

User Manual

Getting started with devention DfuSe USB upgrade tool

1. Contents

1. Contents.....	2
2. Introduction	3
3. System requirements	4
4. Package contents	5
5. How to enter program update interface.....	6
5.1 DEVO-12 how to enter program update interface.....	6
5.2 DEVO-8 how to enter program update interface.....	7
5.3 DEVO-6 how to enter program update interface.....	8
6 The installation of devention DfuSe USB upgrade tool	9
6.1 Software installation.....	9
6.2 Hardware installation	9
7. User interface description	13
7.1 Firmware Upgrade Interface	13
7.2 Configuration Upgrade Interface.....	15
7.3 Library Upgrade Interface	16
8. Step-by-step procedures.....	17
9. Revision history.....	18

2. Introduction

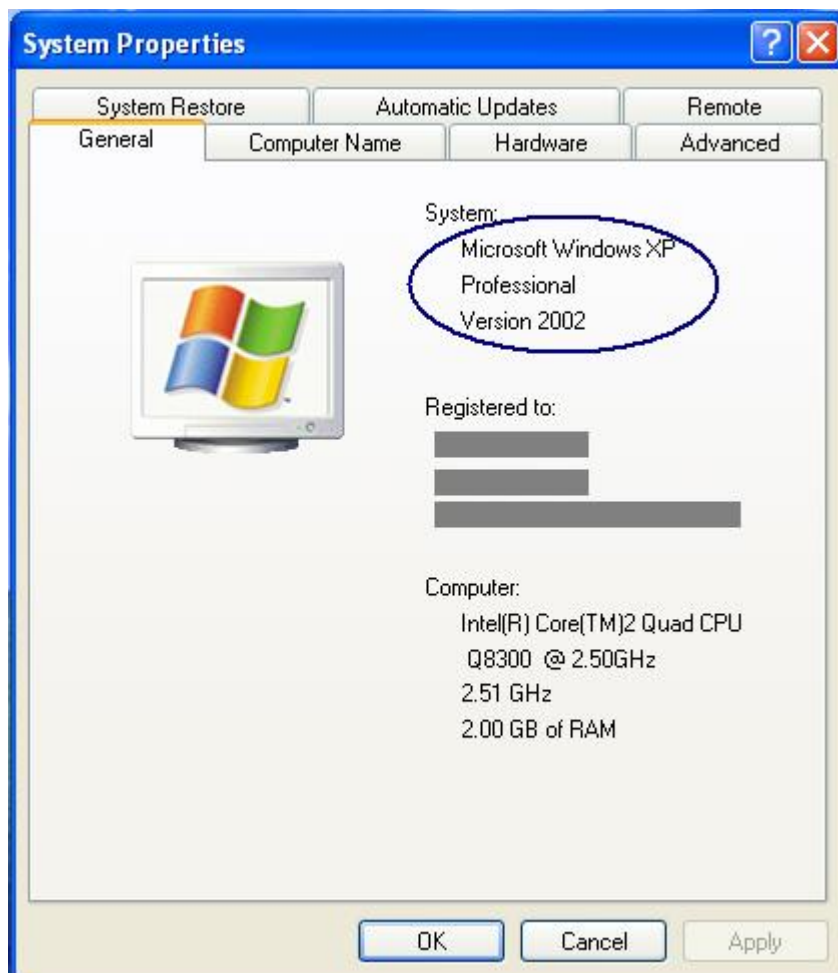
devention DfuSe USB upgrade package includes three parts: Firmware, Configuration, and Library. The Firmware is MCU program based on ARM STM32F series. The Configuration is parameters for each aircraft model. The Library is the used icons and language packages and texts. The tool is used to upgrade the devention 2.4G transmitter's firmware, configuration, and library. This document describes how to install the driver of devention DfuSe USB, and how to install the software and how to use the upgrade tool. The devention DfuSe USB upgrade tool can be downloaded at the official website <http://www.devention.com>.

3. System requirements

In order to use the devention DfuSe USB upgrade tool with the Windows operating system, a recent version of Windows, such as Windows 98SE, Millennium, 2000, XP, or VISTA, must be installed on the PC.

The version of the Windows OS installed on your PC may be determined by right-clicking on the **“My Computer”** icon in the desktop, then clicking on the **“Properties”** item in the displayed PopUpMenu. The OS type is displayed in the **“System properties”** dialog box under the **“System”** label in the **“General”** tabsheet (see **Figure 1**).

