ZeroUno DAC

Driver Installation for Windows Users

USB AUDIO CLASS 2.0 DRIVER FOR MICROSOFT WINDOWS USERS

INTRODUCTION

The XMOS USB Audio firmware supports USB Audio Class 2.0 operation.
Mac OS, iOS or Linux based system do not need to install any driver because they are already USB Audio Class 2.0 ready.
Microsoft® Windows only provides support for USB Audio Class 1.0.
To use a USB Audio Class 2.0 device under Microsoft® Windows requires a driver.

Below is described the installation of the driver for Microsoft® Windows users.
It is explained systematically and it is focused for newbies. The installation procedure is the same when a new peripheral (printer, scanner, camera …) is connected to the computer.

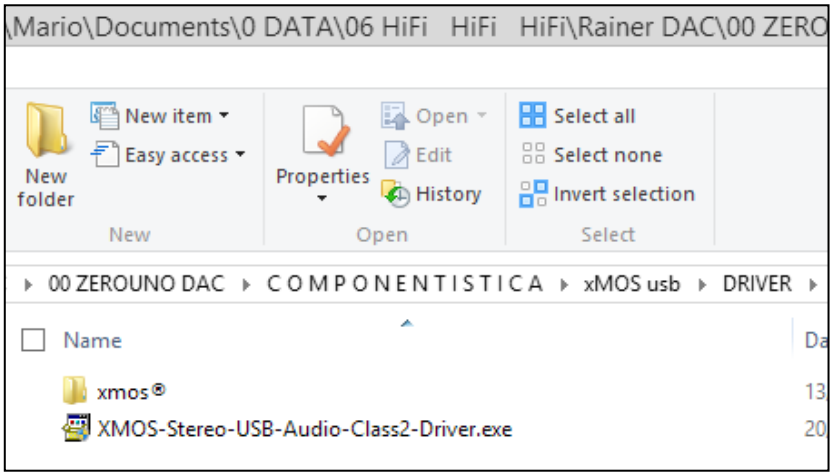
After the installation of the driver, Windows® Mac OS or Linux based systems offers exactly the same performances.

Microsoft® Windows only, after the installation, offers ASIO, WASAPI, Kernel Streaming, Direct Sound and WaveOut at the same time. The user can chose the best for his/her application. Mac OS or Linux does not let chose the way out and the features offered are the same of ASIO for Microsoft® Windows only.

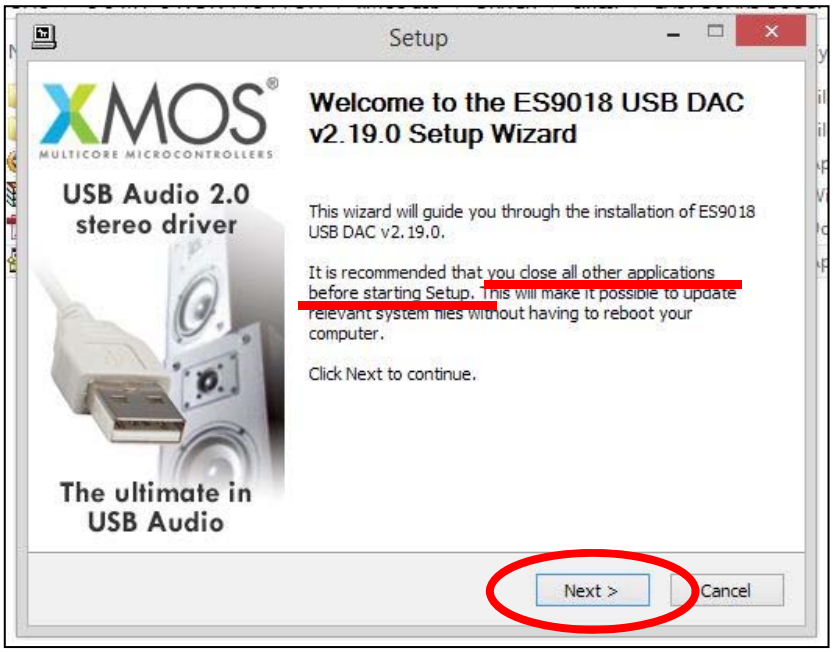
The driver is the executable file named *XMOS-Stereo-USB-Audio-Class2-Driver.exe* found in the CD_ROM received with the *ZeroUno* **DAC.**
Alternatively, to receive the driver, send an email to info@canever.eu; if the user is the owner of the *ZeroUno* **DAC** he/she will receive the file *XMOS-Stereo-USB-Audio-Class2-Driver.exe* in a very short time.

