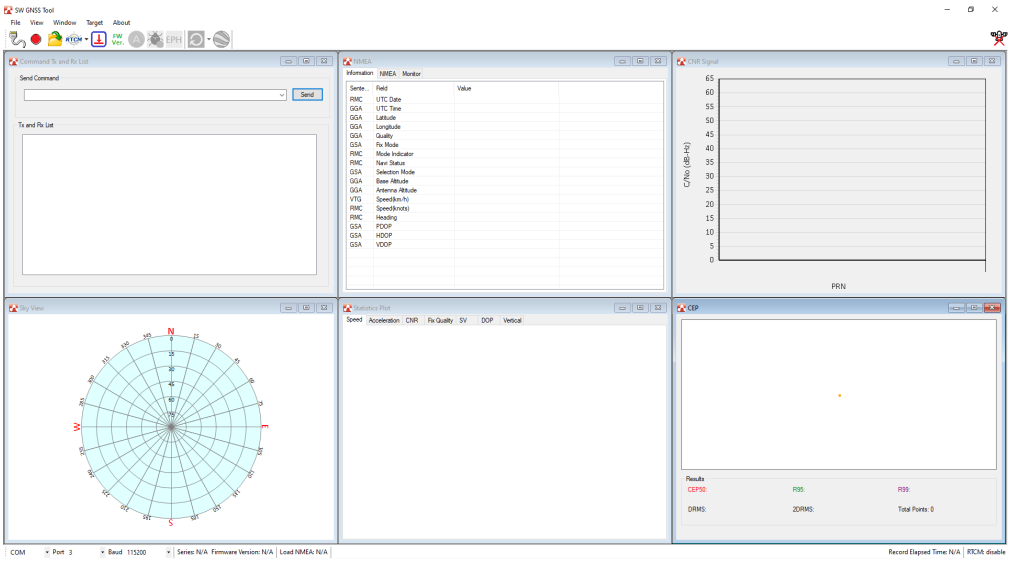


Figure 2-1: Main Program Screen

Initial Setup

After the Development Kit and PC are connected, the first step is to set up the COM port and baud rate.

1. Click the combo box at the bottom of the screen to select either COM Port or USB Port.

2. Select the port number of the Development Kit.
3. Select the baud rate of the Development Kit. (You don't need to select the baud rate if you've previously selected USB port in step 1.)

File Menu and Toolbar

Open and Close Communication

Click the cable button on the toolbar to open communication.

Figure 2-2: Cable Button

To disconnect signal reception, click the cable button again.

If using a USB connection with the XA12xx or XM12xx, ensure that the firmware version indicated in the lower left corner of the window is correct. If the firmware version is not detected, reconnect the Development Kit and PC.

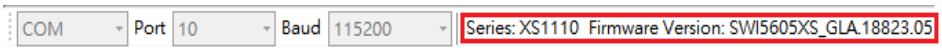


Figure 2-3: Series Model and Firmware Version on the Status Bar

Note: Click the port combo box again to refresh the port list.

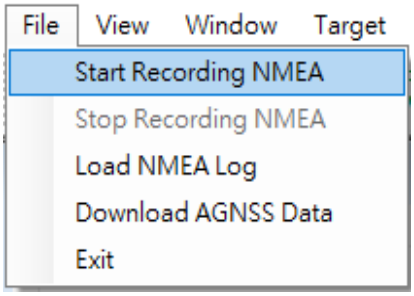
Recording NMEA Stream

The GNSS tool allows you to record NMEA sentences. There are two ways to do so:

1. Click the recording button on the toolbar:

or

2. Click **Start Recording NMEA** on the **File** dropdown menu:



Once **Start Recording NMEA** or the recording button is clicked, a dialog will pop up allowing you to save the file in the desired directory. Click the **Save** button and the recording button will change to  , to show that recording is in progress.

To stop recording, click the recording button again, or click **Stop Recording NMEA** on the **File** dropdown menu.

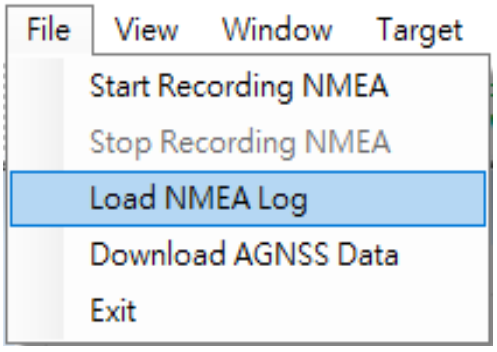
Load NMEA Log (NMEA Stream)

To review the recorded NMEA log:

1. Click the folder button from the toolbar:

or

2. Click **Load NMEA Log** from the **File** dropdown menu:



Once **Load NMEA Log** or the folder button is clicked, a dialog will pop up allowing you to choose the recorded NMEA file from the directory.

After the NMEA file is selected and loaded, the playback control bar will appear in the toolbar area, as shown in Figure 2-4:

Figure 2-4: Playback Control Bar

: Play the NMEA sentences continuously.

1 Times : Play speed. The speed range is from 1 to 10.

: Pause the play.

: Stop the play (note that once the NMEA sentence is stopped from playing, the file will start from the beginning when Play is clicked again).

0 Steps : Jump to the indicated step and play it.

Step # 4 of 2250 : Step counter. Displays the current step and total steps. In this example the step comes from "XXGGA" in the loaded NMEA sentence. The program will calculate the summation of the "XXGGA" in the loaded

NMEA log file for the step reference. The program will also load every NMEA sentence and display all information to the corresponding windows.

RTCM

Note: This feature is only available on the XA11xx and XM11xx.

The ntrip client function can connect to the specified ntrip caster and stream RTCM. Before connecting to an ntrip caster, please set up the required parameters properly.

Click the down arrow next to the RTCM button and click **Settings**.

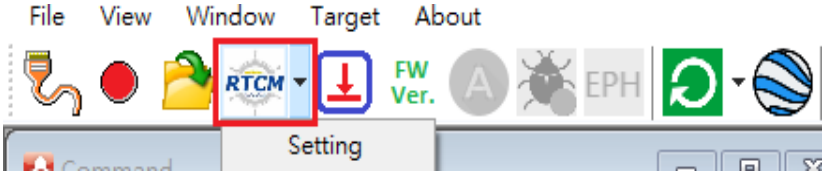


Figure 2-5: RTCM Settings

The Ntrip Client Settings dialog is then displayed, as shown in Figure 2-5:

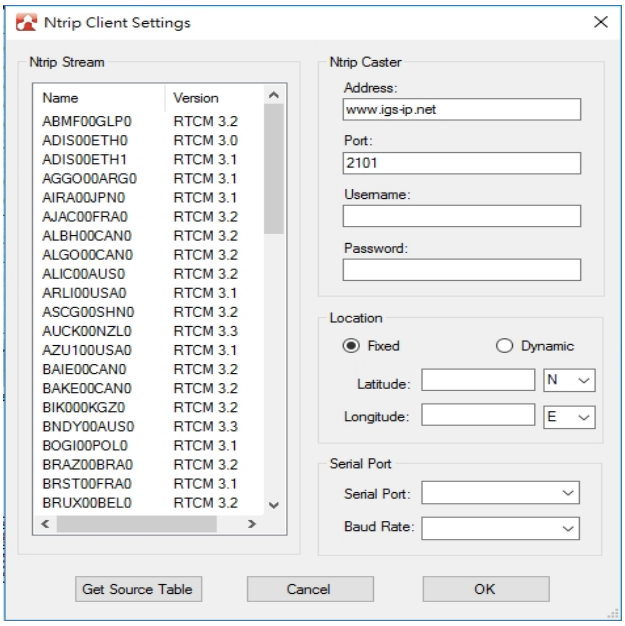


Figure 2-6: Ntrip Client Settings

- **Ntrip Stream**: if the computer has a connection to the Internet, the program will download the source table automatically. You can also get the source table manually by clicking the Get Source Table button. You must then choose a proper stream which meets your RTCM version.
- **Ntrip Caster**: specifies the address and port number of the specified caster with the authorized username and password to log in.
- **Location**: designates fixed location (latitude and longitude), or a dynamic location which reads from the GPS location. Such location information will send an ntrip caster to acquire more accurate RTCM-correct data.

- **Serial Port**: specifies the serial port and baud rate of the computer to output the RTCM data to the GPS module.

After the set up is complete, click the RTCM button to start. You can observe the screens marked by red rectangles as shown in Figure 2-7 to understand the result.

Click the RTCM button again to disconnect streaming.

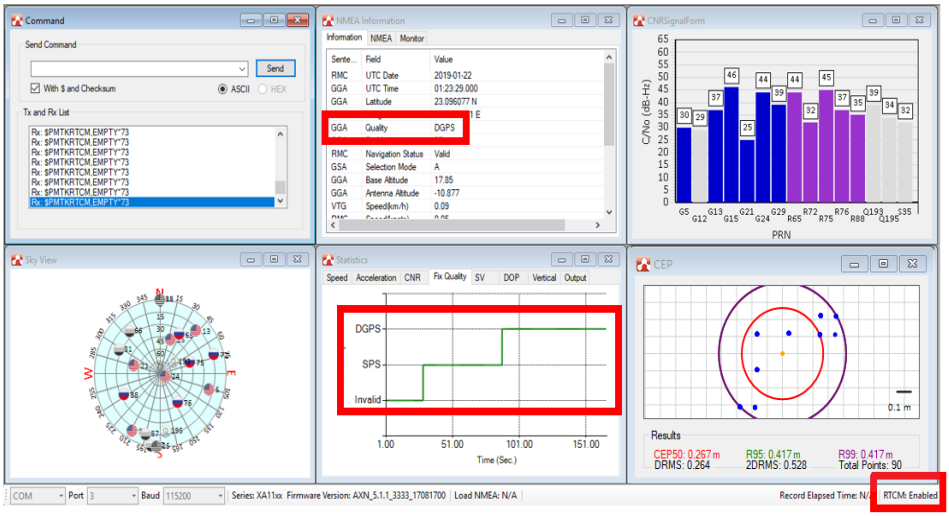


Figure 2-7: Fixed Quality after RTCM is Enabled

You can also launch a command prompt and input the "netstat —a" command to monitor the status of a network connection as show in Figure 2-8. If the connection is successful, the caster name and port number will be listed.

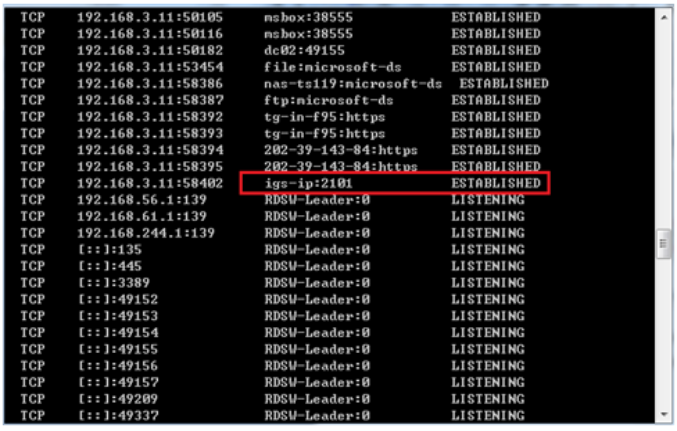


Figure 2-8: Status of a Network Connection

Download ROM

This function allows you to update the firmware of the GNSS module. Click the download button from the toolbar to display the Download ROM dialog.