Figure 1. System properties dialog box



4. Package contents

The following items are supplied in this package:

Software contents

1. STTube driver consisting of the two following files:
 - **STTub30.sys**: Driver to be loaded for devention transmitter product.
 - **STDFU.inf**: Configuration file for driver.
2. **DevoDfuSe_V1.x_Setup.exe**: Installation file which installs the devention DfuSe USB upgrade tool applications on your computer.

Hardware contents

This tool is designed to work with devention transmitter product which supports the Device Firmware Upgrade via an USB interface. For more details, please visit the devention web site at <http://www.devention.com>.

5. How to enter program update interface

5.1 DEVO-12 how to enter program update interface

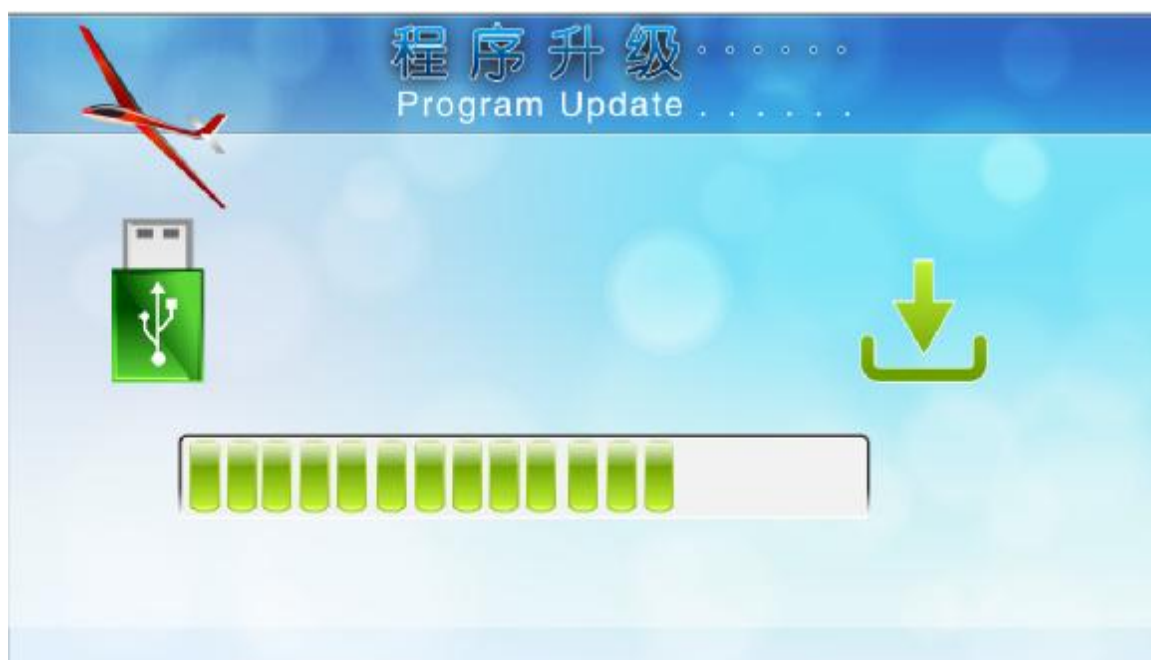
- I Hold the DEVO-12's **TRN** switch and keep it up, when DEVO-12 transmitter is power off (See Figure 2).

Figure 2: TRN switch's position



- I Move **POWER** switch to on. The interface of “**Program Update**” will be shown on TFT LCD (See Figure 3).

Figure 3: The interface of program update



- I Then release the **TRN** switch. DEVO-12 has entered the status of program update.

5.2 DEVO-8 how to enter program update interface

- I Press the DEVO-8's **EXT** key, when DEVO-8 transmitter is power off (See **Figure 4**).

Figure 4: EXT key's position



- I Move **POWER** switch to on. The interface of “**Program Update**” will be shown on TFT LCD (See **Figure 3**).
- I Then release the **EXT** key. DEVO-8 has entered the status of program update.

5.3 DEVO-6 how to enter program update interface

- I Press the DEVO-6's **EXT** key, when DEVO-6 transmitter is power off (See **Figure 5**).

Figure 5: EXT key's position



- I Move **POWER** switch to on. The interface of “**Program Update**” will be shown on TFT LCD (See **Figure 3**).
- I Then release the **EXT** key. DEVO-6 has entered the status of program update.