Do not plug the *ZeroUno* **DAC** to the computer until the installation program will prompt. If the *ZeroUno* **DAC** was connected before read this installation procedure, nothing is compromise: read the chapter 2.

CHAPTER 1 *ZeroUno* DAC never connected to the computer before

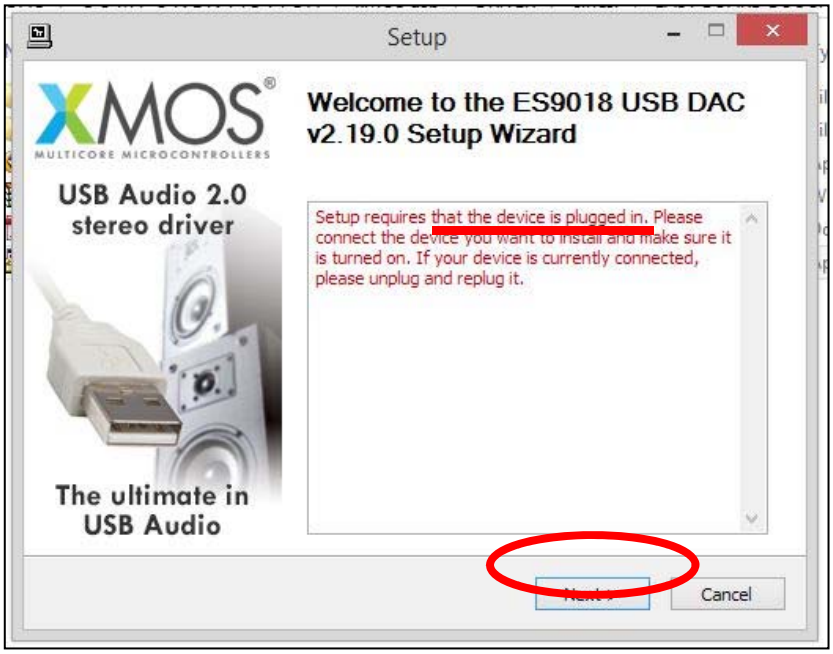


Run *XMOS-Stereo-USB-Audio-Class2-Driver.exe* double clicking on the file name.



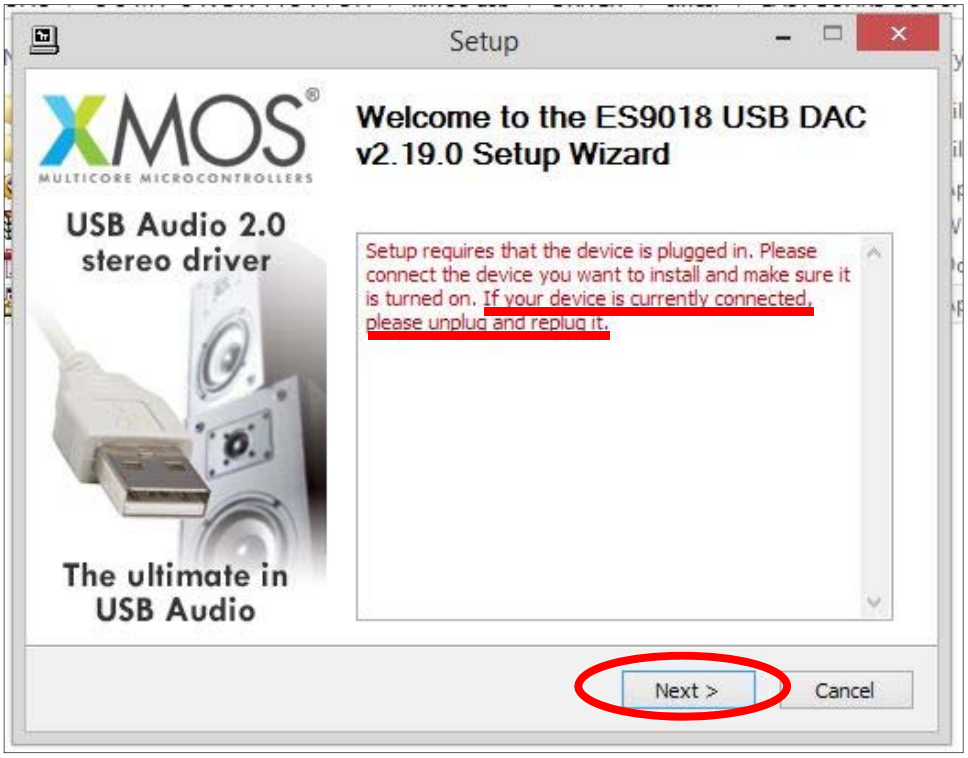
A welcome window will pop-up. It is a good rule to close all the applications, mainly those dedicated to audio applications. If do not do, probably, at the end of the installation the applications involved with the audio must be closed and restarted to let the audio applications themselves work with the driver installed.