Figure 2-9: Download Button

For XA11xx and XM11xx

The Download ROM dialog for XA11xx and XM11xx modules is shown in Figure 2-10:

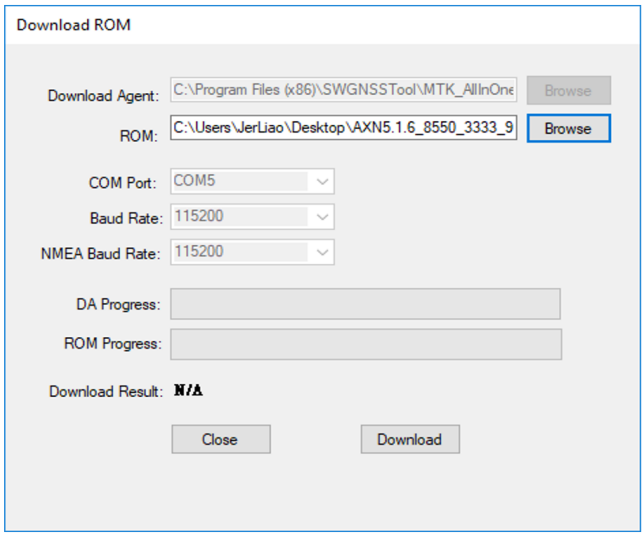


Figure 2-10: Download ROM Dialog for XA11xx and XM11xx

- **Download Agent**: choose a proper download agent binary file corresponding to the model of the GNSS module.

Note: Once the GNSS tool is installed, the related DA files will be stored in the default install directory.

- **ROM**: choose desired firmware file to download.
- **COM Port**: specify the COM port which connects to the GNSS module.
- **Baud Rate**: specify the baud rate of the COM port above for ROM downloading.
- **NMEA Baud Rate**: Specify the baud rate of the COM port for NMEA output. For example, if the baud rate is 115200bps for NMEA output before downloading, then choose 115200 here.

Click the **Download** button to start downloading. Download Result will show "Pass" or "Fail", depending on whether the download was successful or not.

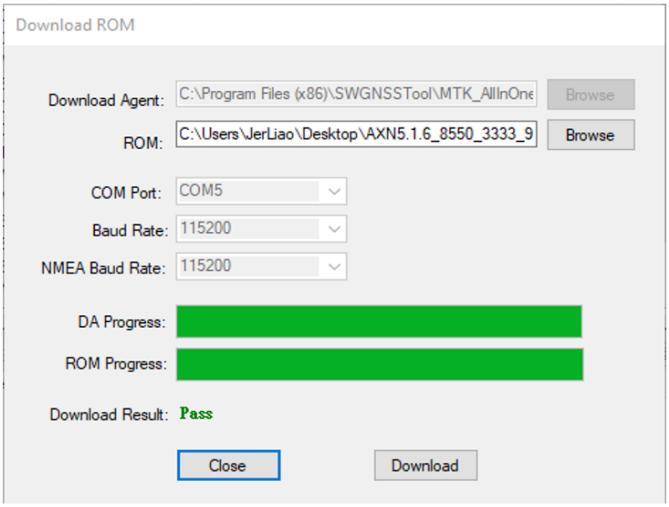


Figure 2-11: Download Result for XA11xx and XM11xx

For XA12xx and XM12xx

The Download ROM dialog for XA12xx and XM12xx modules is shown in Figure 2-12:

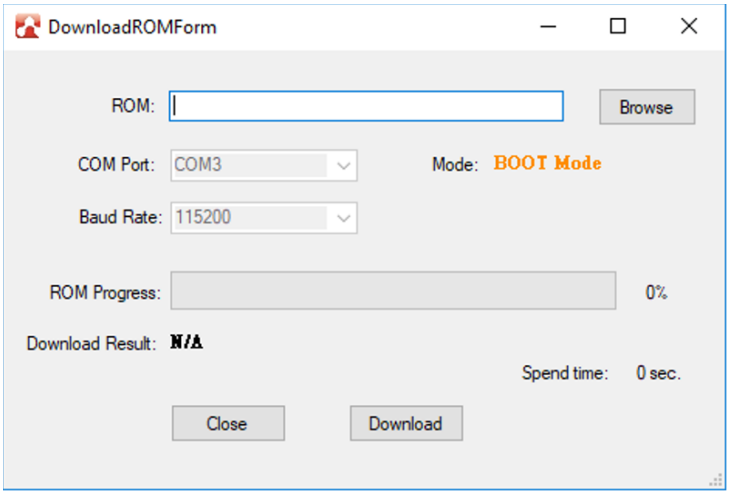


Figure 2-12: Download ROM Dialog for XA12xx and XM12xx

- **ROM**: choose desired firmware file to download.
- **COM Port**: specify the COM port which connects to the GNSS module.
- **Baud Rate**: specify the baud rate of the COM port above for ROM downloading.
- **Mode**: mode (User Mode or Boot Mode) is automatically determined by the tool.

Click the **Download** button to start downloading. Download Result will show "Pass" or "Fail", depending on whether the download was successful or not. When the update is completed, the module will automatically restart in User Mode. If you are in Boot Mode, you have to press the reset button manually.

Note that regardless of mode, when connected via USB, you must reconnect to read NMEA normally.

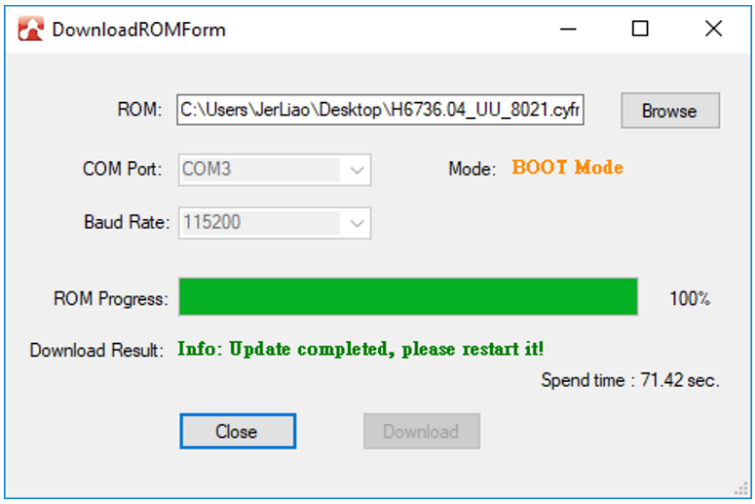


Figure 2-13: Download Result for XA12xx and XM12xx

For XP2210 and XS1110

The Download ROM dialog for XP2210 and XS1110 modules is shown in Figure 2-14.

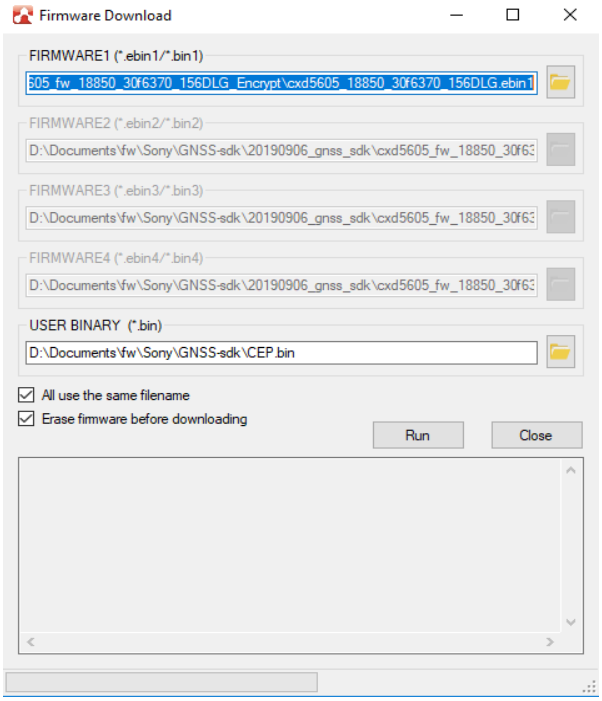
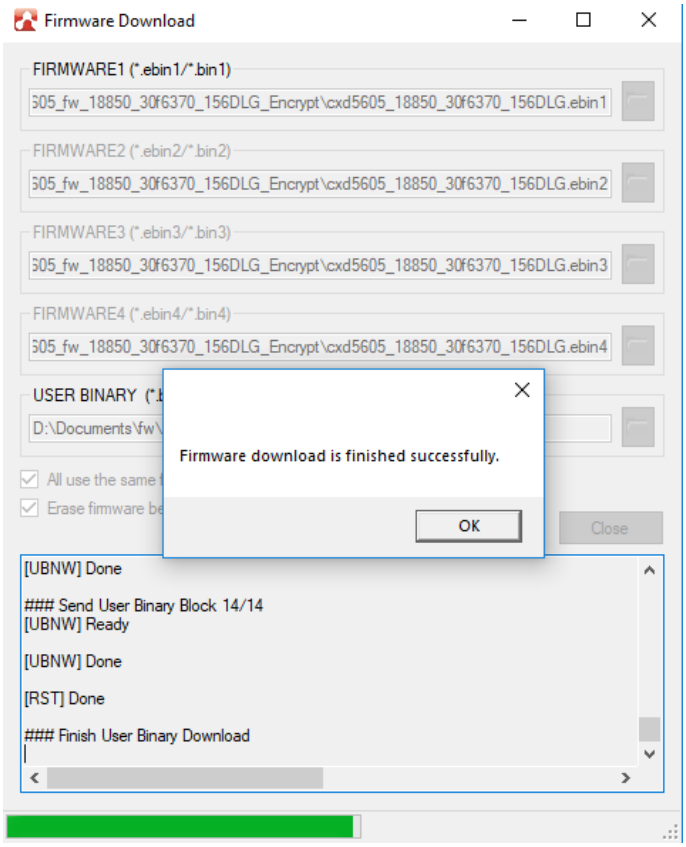


Figure 2-14: Download ROM Dialog (For XP2210 and XS1110)

- **FIRMWARE1**: choose desired first firmware file to download.
- **FIRMWARE2**: choose desired second firmware file to download.
- **FIRMWARE3**: choose desired third firmware file to download.
- **FIRMWARE4**: choose desired fourth firmware file to download.
- **USER BINARY**: choose desired bin file to download.
- **All use the same filename**: if all of the four firmware have the same filenames and file paths, you can select all of them at the same time by selecting the first firmware and then selecting this check box.
- **Erase firmware**: Select this if you want to upgrade the firmware. If the module is in BOOT mode, there is no need to select this.

Click the **Run** button to start downloading. Download Result will show "Pass" or "Fail", depending on whether the download was successful or not. When the update is completed, the module will automatically restart in User Mode. If you are in Boot Mode, you have to press the reset button manually.