6 The installation of devention DfuSe USB upgrade tool

6.1 Software installation

Run **DevoDfuSe_V1.x_Setup.exe** file: the Installation Shield Wizard will guide you to install devention DfuSe USB upgrade tool applications on your computer. When the software is successfully installed, click the **“Finish”** button. You can then explore the driver directory. The driver files are located in the **“Driver”** folder in your installed path (**C:\Program files\devention Upgrade Tools**). Documentation is located in the folder of **“C:\Program Files\devention Upgrade Tools”**.

6.2 Hardware installation

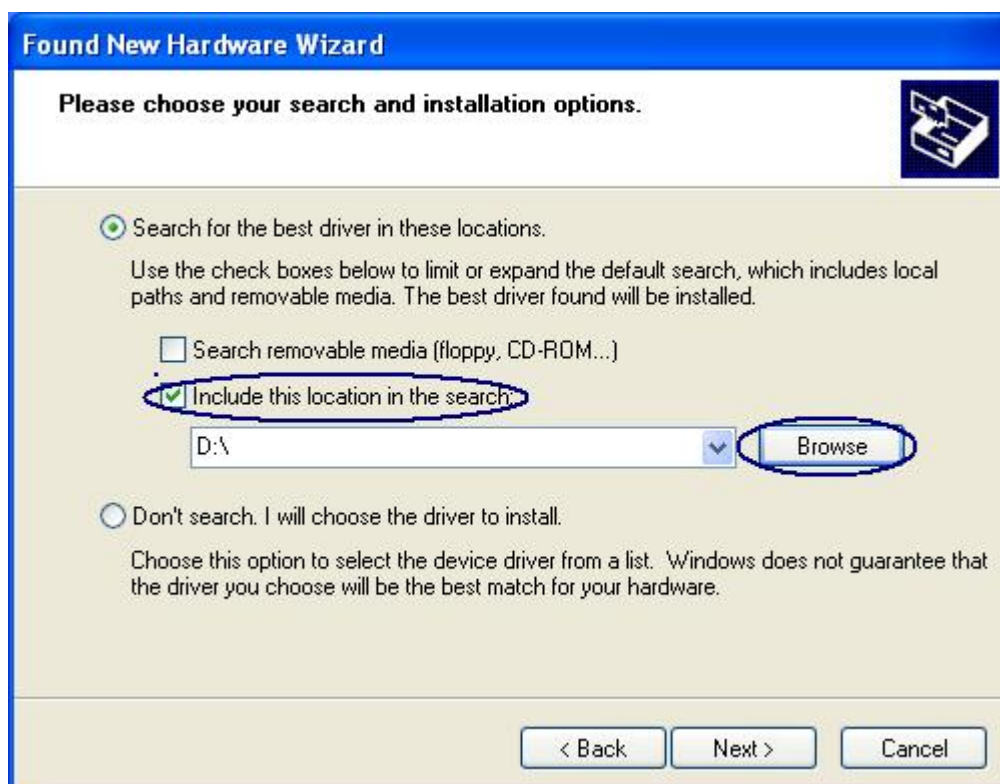
- I Let the device to enter the status of program update, connect it to a spare USB port on your PC.
- I The System prompts **“Found New Hardware Wizard”**, and pops up **“Hardware Update Wizard”**. Select the **“Install from a list or specific location”** as shown below and then click **“Next”**.

Figure 6: Selecting the installation location



- I Select **“Include this location in the search”**, and click **“Browse”**.

Figure 7: Driver selection option



- I Find “**devention Upgrade Tools\Driver**” in the setup. The driver folder is located at the installed path. (e.g.: **C:\Program files\ devention Upgrade Tools\Driver**). Click “**OK**” and then click “**Next**”.