Click on Next to move to the next step.



The *ZeroUno* **DAC must be connected** to the computer.

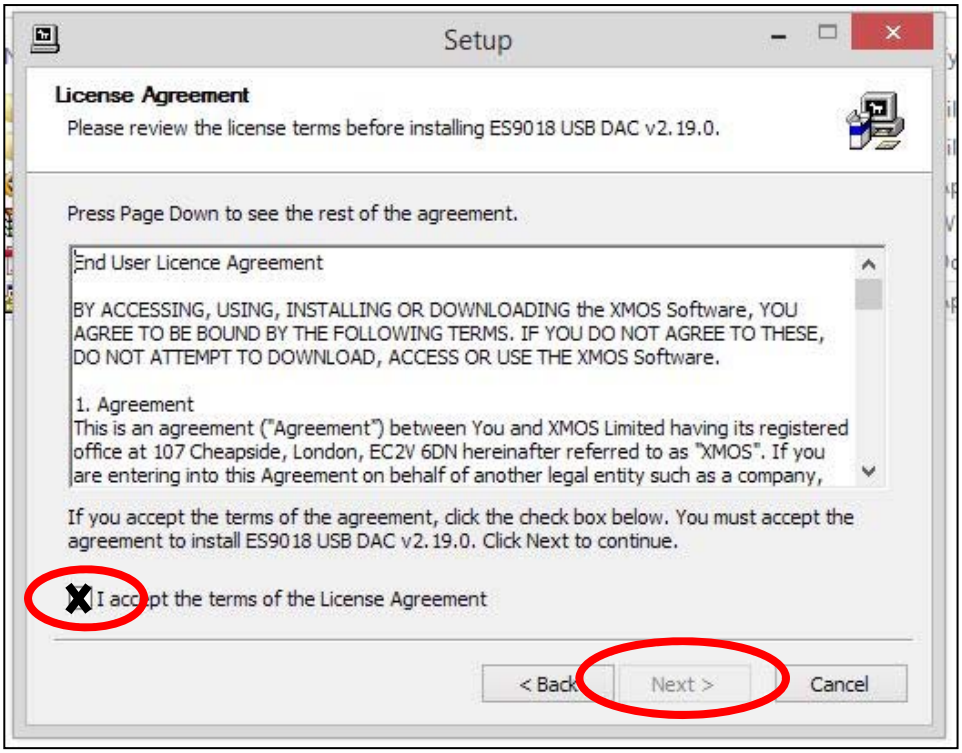
Click to NEXT to move forward.



If the same window of before appears take note on what is written in the window itself.

If the ***ZeroUno*** **DAC** *has already connected before to launch the driver setup,* as written in the window before, *unplug and plug again it.*

