QEEXO AUTOML INSTALLATION GUIDE FOR WINDOWS* (AWS VERSION)

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This document details the installation and upgrade process for the AWS version of Qeexo AutoML, where its backend runs on a private instance of the AWS cloud.

*Tested on Windows 10 Build 2004 Version 19041.630

STEP 1: Install Qeexo AutoML

A. Download Qeexo AutoML

After registering and logging in on <u>https://www.qeexo.com</u>, please visit this <u>link</u> to download the Windows installer.



B. Frontend Installation

Once the installer is downloaded, double-clicking **QeexoAutoML-installer-Windows.exe** to install the frontend.

Then the welcome screen will be presented which begins the installation process:



After clicking "Next" button, read and accept the agreement to continue installing.

License Agreement	
Please review the license terms before installing Qeexo AutoML.	Q
Press Page Down to see the rest of the agreement.	
MASTER SUBSCRIPTION AGREEMENT THIS MASTER SUBSCRIPTION AGREEMENT GOVERNS CUSTOMER'S ACQUISITION AN	
USE OF QEEXO AUTO ML SERVICES. CAPITALIZED TERMS HAVE THE DEFINITIONS S FORTH HEREIN. IF CUSTOMER REGISTERS FOR A FREE TRIAL OF QEEXO AUTOML	ET
AGREEMENT WILL ALSO GOVERN THAT FREE TRIAL OR THOSE FREE SERVICES. BY	(2)
EXECUTING AN ORDER FORM THAT REFERENCES THIS AGREEMENT, OR (3) USING FREE SERVICES, CUSTOMER AGREES TO THE TERMS OF THIS AGREEMENT, IF THE	(2)
INDIVIDUAL ACCEPTING THIS AGREEMENT IS ACCEPTING ON BEHALF OF A COMPA- OR OTHER LEGAL ENTITY, SUCH INDIVIDUAL REPRESENTS THAT THEY HAVE THE	vv 🗸
If you accept the terms of the agreement, click I Agree to continue. You must accept	the
agreement to install Qeexo AutoML.	
Nullsoft Install System v3.06.1	
< Back I Agree	Cancel

We recommend to leave the Destination Folder as default path. Click "Install" button to proceed.

C Qeexo AutoML Setup	-		×
Choose Install Location			
Choose the folder in which to install Qeexo AutoML.			Q
Setup will install Qeexo AutoML in the following folder. To install in a diff Browse and select another folder. Click Install to start the installation.	erent fol	der, click	
Destination Folder C:\Program Files (x86)\Qeexo AutoML	Brov	/se	
Space required: 0.0 KB Space available: 98.1 GB			
Nullsoft Install System v3.06.1 	all	Can	cel

After installation, click "Finish" to close Setup.



You should see Qeexo AutoML application running on the menu bar.



STEP 2: Setup SensorTile.box

A. Install dfu-util

- 1. Navigate to this tools folder on sourceforge.net.
- 2. Download the latest binary archive. For instance, dfu-util-0.11-binaries.tar.xz
- 3. In order to extract the archive, please download <u>7-zip</u>. Choose 32 bit or 64 bit depneding on your Windows 10. Double click the 7-zip EXE file to install this utility on your computer.
- 4. In File Explorer, enter **%PROGRAMFILES%** in the address bar.
- 5. Right click, New \rightarrow Folder. Name it **dfu-util**.
- 6. Use 7-zip to uncompress the dfu-util binary that end with tar.xz.
- 7. Extract the **dfu-util-static.exe** file from the archive. Make sure the detaination folder is the newly created **dfu-util** folder.
- 8. Go back to File Explorer, and rename **dfu-util-static.exe** to **dfu-util.exe**. For Qeexo AutoML to work with this hardware, dfu-util must be named properly in the aforementioned folder.

B. Prepare Hardware

1. You should have received the SensorTile.box:



- 2. Disconnect Sensortile.box from battery(If you want to connect Sensortile.box and laptop with Bluetooth, you can connect the battery. But in the first setup we need to disconnect Sensortile.box from the battery).
- 3. You will need to prepare an additional micro-USB cable to connect the SensorTile.box to your laptop.
- 4. If your SensortTile.box is brand new or has never been flashed, please proceed to the next section. If your SensorTile.box has been flashed with other firmware, please be sure to flash it back to <u>ST's stock firmware</u>.

