1   Introduction

This document describes how to use Teseo2 Firmware Upgrade tool. This application is written in C# using Microsoft Visual Studio 2010 Express and is built with .NET 2.0 Framework. Below the minimum system requirements:

- Windows XP Service Pack 2 or higher;
- .NET 2.0 Framework or higher

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3.1   Revision History

Rev	Date	Author	Notes
1.0	30/10/2015	G. De Angelis	First version

Table 1: Revision history

4   Usage

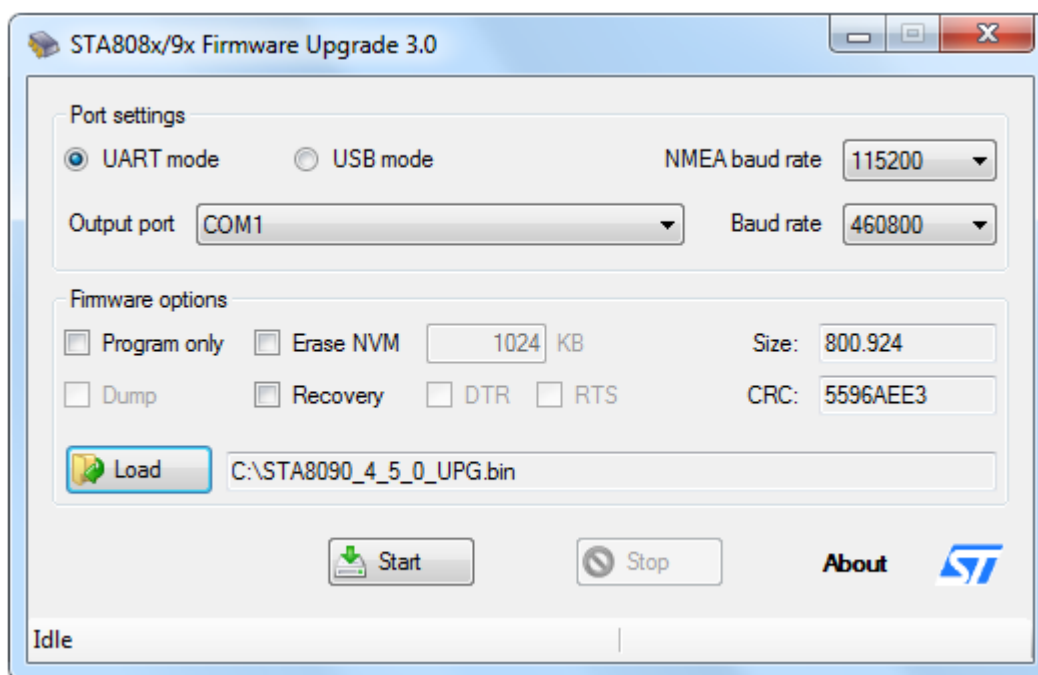In Figure 1 there is the main window of Teseo III Firmware Upgrade tool:

Figure 1: Main window

This tool is used to upgrade Teseo III GNSS firmware. It has two main modes, normal and recovery.

Normal mode is the default upgrade mode; when normal mode is selected, this tool must be used on the NMEA port. It works only if an existing firmware is already running and NMEA port is available. The user must identify this port, configure the tool and start upgrade process.

Recovery mode is enabled using related Firmware option; see paragraph 4.2 for details.
This mode is very useful when the user wants to recover an unstable firmware release or force a firmware upgrade without using NMEA interface. When recovery mode is enabled Teseo III hardware must be powered off or under reset; the user must configure the tool, select binary image and start firmware upgrade process. Only when the process started, user

must switch on the hardware or take it out of reset. This mode works with all Teseo III UART port but it cannot be used in USB mode.

4.1   Port settings option

When you click on UART mode button all COM ports available on your PC will be listed in the Output port box; also, two boxes for the baud rate selection are now selectable.