Firmware Download
FIRMWARE1 (*.ebin1/*.bin1)
305_fw_18850_30f6370_156DLG_Encrypt\cxd5605_18850_30f6370_156DLG.ebin1
FIRMWARE2 (*.ebin2/*.bin2)
305_fw_18850_30f6370_156DLG_Encrypt\cxd5605_18850_30f6370_156DLG.ebin2
FIRMWARE3 (*.ebin3/*.bin3)
305_fw_18850_30f6370_156DLG_Encrypt\cxd5605_18850_30f6370_156DLG.ebin3
FIRMWARE4 (*.ebin4/*.bin4)
305_fw_18850_30f6370_156DLG_Encrypt\cxd5605_18850_30f6370_156DLG.ebin4
USER BINARY
D:\Documents\fw\
All use the same
Erase firmware be
Close
Firmware download is finished successfully.
OK
[UBNW] Done
Send User Binary Block 14/14
[UBNW] Ready
[UBNW] Done
[RST] Done
Finish User Binary Download

Firmware Version

Clicking the FW Ver. button allows you to check the firmware version of the Development Kit (when the PC and Development Kit are connected).

Figure 2-15: Firmware Version Button

Information is then displayed in the command window.

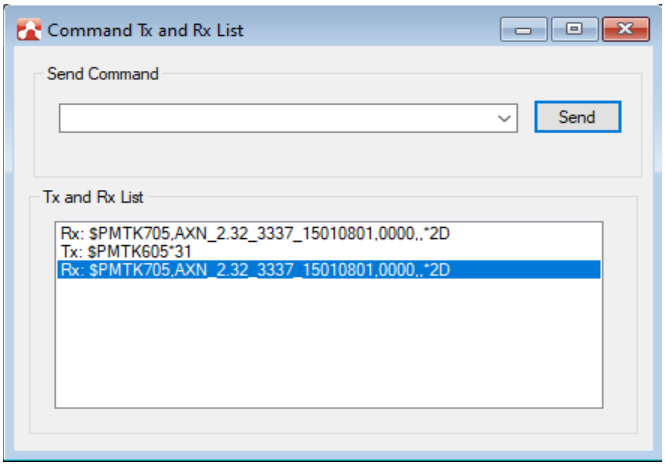


Figure 2-16: Firmware Version Information Example for XM / XA11xx

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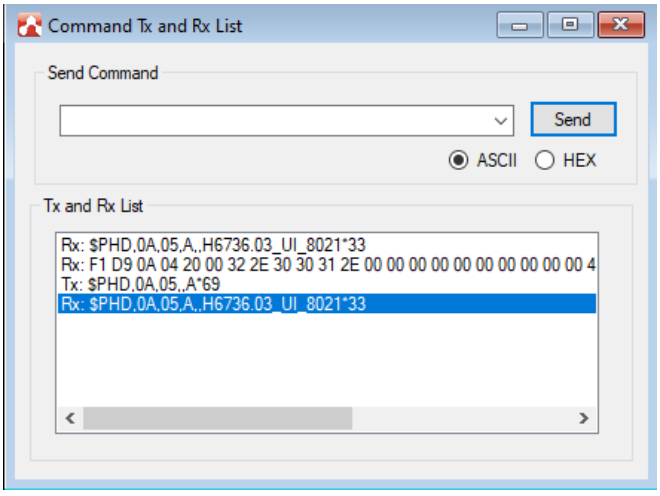
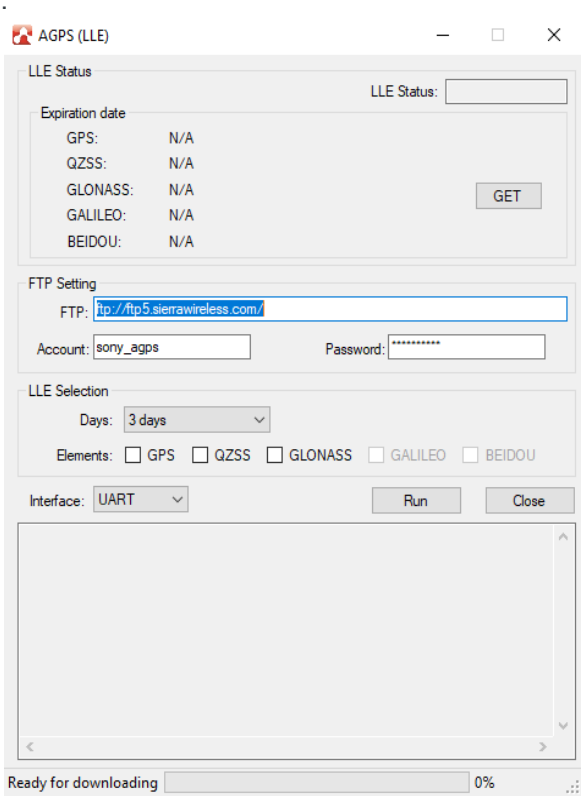


Firmware Version Information Example for XM / XA12xx



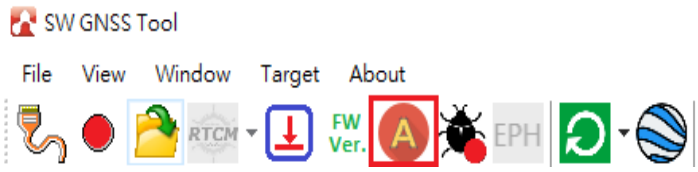
Firmware Version Information Example for XP2210 / XS1110

Download AGNSS Data

This function obtains the desired period of AGNSS file from Sierra Wireless and downloads it to the module to reduce the TTFF time.

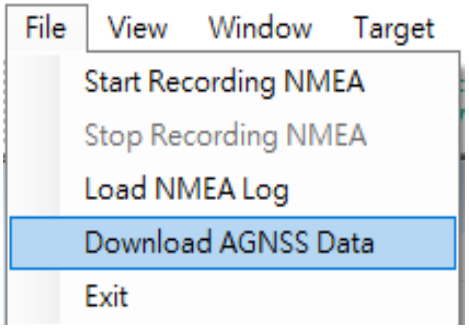
To download AGNSS data:

1. Click the AGNSS button from the toolbar:



or

2. Click **Download AGNSS Data** from the **File** dropdown menu:



Once Download AGNSS Data or the AGNSS button is clicked, a dialog will pop up allowing you to input the AGNSS FTP settings and select the desired period of AGNSS data. Click **Download** or **Start** (for AGNSS) button to start downloading.

Note: For the XM / XA12xx series, you can do the TTFF test in the AGNSS window.

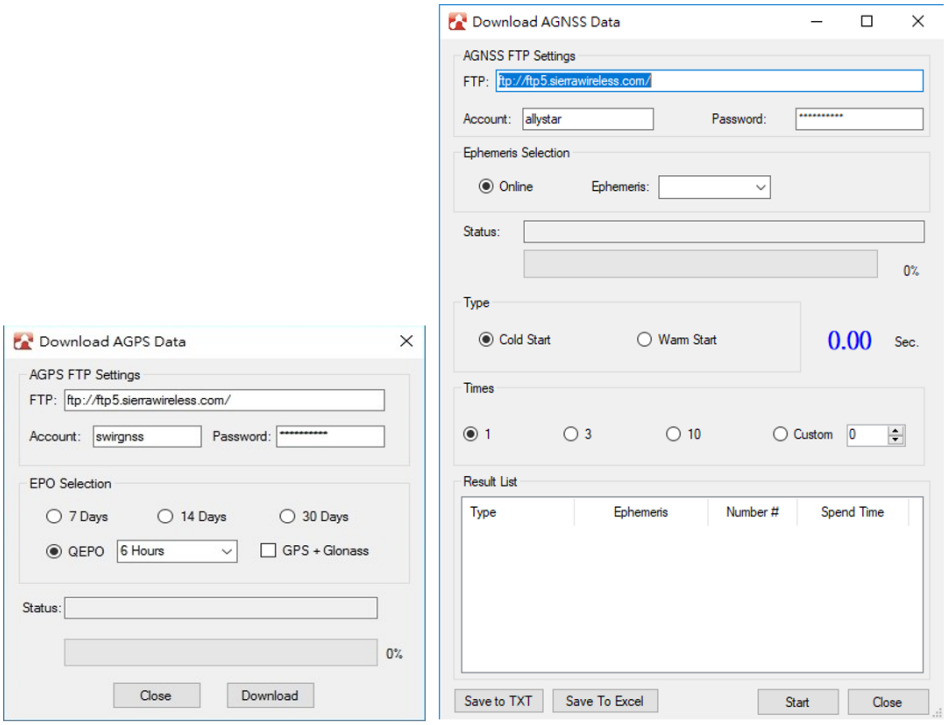


Figure 2-17: Download AGNSS Data Dialog Boxes

Select the desired period of LLE data then click **Run** to start downloading.

*Note: Get the expiration date by clicking the **GET** button.*

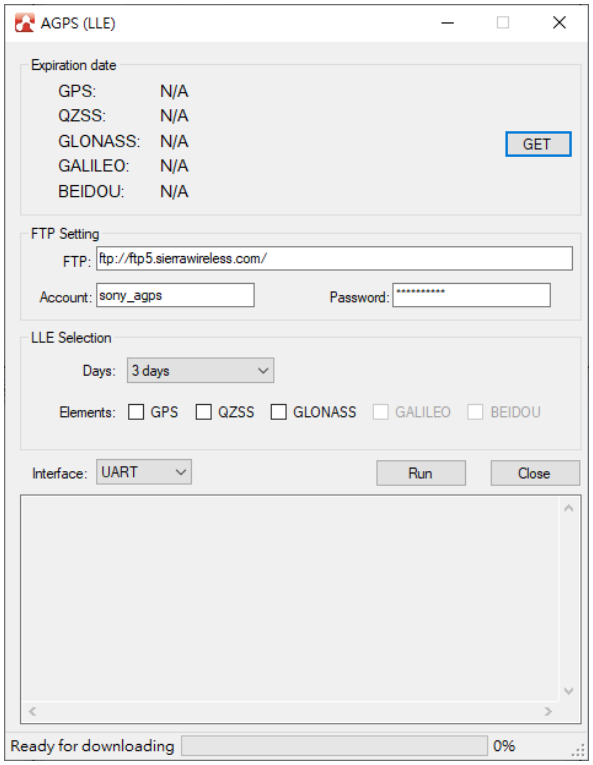


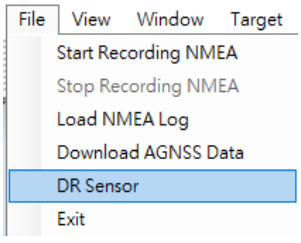
Figure 2-18: Download LLE Data Dialog

DR Sensor

Note: This feature is only available on the XP2210.

This feature allows you to get the DR sensor details. Clicking on this menu item will bring out a window with DR Sensor information.