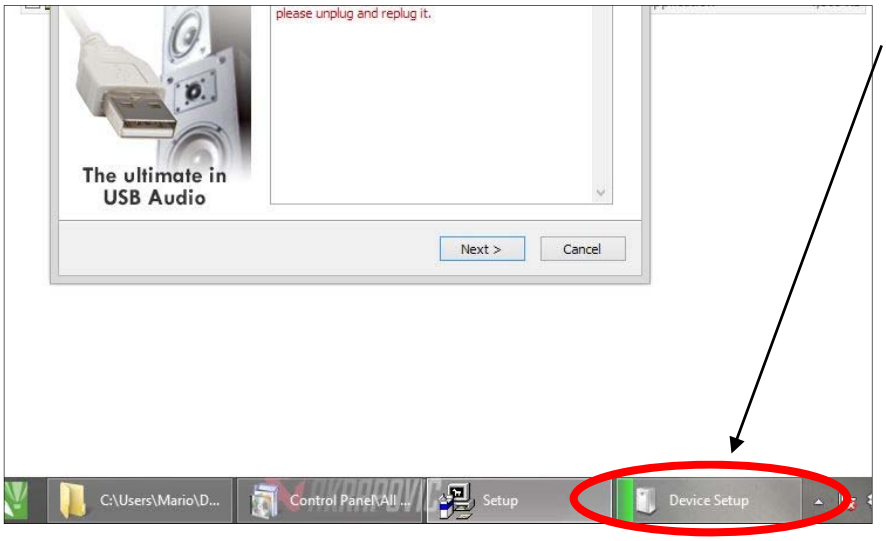
Click to next to move on.



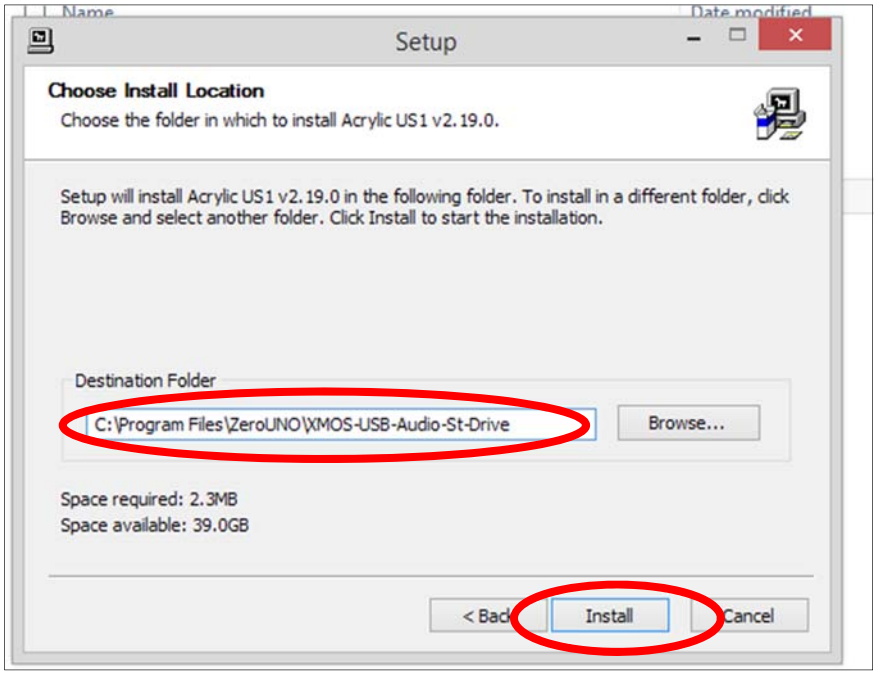
The License Agreement will appear.

Click on the "I accept the terms of the ….." and then Next

The installation procedure now starts automatically. Meanwhile, and only to explain what is going on, look to the right bottom of the computer monitor ……



… a “Device Setup” banner will appear, showing a program is running in the background, with the banner starts to become green; means that the Windows Operating System is installing the driver.



Now the installation program prompts the location where copy all the files regarding the driver itself.

The installation program suggests a default location.

