# How to Update Firmware

## For HP-DSO272 Oscilloscope



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## **1 GETTING STARTED**

This guide walks you through how to upload the firmware manually in case you need to load a specific firmware version. The firmware update process is fairly simple and is outlined in this article. In many cases, updating the firmware can fix functional problems with the scope. Checking for updates regularly will ensure that your oscilloscope is functioning correctly, and avoid potential issues.

#### 1.1 System Requirements

In order to upgrade your device, you need to download DfuSe demonstration program from this <u>link</u>. This software works with the Windows operating systems, a recent version of Windows, such as Windows 7, 8.0 or 8.1, must be installed on the PC.

#### 1.2 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 the device.
  - STDFU.inf: Configuration file for driver.
- 2. DfuSe\_Demo\_V3.0.4\_Setup.exe: Installation file which installs the DfuSe applications and source code on your computer.

#### 1.3 DfuSe demonstration installation

#### 1.3.1 Software Installation

Run DfuSe\_Demo\_V3.0.4\_Setup.exe file: the Install Shield Wizard will guide you to install DfuSe applications and source code on your computer. When the software is successfully installed, click the "Finish" button. You can then explore the driver directory.

For 32bit OS, the driver files are located in the "Driver" folder in your install path (C:\Program files\STMicroelectronics\DfuSe). For 64bit, "C:\Program Files (x86)\STMicroelectronics\Software\DfuSe v3.0.4\Bin".

#### 1.3.2 Hardware installation

- Connect the device to a spare USB port on your PC.
- The "Found New Hardware Wizard" then starts. Select the "Install from a list or specific location" as shown below and then click "Next".

Found New Hardware Wizard	
	Welcome to the Found New Hardware Wizard
	This wizard helps you install software for:
	DFU-Aware STM Device
	If your hardware came with an installation CD or floppy disk, insert it now.
	What do you want the wizard to do?
	C Install the software automatically (Recommended)
	<ul> <li>Install from a list or specific location (Advanced)</li> </ul>
	Click Next to continue.
	< Back Next > Cancel

• Select "Don't search. I will choose the driver to install" as shown below and then click "Next".

ease choose your search and installa	ation options.
O Search for the best driver in these loca	ations.
Use the check boxes below to limit or e paths and removable media. The best o	expand the default search, which includes local driver found will be installed.
🗖 Search removable media (floppy	, CD-ROM)
Include this location in the search	shr
	Browse
Don't search I will choose the driver to	- install
Borresources a second control to	
Choose this option to select the device the driver you choose will be the best m	driver from a list. Windows does not guarantee tha natch for your hardware.

• If a driver is already installed, the model list will show the compatible hardware models, else click "Have Disk..." to locate the driver files.

Found New Hardware Wizard
Select the device driver you want to install for this hardware.
Select the manufacturer and model of your hardware device and then click Next. If you have a disk that contains the driver you want to install, click Have Disk.
Show compatible hardware
Model
STM Device in DFU Mode
This driver is not digitally signed!     Have Disk Have Disk
< Back Next > Cancel

• In the "Install From Disk" dialog box, click "Browse..." to specify the driver files location, the driver directory is located in your install path (C:\Program Files (x86)\STMicroelectronics\Software\DfuSe v3.0.4\Bin\Driver), then click "OK". The PC auto selects the correct INF file, in this case STDFU.INF. Once Windows has found the required driver .INF file, the compatible hardware model will be displayed in the model list. Click "Next" to proceed.

Found I	New Hard	ware Wizard					
Sel	ect the d	evice driver you want to insta	ll for this hard	dware.	Ð		
æ	Install Fr	om Disk			×		
₩ 9 Mo		Insert the manufacturer's installation disk, and then make sure that the correct drive is selected below.			OK Cancel		
 ▲	<del></del>	Copy manufacturer's files from: C:\Program Files\STMicroelectro	nics\DfuSe\Driv	ve 💌 Brows	;e		
		[	< Back	Next >	Cancel		

• When Windows is performing the driver installation, a warning dialog will be displayed indicating that the driver has not passed Windows logo testing, click "continue Anyway" to continue.