C. Update USB Driver

- 1. Please visit this <u>link</u> to download **Zadig**.
- 2. Plugin sensortile.box board while holding down the "BOOT" button. No LED should light up.



- 3. Let Windows finish searching for drivers.
- 4. Start Zadig

Zadig –	- 🗆 🗙
Device Options Help	
Driver WinUSB (v6. 1. 7600. 16385) USB ID Install WCID Driver WCID ²	Edit Edit Information MUSB (libusb) usb-win32 usbK mUSB (Microsoft)
0 devices found.	Zadig 2.5.730

5. Select "Options" -> "List All Devices"

🗾 Zadi	g			- 🗆 X
Device	Opt	ions Help	_	
	~	List All Devices	L	
STM3	~	Ignore Hubs or Composite Parents		✓ ☐ Edit
Driver	× _	Create a Catalog File Sign Catalog & Install Autogenerated Certificate	•	More Information WinUSB (libusb)
USB II		Advanced Mode		libusb-win32
WCID	-	Log Verbosity >	J	libusbK WinUSB (Microsoft)
7 devices	four	nd.		Zadig 2.5.730

6. Select "STM32 BOOTLOADER" from the device dropdown

Zadig -	_	×
Device Options Help		
STM32 BOOTLOADER	~	🗌 Edit
Synaptics WBDI USB Receiver (Interface 0) USB Receiver (Interface 1) STM32 BOOTLOADER		ation
英特尔(R) 无线 Bluetooth(R) USB Receiver (Interface 2) Integrated Camera (Interface 0)		
WCID ¹ X	inUSB (Micros	<u>soft)</u>
7 devices found.	Zadig 2	2.5.730

If "STM32 BOOTLOADER" is not available as a dropdown, ensure that the battery is disconnected from SensorTile.box and repeat step C.2. above (plugin USB cable while holding down "BOOT" button). If you need additional support, contact us by fillin in this <u>form</u>.

7. Select "WinUSB (v6.1.7600.16385)" as new driver

Zadig	- 🗆 X
Device Options Help	
STM32 BOOTLOADER	∽ □Edit
Driver WinUSB (v6.1.7600.16385) WinUSB (v6.1.7600.16385)	More Information WinUSB (libusb) libusb.win 32
WCID ² X	libusbK WinUSB (Microsoft)
7 devices found.	Zadig 2.5.730

8. Click "Replace Driver". After installation, You can see "The drive was installed successfully". Click "Close".

🗾 Zadig		- 🗆 X
Device Option Driver Ins	stallation	
STM32 ВООТ	The driver was installed successfully.	✓ ☐ Edit
Driver WinU		(libusb)
WCID ²	Reinstall Driver	libusbK WinUSB (Microsoft)
Driver Installation: SUCCES	S	Zadig 2.5.730

9. Please restart your laptop.

D. Connect Hardware

1. Reconnect STsensortile.box to your laptop. A blue LED should light up on SensorTile.box.



E. Prepare Hardware

 While the STsensortile.box is connected, right click 'This PC', go to 'Properties', 'Device Manager'. You can also search 'Device Manager' in Windows search bar. If STMicroelectronics Virtual COM Port (COM*) shows up under "Ports(COM and LPT)", the sensortile.box is connected and recognized successfully.

If successful, you may skip #2-4 below.



- If devices are not automatically recognized, download and install <u>STM Virtual COM Port Driver</u> using the same MyST account in "Step 2 B. Download and Extract Third-Party Dependency from Host to Ubuntu". Click "Get Software" next to "STM32 Virtual COM Port Driver". Click "Accept" to accept the license agreement.
- 3. Follow the readme.txt in the en.stsw-stm32102 package you just downloaded, if your OS is Windows 10 (64-bit) you should install VCP_V1.5.0_Setup_W8_x64_64bits.exe.