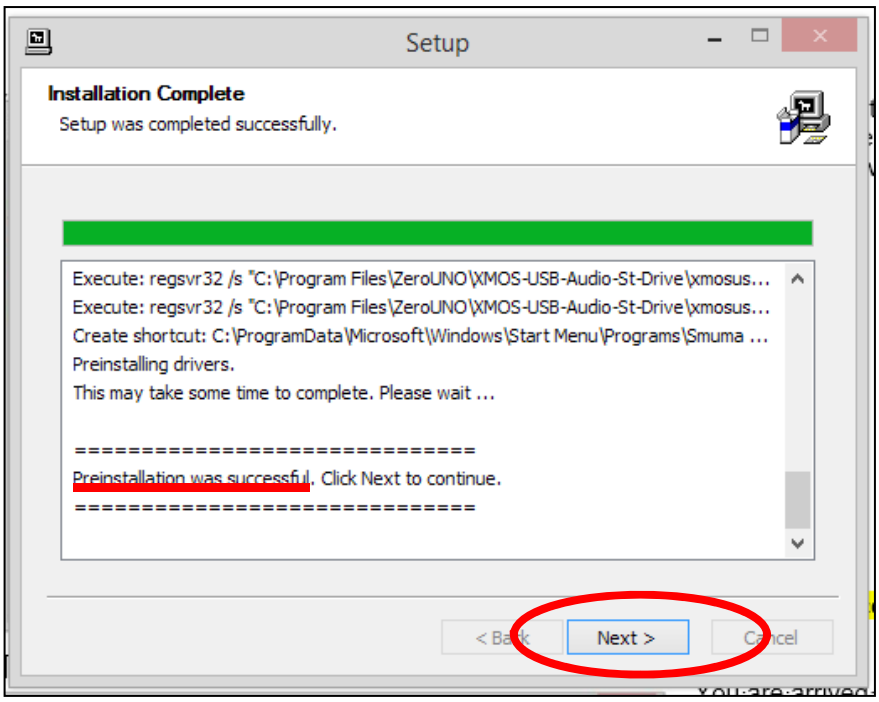
There is no need to change it. Anyway the user can choose any destination. Change is recommended only for Windows expert users.

Click to Install to go on.

Installation will start automatically and **it will take some minutes**.

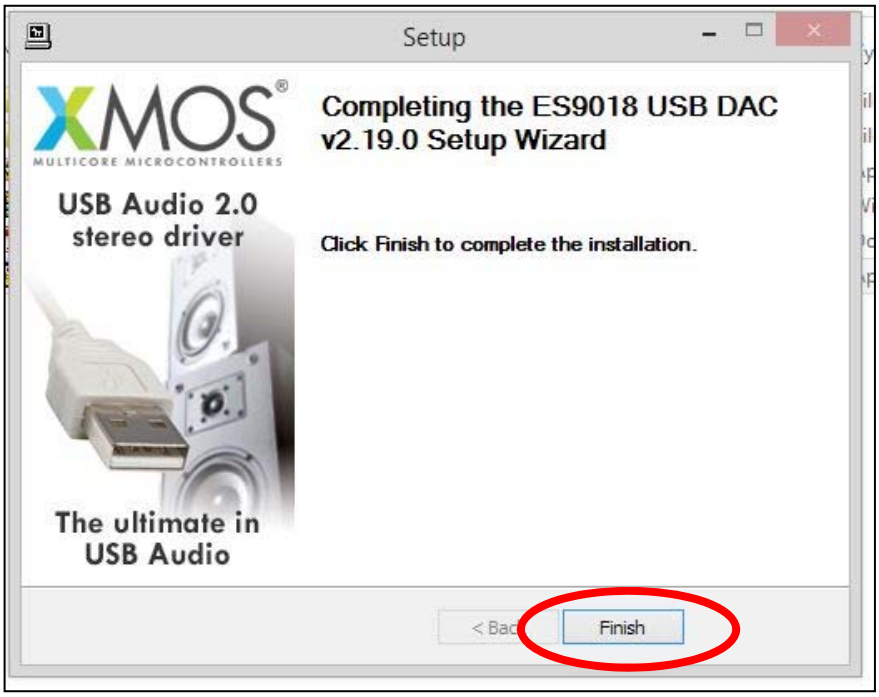
Meanwhile do not power off the computer and do not disconnect the *ZeroUno* DAC from the computer. Let the computer do its job. Be patient.

If the *ZeroUno* **DAC** is powered off or disconnected before the end of the installation, the installation must start again since the beginning and nothing is compromised.



When finished the message below will appear: " Preinstallation was successful".

Click Next to continue.



The user is arrived at the end of the process.

Chose Finish.

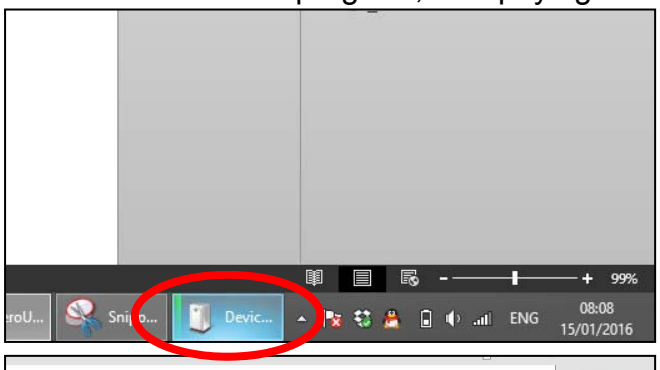
Now the system is ready and the Windows based Personal Computer is interfaced to *ZeroUno* **DAC** for the full performances.