Found New H	lardware Wizard				
Please w	vait while the wizard ins	talls the	software		
ų,	STM Device in DFU Mo ▶	de			
	õ	Ð		D	
			< Back	Next >	Cancel
Hardware	Installation				
1	The software you ar STM Device in DFU	e install I Mode	ing for this h	ardware:	
	has not passed Win with Windows XP. (j	dows Lo Fell me	ogo testing to why this test	o verify its com ing is importan	npatibility <u>t.</u> )
	Continuing your i or destabilize the either immediatel recommends that contact the hard passed Windows	installa corre y or in t you s ware y Logo	ation of this ct operation the future top this ins rendor for testing.	s software n on of your sy . Microsoft stallation no software tha	nay impair ystem strongly w and at has
		Con	tinue Anywa	STOP	Installation

• Windows should then display a message indicating that the installation was successful. Click "Finish" to complete the installation.

Found New Hardware Wizard	
	Completing the Found New Hardware Wizard
	The wizard has finished installing the software for:
	STM Device in DFU Mode
	Click Finish to close the wizard.
	< <u>B</u> ack <b>Finish</b> Cancel

## 2 Uploading procedures

#### 2.1 Hardware setup

There are two buttons under LCD (Reset and Boot, as shown in the picture). Before upgrading new firmware, device must enter bootloader mode. In order to enter the bootloader mode press and hold "Boot" button then press and release "Reset" button. Finally release "Boot" button and now the device is in the bootloader mode.



#### 2.2 Step-by-step procedures

Firmware 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.

How to upload a new firmware

- Download the latest firmware from this <u>link</u> and save it to a convenient place like your desktop. Unzip if needed.
  - Note: The correct firmware file should have a ".dfu" extension.
- Run the "DfuSe demonstration" application (Start -> All Programs -> STMicroelectronics -> DfuSe -> DfuSe Demonstration).
- Enter the bootloader mode (Section 2.1).
- Click "Choose" button (Item 12) to select a DFU file.
- Select the "internal flash" in the memory mapping list (Item 6).
- Check the "Verify after download" checkbox if you want to launch the verification process after uploading data (recommended).
- Click "Upload" button (Item 13) to start uploading memory content to the selected DFU file. After clicking "Upload" button, a window will be shown about verification of firmware file. Click "Yes" button to continue.
- Reset the oscilloscope after successful upload.

vailable DFU and	compatible HID Device	s (1)		~	~	
STM Device in DF	U Mode	Applica		tion Mode:	) DFU Mode: (2)	
Supports Upload Manifesta Supports Download Can Detach Enter DFU mode/HID detach (5) Leave		ation tolerant ated Upload (ST) e DFU mode	Vendor ID: Procuct ID: Version:		Vendor ID: 0483 Procuct ID: DF11 Version: 1000	
ctions						
Select Target(s):	Target Id Name Available Sectors (Double Click for more)					
Upload Action File: Internal fla:	sh, dfu	Upgrade or \ File:	erify Action	n ash.dfu Targets in f	ile: (1.1)	
	vendorit).	DE11	00 Internal Flash	ernal Flash		
(7) Choose.	Transfered data size			2		
7 Choose Transfered data s	ize	Version:	1000			
Transfered data s 107 KB(110100 E KB(262144 Bytes	ize lytes) of 256 ) 9	Version:	1000 er downloa Upgrade d	d uration (Remo	ve some FFs1	
Transfered data s 107 KB(110100 E KB(262144 Bytes Time duration	ize lytes) of 256 ) 9 0:00:16	Version: Verify aft Optimize	1000 er downloa Upgrade d	d Iuration (Remo 13) Upgrade	ve some FFs)	