Figure 8: Driver selection

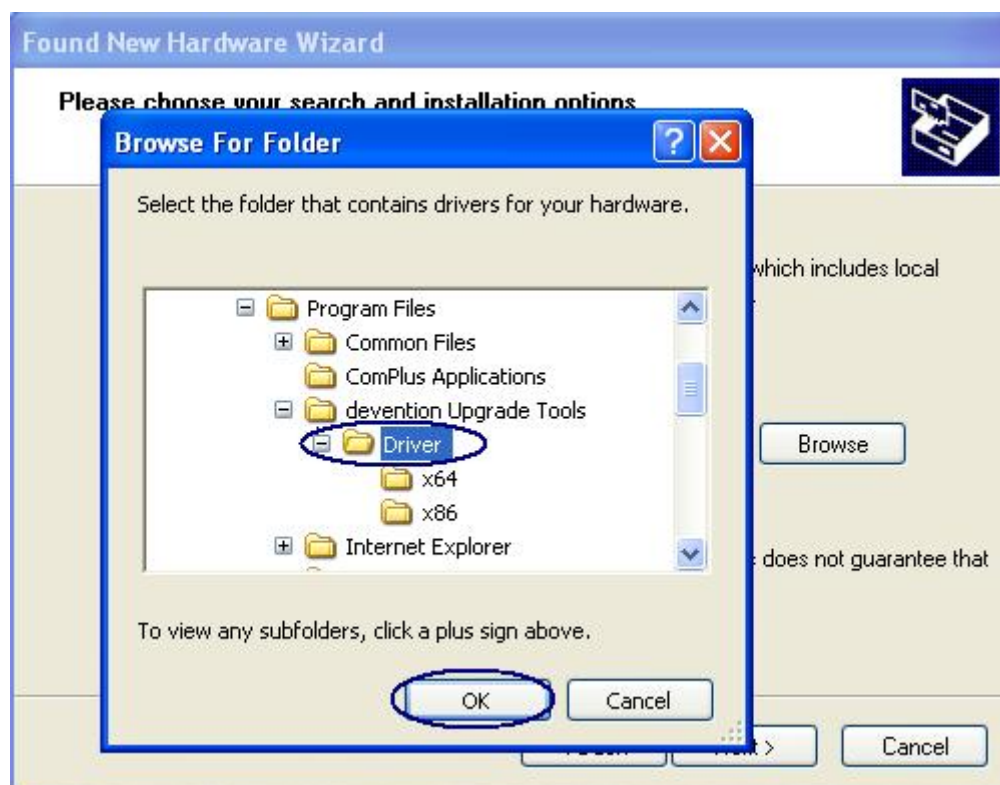