To launch, click **DR Sensor** from the **File** dropdown menu:



The DR Sensor window is then displayed, as shown in Figure 2-19

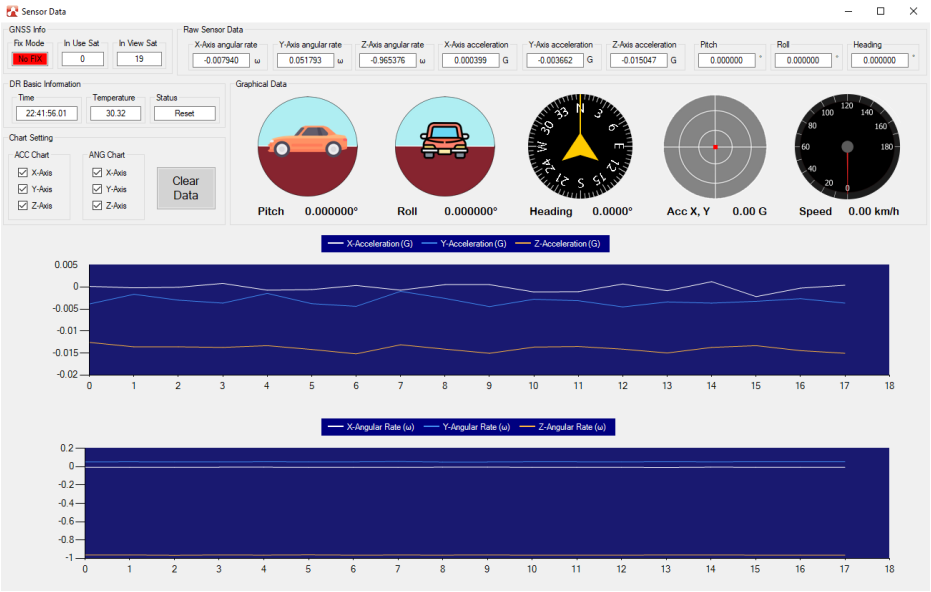


Figure 2-19: DR Sensor Window

- GNSS Info: displays the GNSS information.
- Raw Sensor Data: displays the DR sensor data. Pitch, roll, and heading only appears after calibration is completed.
- DR Basic Information: displays basic information about the DR sensor.
- Chart Setting: sets the information to be displayed on the chart.
- Graphical Data: graphical DR sensor data
- Charts: top chart shows the change in acceleration, while the bottom chart shows the change in angular acceleration.

Note: The chart data is saved to "YourDocument/SWGNSSTool/UDR".

Recording Debug Message

This feature allows you to record debug messages.

Click the debug log button from the toolbar to enter debug mode and start recording.

Figure 2-20: Debug Button

Once the debug button is clicked, a dialog will pop up allowing you to save the log file. Click the **Save** button and the debug button will then change to , to show that recording is in progress.

To stop recording, click the debug button again.

EPH

Note: This feature is only available on the XA12xx and XM12xx.

The ephemeris runtime flash saving (EPH) feature allows you to reduce TTFF time. EPH keeps real-time read-write satellite data (depending on how long the satellite data received is). Click the EPH button and select yes to start this feature.

This feature does not clear the ephemeris after powering off.

Figure 2-21: EPH Button

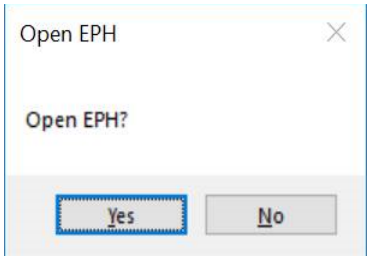


Figure 2-22: Start EPH

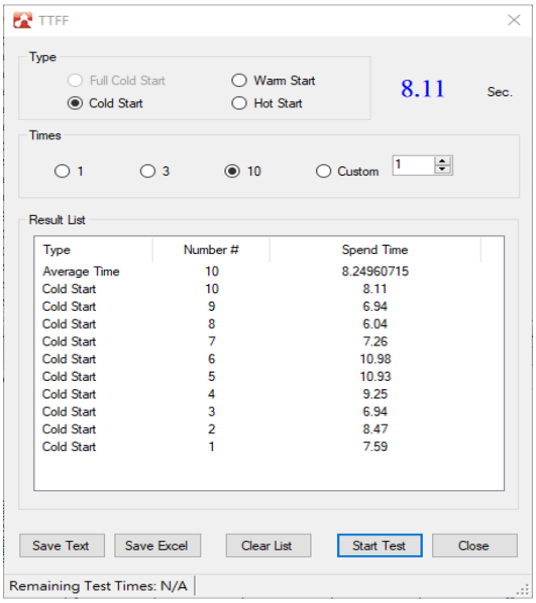


Figure 2-23: TTFF after EPH has been Started

This feature increases the read and write of the flash memory, which could possibly reduce the life of the flash memory.

Simple Restart

This function makes it easier for you to restart the module. Click the Simple Restart button to use this feature.

Figure 2-24: Simple Restart Button

*Note: **Stop Positioning** is only supported in XP2210 and XS1110 modules.*

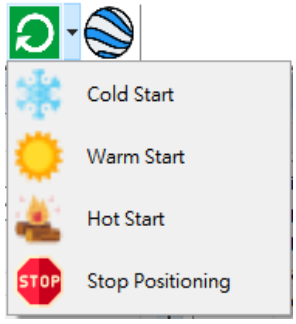


Figure 2-25: Simple Restart Options

- Click the **Cold Start** button to perform a cold start.
- Click the **Warm Start** button to perform a warm start.
- Click the **Hot Start** button to perform a hot start.
- Click **Stop Positioning** to enable idle mode. Note that this function is only supported in XP2210 and XS1110 modules.

Google Earth

Note: Install Google Earth to enable this feature.

Using this feature allows you to display the current location via Google Earth. Click the Google Earth button to start using this feature.

Figure 2-26: Google Earth Button

The Google Earth Setting dialog appears to let you set up the number of points size, and the point color that would appear as your location markers on Google Earth.

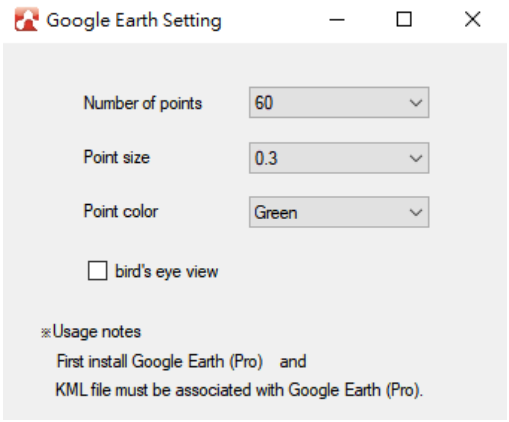


Figure 2-27: Google Earth Setting Dialog

Figure 2-28:

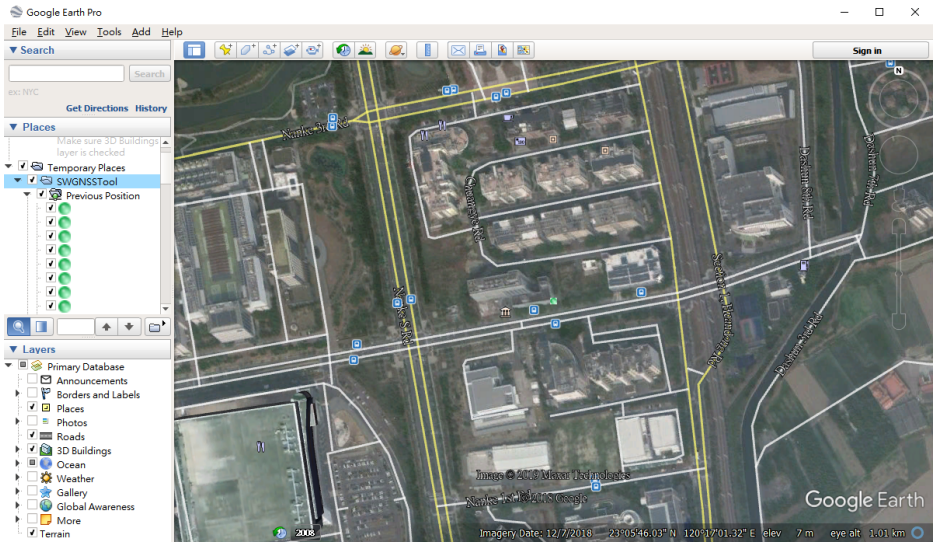


Figure 2-29: Sample Settings Showing Current Location on Google Earth

Exit

Click **Exit** to close the program.

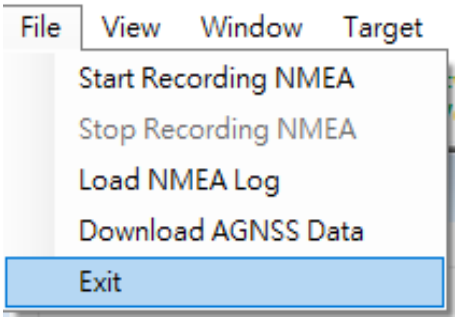


Figure 2-30: Exit Menu

View Menu

Command Tx and Rx List

Clicking on this menu item displays the Command window.

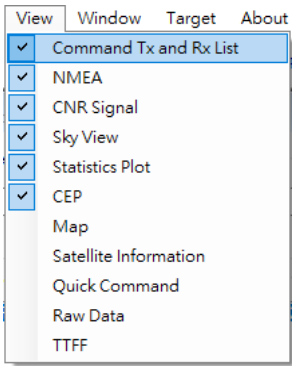


Figure 2-31: Command Tx and Rx List Menu

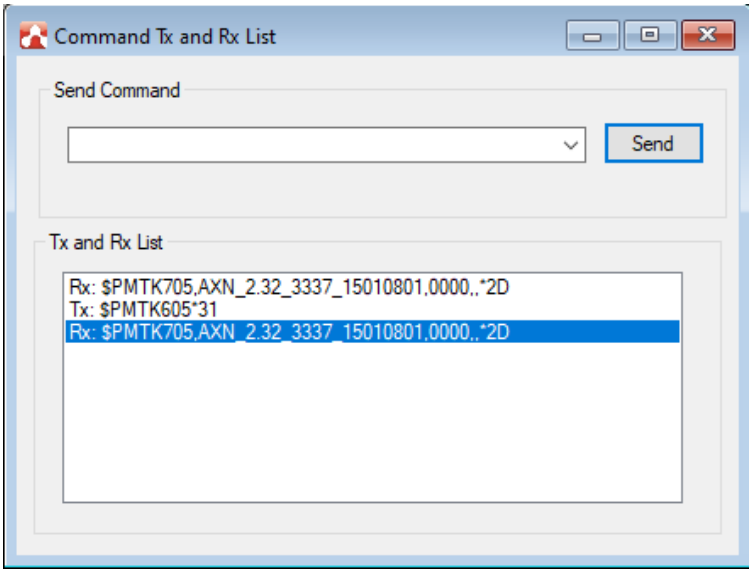


Figure 2-32: Command Window

You can execute PMTK (for XA11xx and XM11xx), PHD and HEX (for XA12xx and XM12xx), AT (for XS1110 and XP2210) or custom commands in the Command window. It also displays information received from the COM or USB port, excluding standard NMEA sentences.