- **NMEA baud rate**: this is the UART baud rate used to send the FW Upgrade command and start the update process. When "Auto" is selected, the tool tries to automatically detect the baud rate of the select port and use it to send the command;
- **Baud rate**: this is the UART baud rate used to download the new firmware.
- **Output port**: COM port used to update the firmware;

Clicking on USB mode button the software will look for any ST GNSS USB Receiver connected to one of the PC USB port. If no ST GNSS USB Receiver is found, an error message is displayed on status bar. If the tool find a ST GNSS USB Receiver, this is listed in the Output port box (Figure 2).
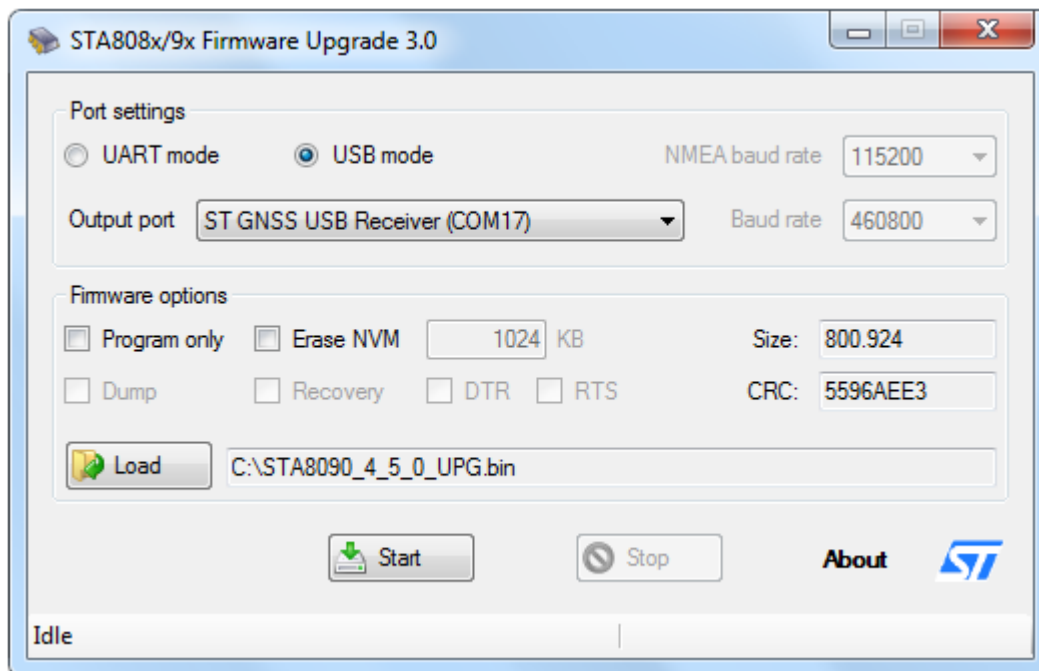

Figure 2: ST GNSS USB Receiver connected

4.2   Firmware options

- **Erase NVM**: check this flag if you want to erase ST proprietary NVM during firmware upgrade process. If this flag is checked, the size of NVM can be entered using the related text box. Value is expressed KB. The default value is 1024;
- **Program only**: check this flag if you don't want to erase program memory before writing new firmware.
- **Dump**: not available;
- **Recovery**: check this flag if you want to enable Recovery mode.

On this windows there are two boxes where information about firmware size and CRC code is displayed; these fields are read-only.

When you configured all options you can push on Load button to load the firmware binary image.

4.3　Upgrade process

When all preliminary steps described above are completed, the firmware upgrade process can be executed by clicking on Start button. A progress bar will be displayed in the status bar. The update process can be stopped by clicking on Stop button.

When upgrade finished a confirmation message is displayed. If the process failed or was stopped by the user, no backup firmware can be executed; the only way to re-install a working firmware is to reset the hardware and start a new upgrade process.

Disclaimer

IMPORTANT NOTICE – PLEASE READ CAREFULLY

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