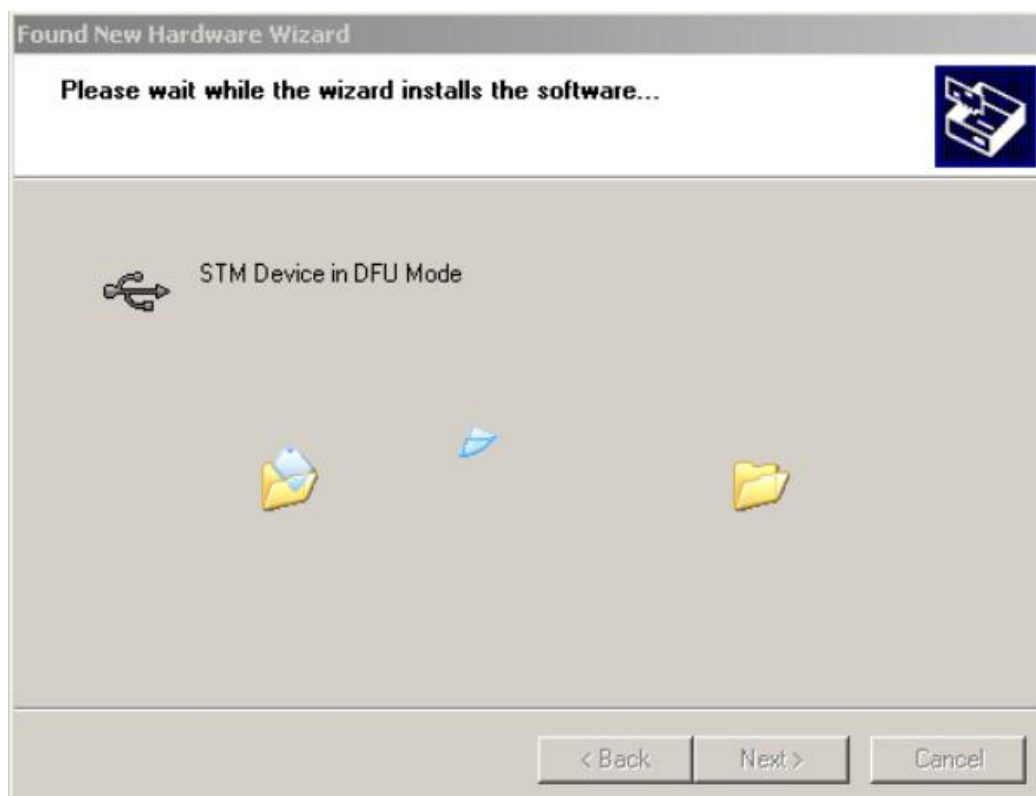
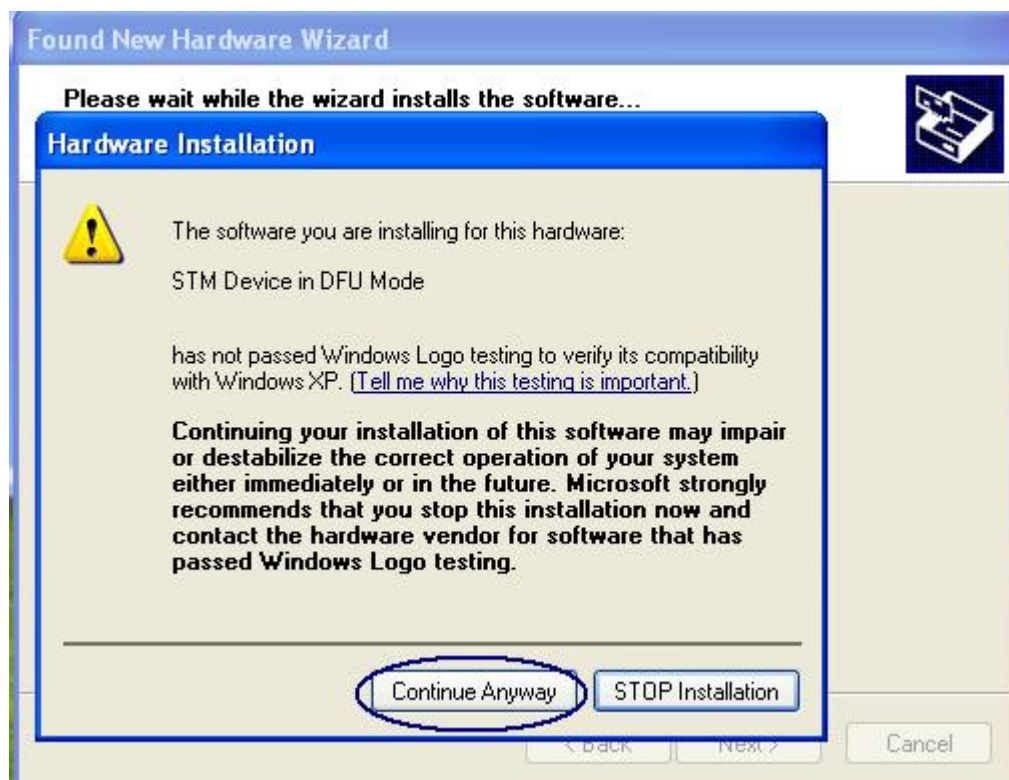