When entering a HEX command (for XA12xx or XM12xx modules), add a blank in the middle of each byte. There is also no need to input the checksum.

Note: The Hex command is only available for the XM / XA12xx series. Refer to the AirPrime XA12xx and XM1210 Software User Guide for more details regarding HEX commands.

NMEA

Clicking this menu item displays a window with NMEA information. Please refer to the figures below:

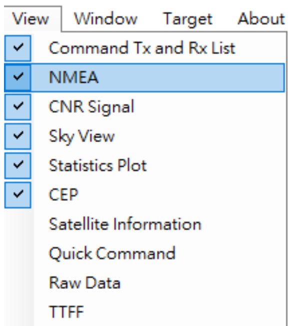


Figure 2-33: View/NMEA Menu

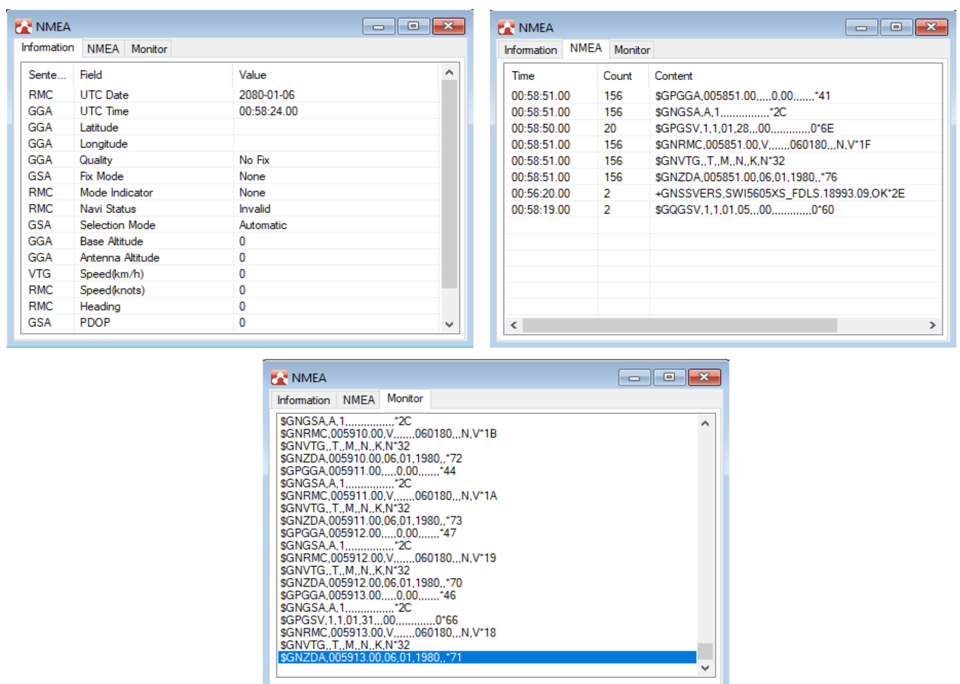


Figure 2-34: NMEA Information Tabs

- **Information List**: displays the location information.
- **NMEA List**: displays all types of NMEA sentences received from the COM or USB port.

- **Monitor**: displays the last 500 NMEA sentences from the COM or USB port. Right-click on the **Monitor** to access the following menu:

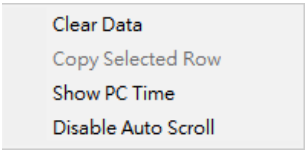


Figure 2-35: Monitor Menu Options

- **Clear Data**: clears each line of NMEA in the Monitor tab.
- **Copy Selected Row**: copies the selected line. This is displayed in gray when disabled. To enable, click **Disable auto scroll**.
- **Show PC Time**: shows the current PC UTC time before the NMEA sentence
- **Disable Auto Scroll:** disables auto scroll. Click this option to enable it.

CNR Signal

Clicking this menu item displays the CNR Signal window where you can get information about the constellation, PRN and CNR of every satellite.

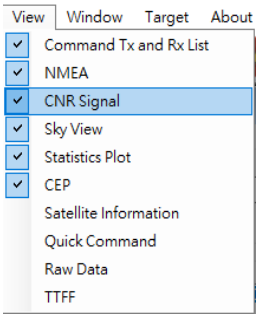


Figure 2-36: CNR Signal Menu

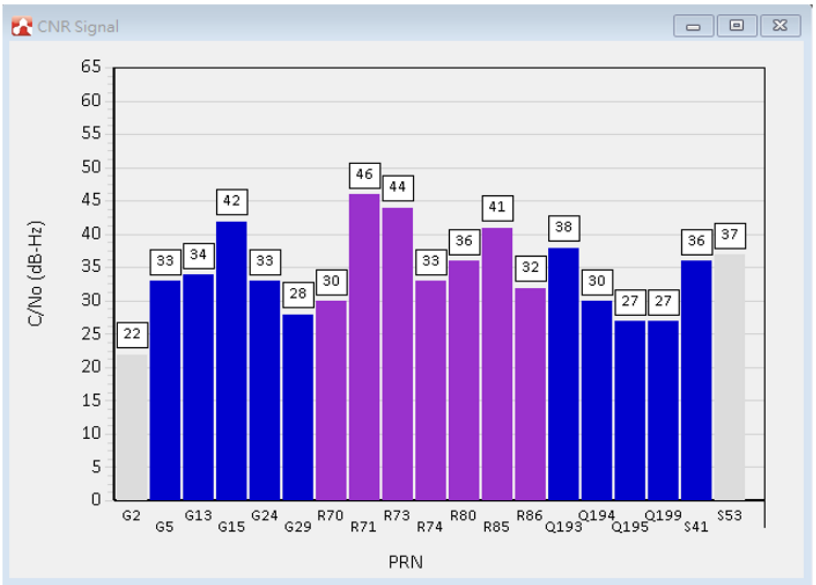


Figure 2-37: CNR Signal Window (GPS+GLONASS)

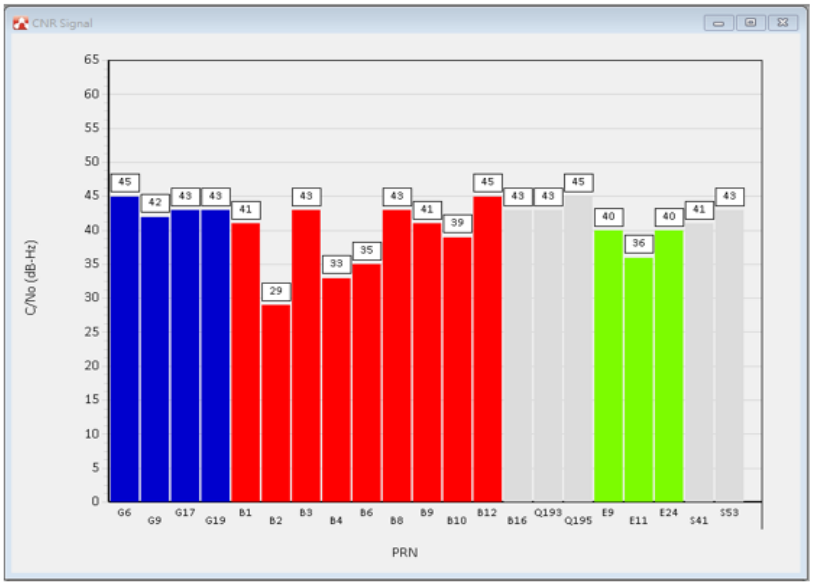


Figure 2-38: CNR Signal Window (GPS+Beidou+Galileo)

Data for all satellites in use are colored, while those not in use are in gray.

Table 2-1: Signal Window Summary

First Letter	G	R	B	Q	E	S	
Color	Blue	Purple	Red	Blue	Green	Blue	Gray
Satellite System	GPS	GLONASS	Beidou	QZSS	Galileo	SBAS	No Fix

Sky View

Clicking this menu item displays a window with a sky view of satellites.

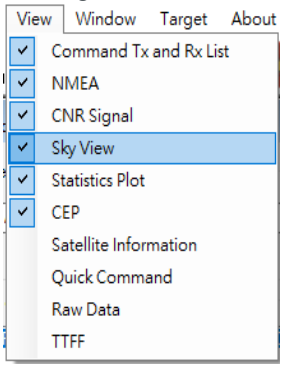


Figure 2-39: Sky View Menu

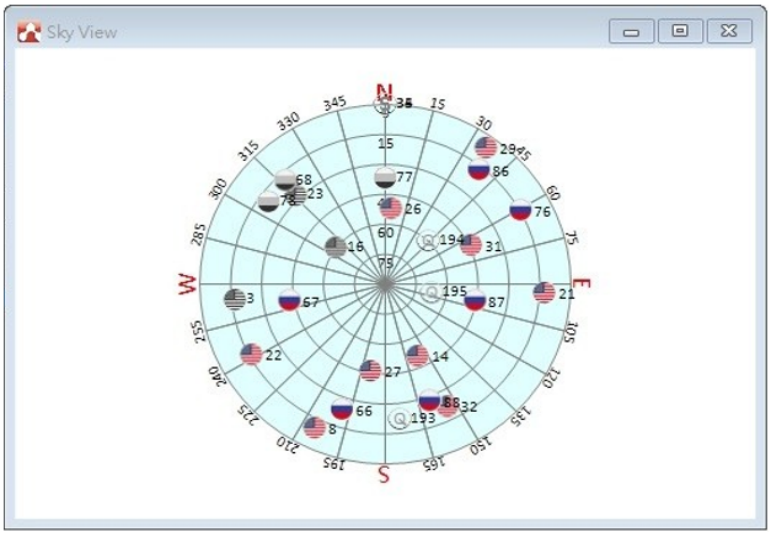


Figure 2-40: Sky View Window

You can get information about the constellation, azimuth, elevation, and PRN of every satellite from this window. All satellites in use will be colored, while those not in use will appear in gray.

Statistics Plot

Clicking this menu item displays the Statistics window.

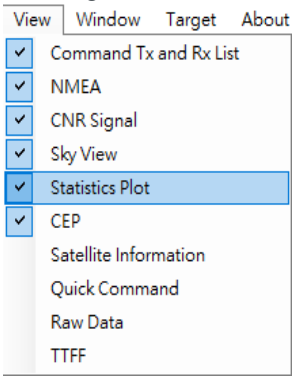


Figure 2-41: Statistics Plot Menu

The Statistics window contains the following eight tabs:

- **Speed**: plots the relation between speed and time.
- **Acceleration**: plots the relation between acceleration and time.
- **CNR**: plots the relation between maximum CNR and minimum CNR. The blue line represents the maximum CNR and the red line represents the minimum CNR at that time.
- **Fix Quality**: plots the relation between fix quality and time.
- **SV**: plots the number of in-use and in-view space vehicle with time.
- **DOP**: plots the relation between PDOP/HDOP/VDOP and time.
- **Vertical**: plots the relation between height and time.