For other OS, please refer to the readme.txt for more information.

```
- VCP\_V1.5.0\_Setup\_W7\_x86\_32bits.exe : Setup file to Copy required files for Win7 x86
```

• VCP_V1.5.0_Setup_W7_x64_64bits.exe : Setup file to Copy required files for Win7 x64

• VCP_V1.5.0_Setup_W8_x86_32bits.exe : Setup file to Copy required files for Win8 x86

- VCP_V1.5.0_Setup_W8_x64_64bits.exe : Setup file to Copy required files for Win8 x64
- 4. Connect Sensortile.box to your laptop. Open "Device Manager", make sure SensorTile.box are recognized (as shown in #1) at all times while using Qeexo AutoML.
- 5. Disconnect the micro-USB cable from SesnorTile.box. The other end of micro-USB cable should still connect to your laptop.
- 6. Press and hold the BOOT button of SensorTile.box.
- 7. While holding the BOOT button, connect SensorTile.box back to the micro-USB cable.

Note that no LED will light up even after both ends of the cable are connected. Proceed to next step.

However, if the blue LED starts blinking, disconnect the micro-USB cable from the SensortTile.box and start over with the connection from (3) above.

 On <u>Qeexo AutoML</u>, proceed to the "Data Collection" tab of Qeexo AutoML (refer to Qeexo AutoMl user guide for reference, if needed). Then choose "BUILD NEW ENVIRONMENT".

Application: Multi-Class Classification	Target Hardware: STMicroelectronics SensorTile.box					
Training	Models	Data Collection				
dfu-stbox / Data Collection	ion					
BUILD NEW ENVIRONMENT	or SELECT A	N ENVIRONMENT				
Enter "mic-only" and press "SAVE Step 1: Build Environment 0						
ENVIRONMENT NAME mic-only Letters, numbers, and symbols permitted		SAVE				
Then click "EDIT"						
Step 2: Configure Sensors		EDIT				

And select "microphone" in the pop-up screen:

Verify inferred sensor configuration and save:

Accelerometer	ODR (Hz)	Full scale range (g) 🗸
Gyroscope	ODR (Hz)	Full scale range (dps) 🗸
Magnetometer	100.0 Hz 👻	
Temperature	100.0 Hz 🗸	
Humidity	25.0 Hz 🗸	
Pressure	100.0 Hz 👻	
Microphone	16000.0 Hz 🗸	
FLASH DATA COLLECTION	APP CANCEL	

Press "FLASH DATA COLLECTION APP".

10. Once Qeexo AutoML finishes the flashing procedure, the blue LED will light up.

STEP 3: Run Qeexo AutoML

You should now have everything you need to run Qeexo AutoML.

Open your browser, navigate to <u>Qeexo AutoML</u>, and log in with the account you registered in "Step 1B Download Qeexo AutoML".

For help on using Qeexo AutoML, refer to the <u>QeexoAutoML User Guide</u>.

STEP 4: Update Qeexo AutoML

Qeexo may periodically release software updates to fix bugs, improve performance, or add features. There are a few ways to check for Qeexo AutoML updates:

 Automatically: The application will detect if there is an older version installed and will send a warning when you log in to Qeexo AutoML. When notified of new release, please refer to "STEP 1: Install Qeexo AutoML" (and skip section A, "Prerequisites") in this guide above.

Warning: Software Update Re An older version of Qeexo AutoML is i	equired nstalled. This may result in er	rrors and s	ome features r	nay not be available. Vis	it https://automl.qu	eexo.com/resources to	download and install	Qeexo AutoML vers	ion 1.14		
Data	Models		Data Colle	ection						¢.	0
Test/Models											
Model History											
DATE C DATASETS	В	UILD ID	FEATURE SELECTION	HYPERPARAMETER OPTIMIZATION	INSTANCE LENGTH (MS)	CLASSIFICATION INTERVAL (MS)	BUILD STATUS	TRAINING DETAILS	DELETE		
				No training his	tory found						

2. **Manually**: You can also check if there is a newer version available by clicking on **Check for updates** under the Qeexo AutoML icon in the menu bar.



Click **Install Update** if a newer version is detected

3. Email notification: Qeexo team may send email to users about new software update.