Figure 9: Progress message



- I If the interface of “**Hardware Installation**” warning message appears, click “**Continue Anyway**”.

Figure 10: Warning message



- I Windows should then display a message indicating that the installation was successful.

Click **Finish** to complete the installation.

Figure 11: Installation finish



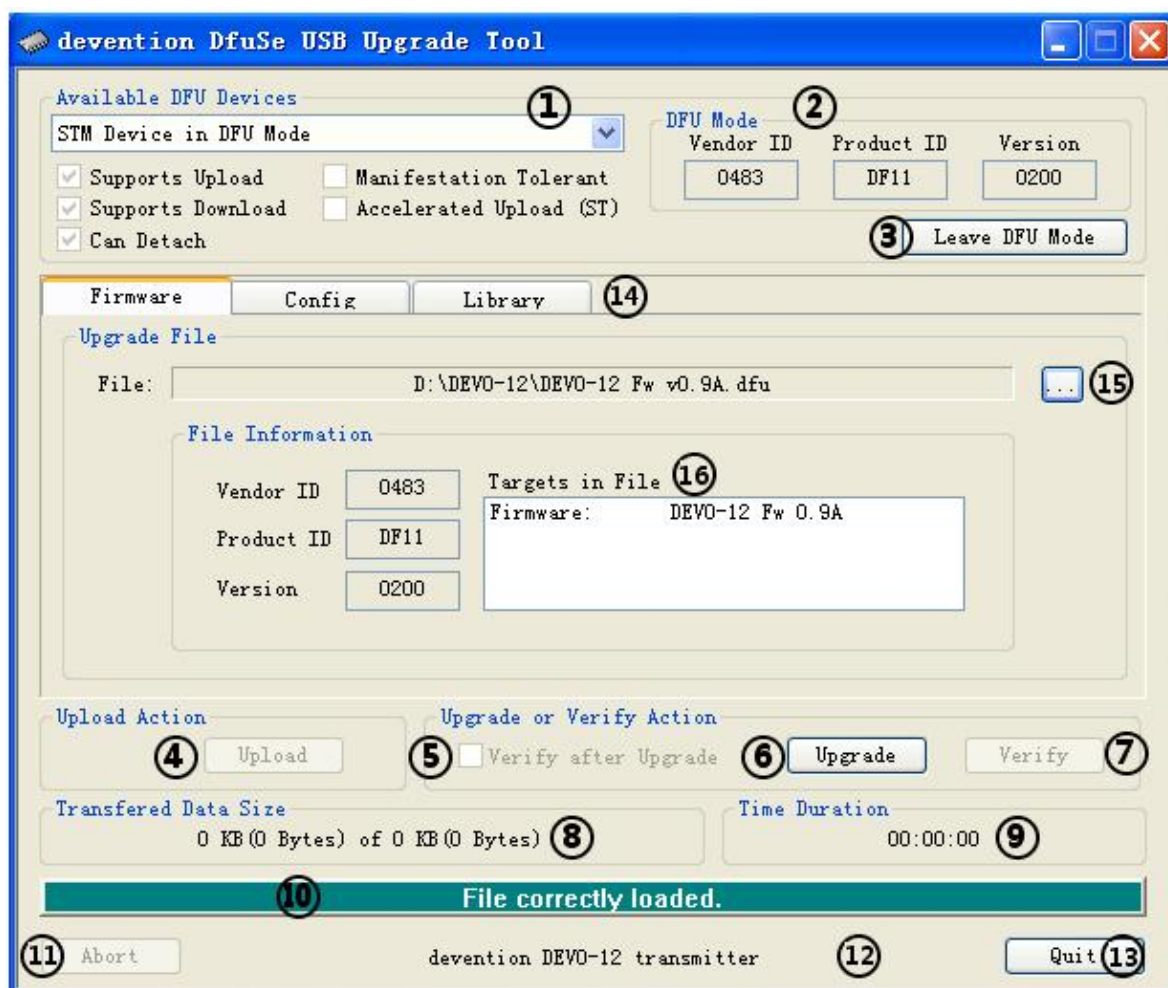
7. User interface description

This section describes the different user interfaces available in the devention