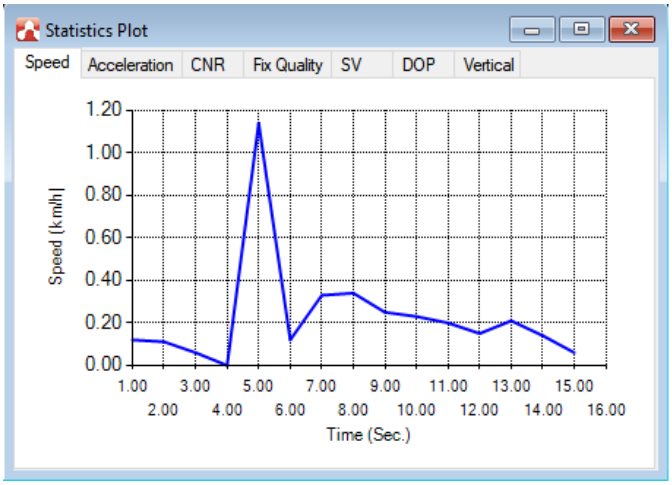


Figure 2-42: Speed Tab

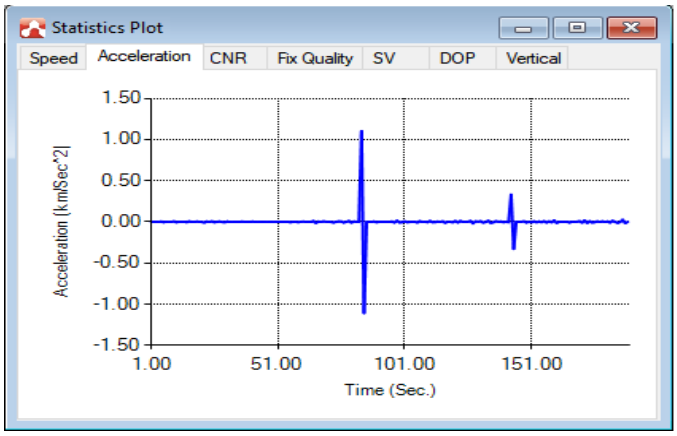


Figure 2-43: Acceleration Tab

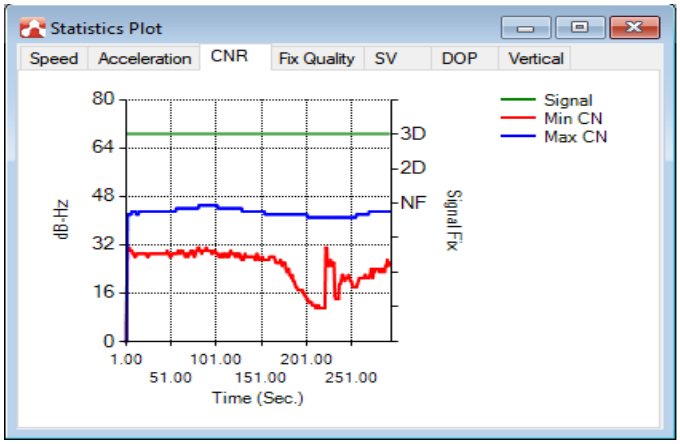


Figure 2-44: CNR Tab

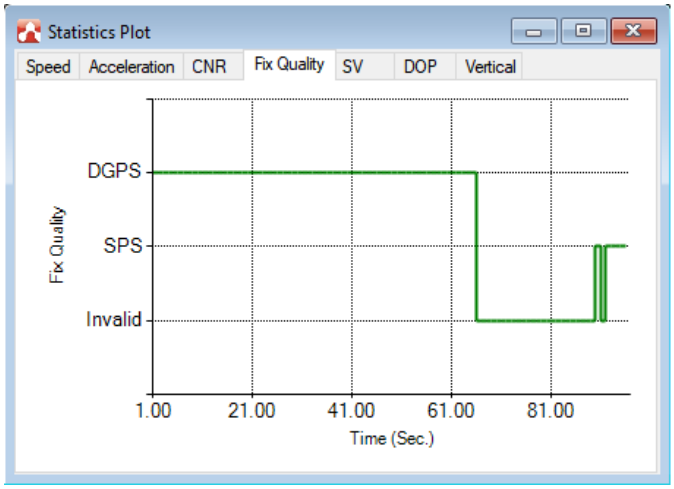


Figure 2-45: Fix Quality Tab

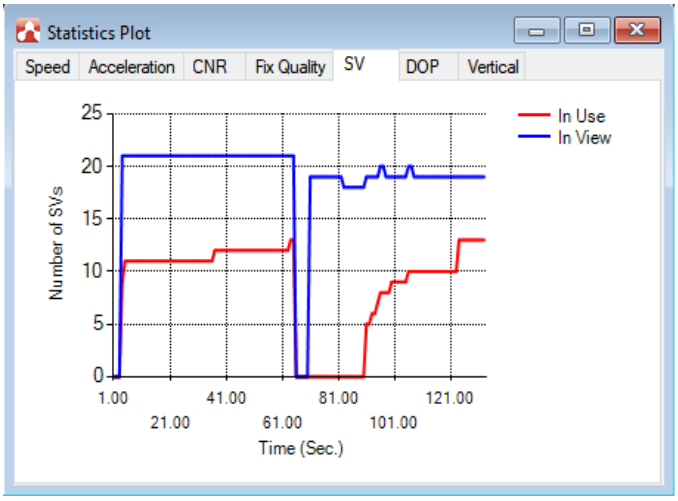


Figure 2-46: SV Tab

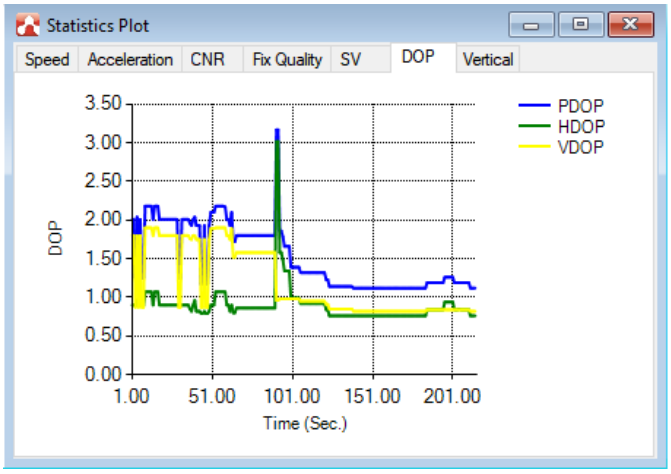


Figure 2-47: DOP Tab

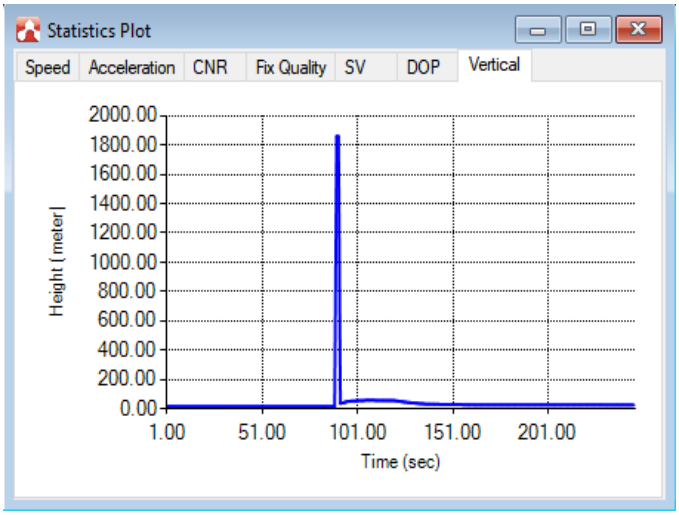


Figure 2-48: Vertical Tab

The Statistics window supports zooming with a mouse wheel (moving the mouse wheel up zooms in, and moving the mouse wheel down zooms the chart back down to its original scale); and also supports tooltips when disconnected and the mouse pointer is placed along the line.

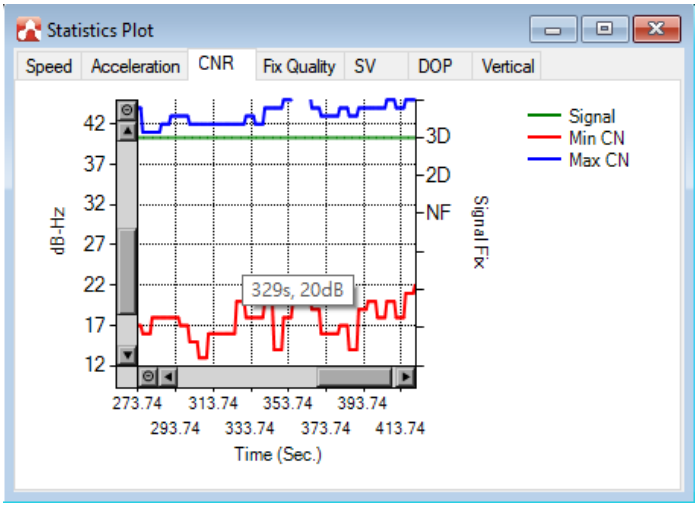


Figure 2-49: Zooming and Displaying Tooltips

*Note: Charts will only display the latest 30 minutes of data. The complete data is stored in the **Documents/SWGNSSTool/Chart/**, in .csv format, once the connection starts.*

CEP

Clicking this menu item displays the CEP window, which can calculate CEP (Circular Error Probable) in real-time or from a historical position.

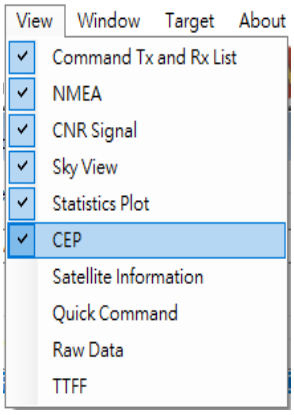


Figure 2-50: CEP Menu

The CEP is defined as the radius of a circle, centered about the mean, whose boundary is expected to include the landing points of 50% of the rounds.

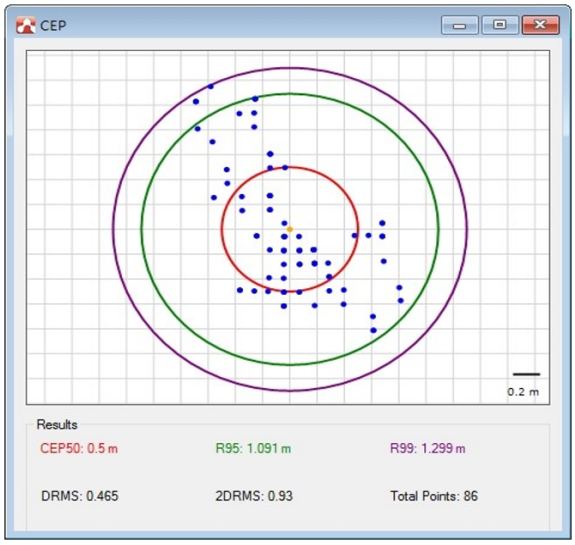
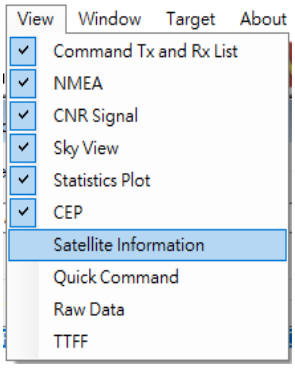


Figure 2-51: CEP Window

Satellite Information

Clicking on this menu item brings out the satellite information window.