DfuSe USB upgrade tool package, and explains how to use them to perform DFU operations such as Upload, Upgrade and Verify.

Upgrades need to be able to be performed without any special training, even by novice users. Hence, the user interface was designed to be as robust and simple to use as possible.

7.1 Firmware Upgrade Interface

Figure 12: Firmware upgrade interface



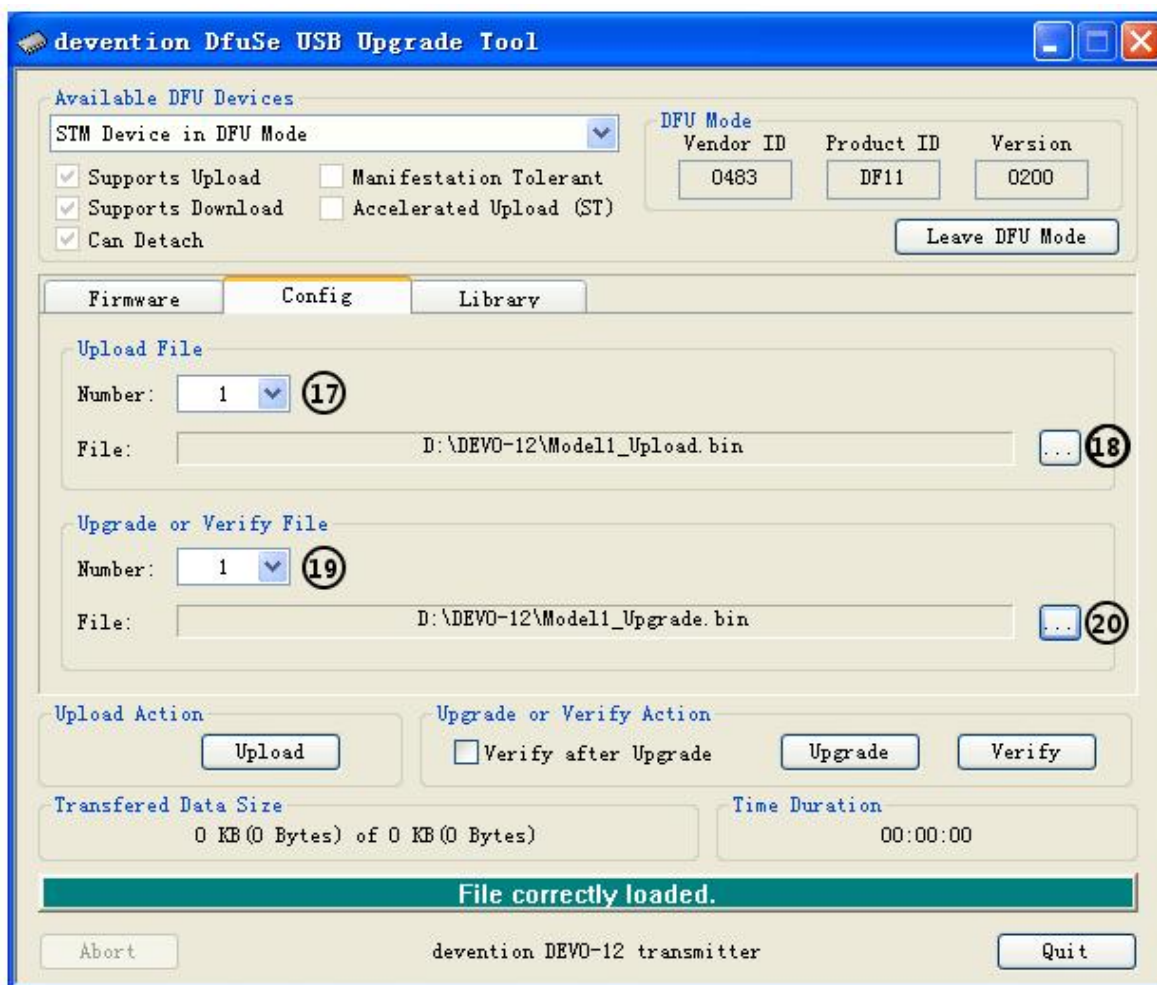
I The numbers in **Figure 12** refer to the description in **Table 1**.