The satellite information windows display the following data:

- GNSS System
- PRN
- Elevation
- Azimuth
- CNR

Quick Command

Note: This feature is only available on the XA12xx, XM12xx, XP2210, and XS1110.

Clicking on this menu item displays the Quick Command window.

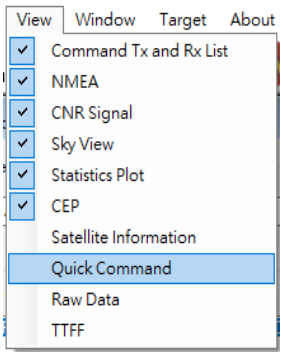


Figure 2-52: Quick Command Menu

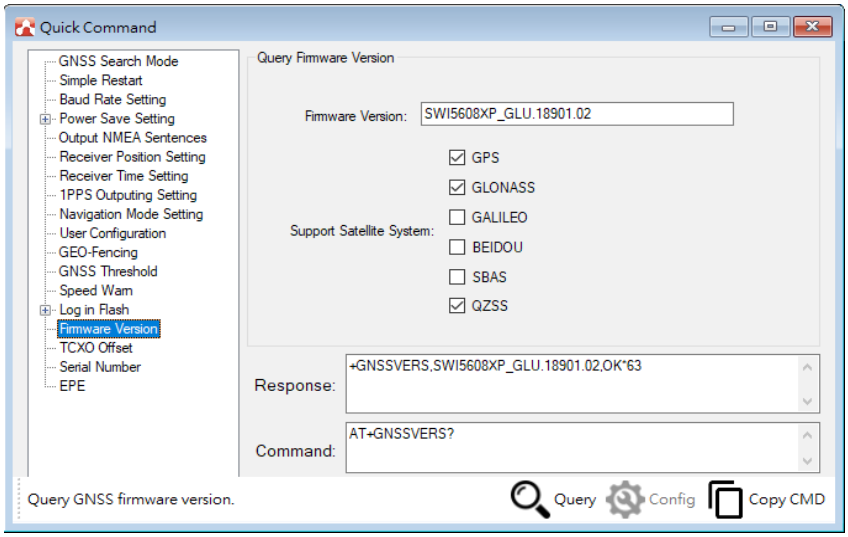


Figure 2-53: Quick Command Window

This feature reduces the time to query and enter commands. For detailed instructions of the commands, refer to the Software User Guide of each supported module.

For XA12xx and XM12xx, click **Send** to change or query the current configuration. The command text box will display the query or configured command.

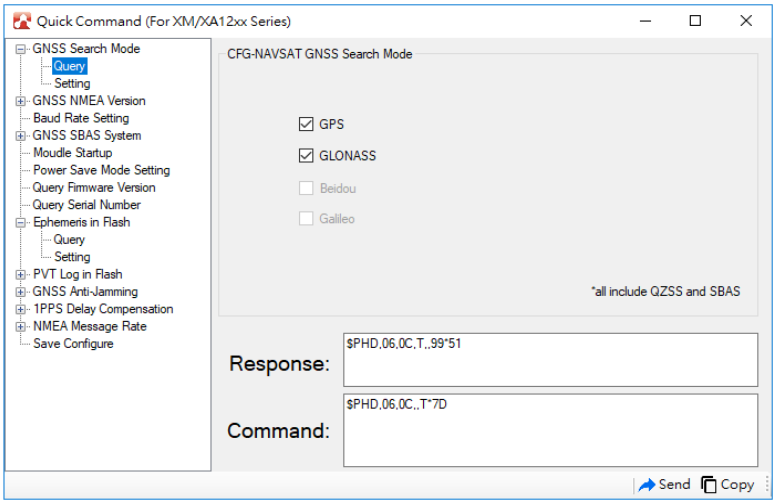


Figure 2-54: Quick Command Window for XA12xx and XM12xx

For XP2210 and XS1110, click **Query** to query the configuration or **Config** to configure the current configuration. The command text box will only display the configured command.

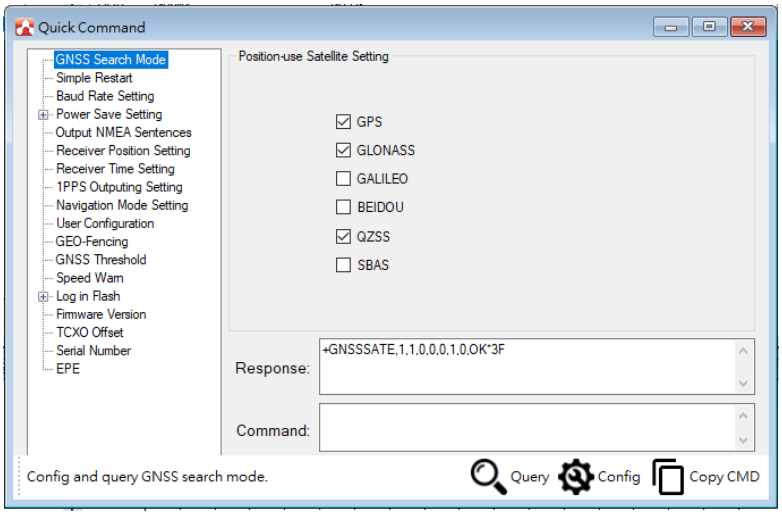


Figure 2-55: Quick Command Window for XP2210 and XS1110

Raw Data

Clicking this menu item displays the Raw Data window.

If your firmware supports output of raw data, you can observe the raw data of satellites with this function.

For XA11xx and XM11xx

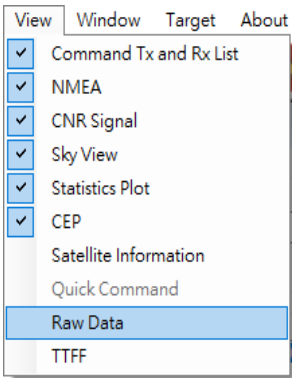


Figure 2-56: Raw Data Menu for XA11xx and XM11xx

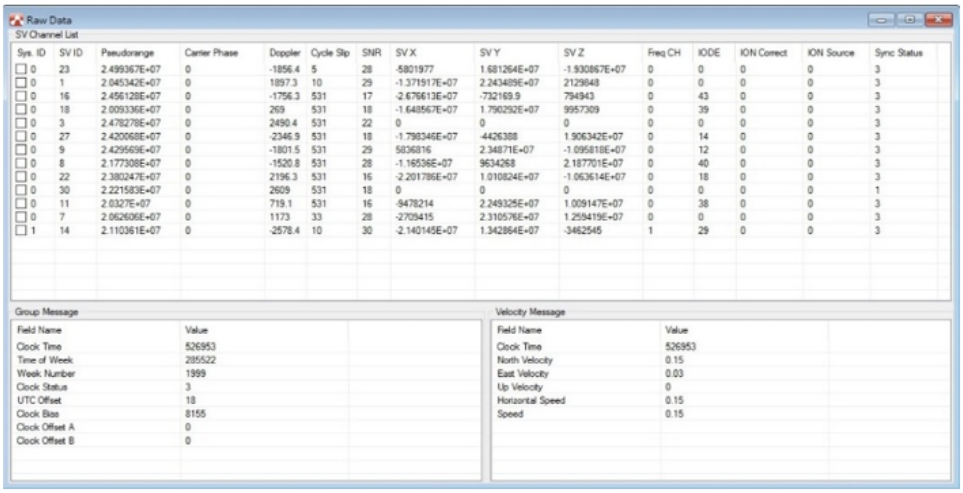


Figure 2-57: Raw Data for XA11xx and XM11xx

For XP2210 and XS1110

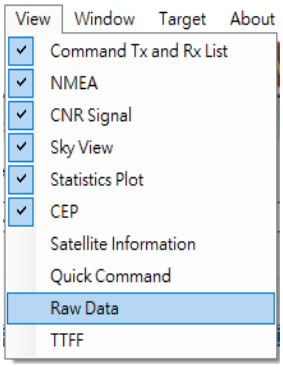
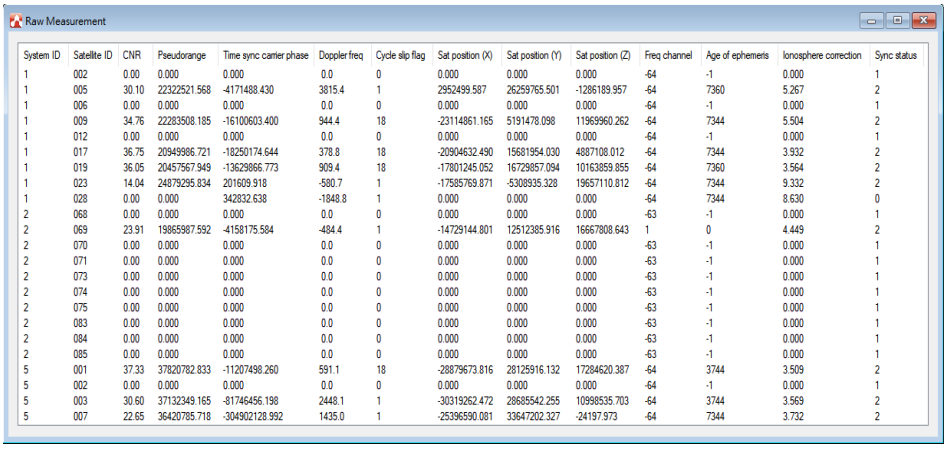


Figure 2-58: Raw Data Menu for XP2210 and XS1110



System ID	Satellite ID	CNR	Pseudorange	Time sync carrier phase	Doppler freq	Cycle slip flag	Sat position (X)	Sat position (Y)	Sat position (Z)	Freq channel	Age of ephemeris	Ionosphere correction	Sync status
1	002	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-64	-1	0.000	1
1	005	30.10	22322521.568	-4171488.430	3815.4	1	2952499.587	26259765.501	-1286189.957	-64	7360	5.267	2
1	006	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-64	-1	0.000	1
1	009	34.76	22283508.185	-16100603.400	944.4	18	-23114861.165	5191478.098	11969960.262	-64	7344	5.504	2
1	012	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-64	-1	0.000	1
1	017	36.75	20949986.721	-18250174.644	378.8	18	-20904632.490	15681954.030	4887108.012	-64	7344	3.932	2
1	019	36.05	20457567.949	-13629866.773	909.4	18	-17801245.052	16729857.094	10163859.855	-64	7360	3.564	2
1	023	14.04	24879295.834	201609.918	-580.7	1	-17585769.871	-5308935.328	19657110.812	-64	7344	9.332	2
1	028	0.00	0.000	342832.638	-1848.8	1	0.000	0.000	0.000	-64	7344	8.630	0
2	068	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	069	23.91	19865987.592	-4158175.584	-484.4	1	-14729144.801	12512385.916	16667808.643	1	0	4.449	2
2	070	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	071	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	073	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	074	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	075	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	083	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	084	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
2	085	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-63	-1	0.000	1
5	001	37.33	37820782.833	-11207498.260	591.1	18	-28879673.816	28125916.132	17284620.387	-64	3744	3.509	2
5	002	0.00	0.000	0.000	0.0	0	0.000	0.000	0.000	-64	-1	0.000	1
5	003	30.60	37132349.165	-81746456.198	2448.1	1	-30319262.472	28685542.255	10998535.703	-64	3744	3.569	2
5	007	22.65	36420785.718	-304902128.992	1435.0	1	-25396590.081	33647202.327	-24197.973	-64	7344	3.732	2

Figure 2-59: Raw Data for XP2210 and XS1110

TTFF

Clicking this menu item displays the TTFF window.