Table 1. devention DfuSe USB Upgrade Tool - Firmware upgrade interface description

Control	Description
1	Lists the available DFU devices, the selected one is the one currently used.
2	Device identifiers for DFU mode: PID, VID and Version.
3	Send Leave DFU mode command. Target will switch from DFU to Application mode.
4	Start Upload operation.
5	The check box of verify after upgrade.
6	Start Upgrade operation.
7	Verify if data was successfully uploaded.
8	Size of the transferred data during the current operation.
9	Duration time of the current operation.
10	Show the progress of the operation.
11	Abort current operation.
12	devention 2.4G transmitter product information.
13	Exit application.
14	The target control of firmware, configuration and library.
15	Choose source DFU file, the upgrade data will be loaded from this file.
16	Available targets in the loaded DFU file.

7.2 Configuration Upgrade Interface

Figure 13: Configuration upgrade interface



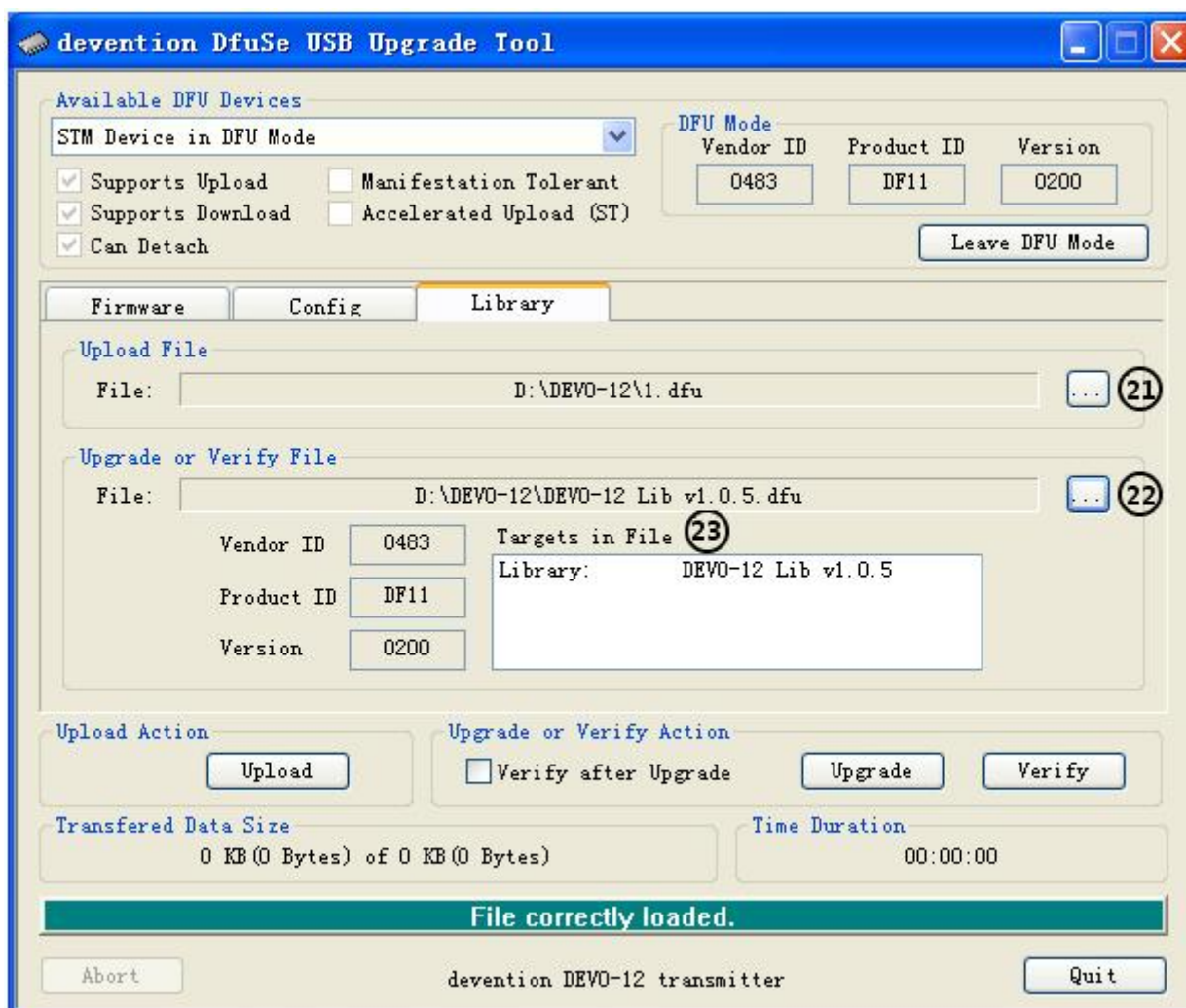
- I The numbers in **Figure 13** refer to the description in **Table 2**. Other contents refer to **Figure 12** and **Table 1**.

Table 2. devention DfuSe USB Upgrade Tool – Configuration upgrade interface description

Control	Description
17	The number of aircraft model to upload.
18	Choose destination configuration file, the uploaded data will be copied into this file.
19	The number of aircraft model to upgrade or verify
20	Choose source configuration file, the upgrade or verify data will be loaded from this file.

7.3 Library Upgrade Interface

Figure 14: Library upgrade interface



I The numbers in **Figure 14** refer to the description in **Table 3**. Other contents refer to **Figure 12** and **Table 1**.

Table 3. devention DfuSe USB Upgrade Tool – Library upgrade interface description

Control	Description
21	Choose destination DFU file, the uploaded data will be copied into this file.
22	Choose source D file, the upgrade or verify data will be loaded from this file.
23	Available targets in the loaded DFU file.

8. Step-by-step procedures

How to upload data

- I Run the “**devention DfuSe USB upgrade tool**”. Start -> All Programs -> devention Upgrade Tools -> DfuSe USB Upgrade.
- I Select configuration or library for operation. (**Item 14** in **Table 1/Figure 12**)
- I Click **item 17** in **Table 2/Figure 13** to select the number of model, **item 18** in **Table 2/Figure 13** to select the file for saved data, or click **item 21** in **Table 3/Figure 14** to select a DFU file.
- I Click “**Upload**” button (**Item 4** in **Table 1/Figure 12**), to start uploading memory content to the selected file.

How to upgrade data

- I Run the “**devention DfuSe USB upgrade tool**”. Start -> All Programs -> devention Upgrade Tools -> DfuSe USB Upgrade.
- I Click **item 15** in **Table 1/Figure 12** to select a DFU file, or click **item 19** in **Table 2/Figure 13** to select the number of model, **item 20** in **Table 2/Figure 13** to select a configuration file, or click **item 22** in **Table 3/Figure 14** to select a library file.
- I Check the “**Verify after Upgrade**” check box if you want to launch the verification process after downloading data. (The firmware upgrade isn't has this function).
- I Click the “**Upgrade**” button (**Item 6** in **Table 1/Figure 12**) to start upgrading file content to the memory.
- I Click the “**Verify**” button (**Item 7** in **Table 1/Figure 12**) to verify if the data was successfully downloaded.

9. Revision history

Table 4: Document revision history

Date	Revision	Changes
2011-3-22	1.0	Initial release.
2011-6-9	1.1	Support DEVO-8 program update.
2011-7-15	1.2	Support DEVO-6 program update.