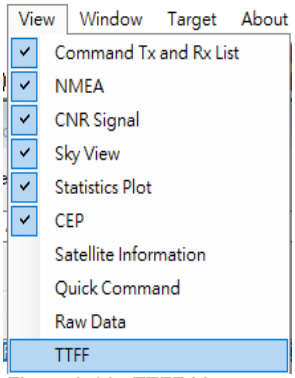


Figure 2-60: TTFF Menu

TTFF (Time to First Fix) has four types of tests including "Full Cold Start" (only available on the XA11xx and XM11xx), "Warm Start", "Cold Start" and "Hot Start". You can select the desired type and times to implement a test procedure. The test results will be displayed in the list and can be saved as a text or Excel file (Microsoft Excel should already be installed in the PC).

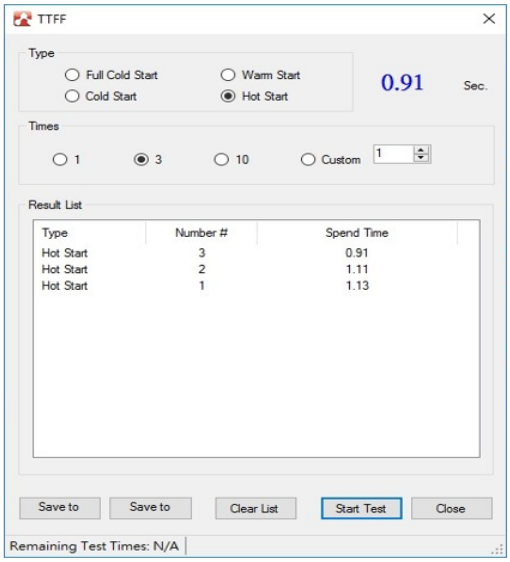


Figure 2-61: TTFF Window Example

Note: The option for a Full Cold Start test is disabled when using an XA12xx or XM12xx module.

Arrangement of Windows

This program contains many windows for various functions. You can arrange the window positions and sizes yourself, or use the arrangements provided.

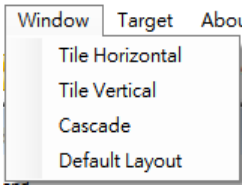


Figure 2-62: Window Menu

Refer to the following figures for examples of the different window views.

1. Tile Horizontal:

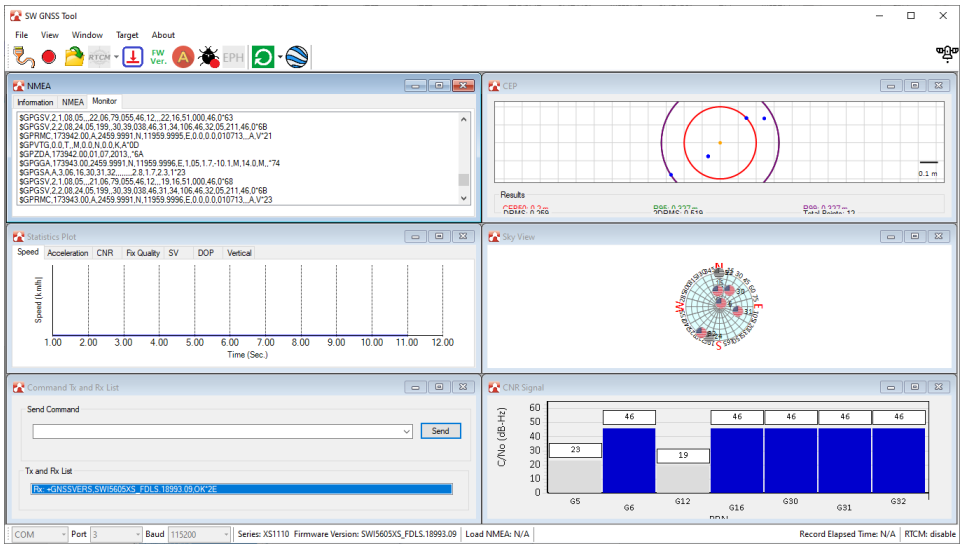


Figure 2-63: Tile Horizontal

2. Tile Vertical:

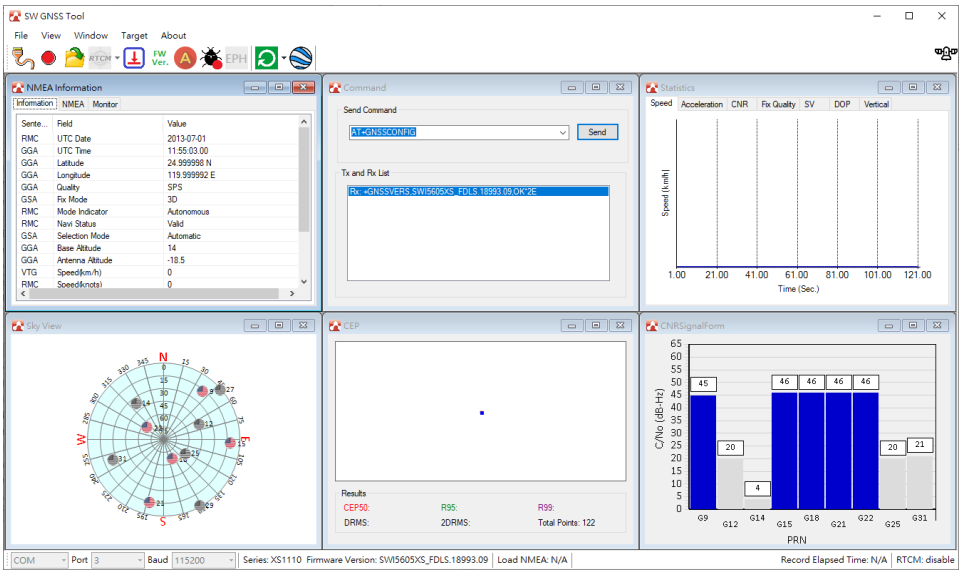


Figure 2-64: Tile Vertical

3. Cascade:

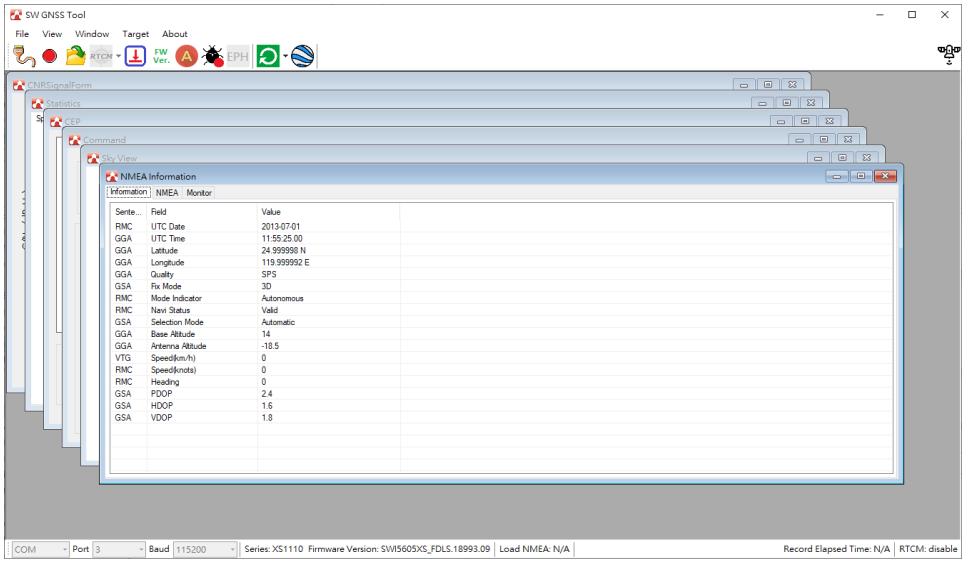


Figure 2-65: Cascade

4. Default Layout:

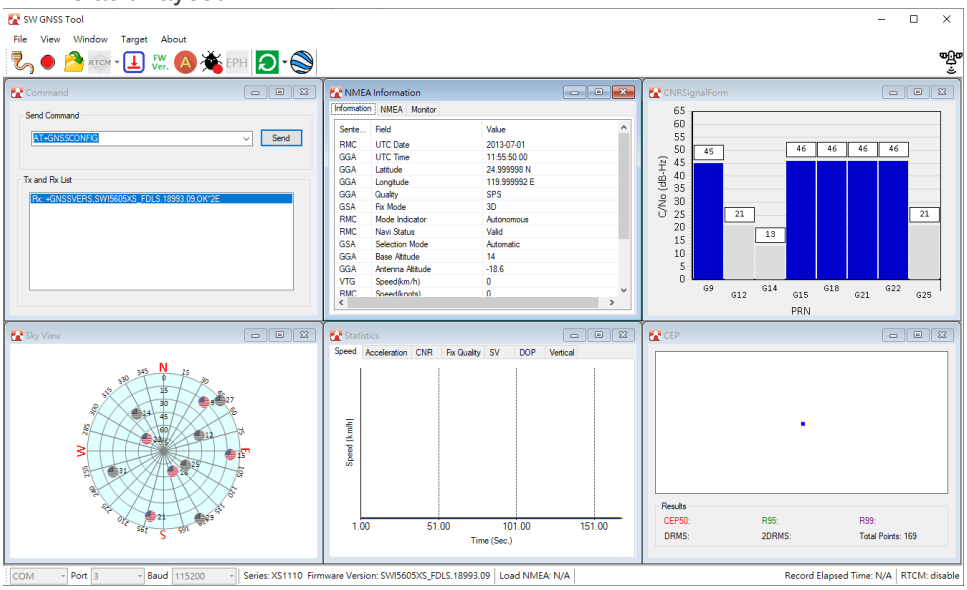


Figure 2-66: Default Layout

Target Menu

Target Series

This function is only used when the GNSS Tool does not recognize the correct model. Under normal conditions, the GNSS Tool can correctly identify the correct model of the connected module.

From the menu tab, click **Target** then select the correct module series.

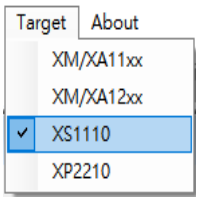


Figure 2-67: Target Menu