CHAPTER 2 *ZeroUno* DAC was connected to the computer before to run the installation program

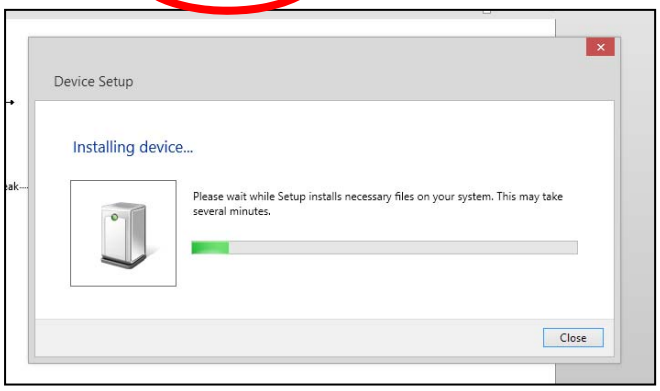
If the *ZeroUno* **DAC** was connected to the Windows based computer before reading this installation guide, the *ZeroUno* **DAC** cannot play. Only go back to the CHAPTER 1 and do what is written step by step since the beginning. After the steps in the CHAPTER 1 the *ZeroUno* **DAC** will be properly installed. There is no any other need. Nothing was compromised.

Anyway an explanation of what Windows has done follows. The target of the below explanation is to introduce the interaction between Windows Operating System and the XMOS driver.

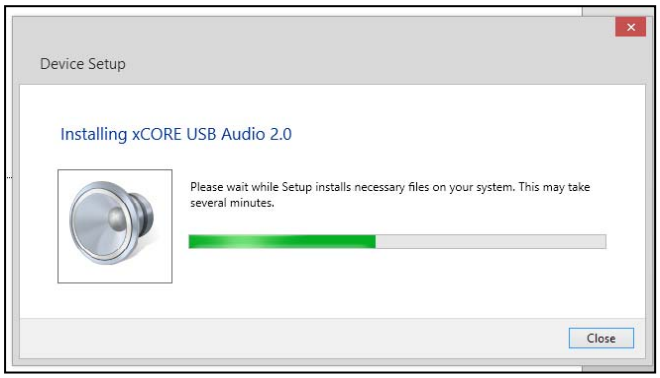
If the *ZeroUno* **DAC** is connected to the computer where Windows is running before to run the driver installation program, and paying attention, the task bar shows a banner about a program running in the background.



Double clicking over the Device Setup (really the bar is becoming green), …..

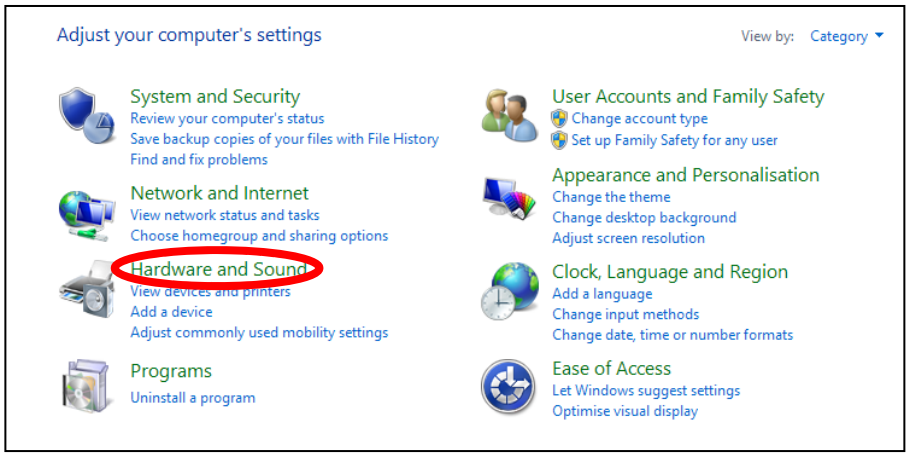


…. a window like this on the left will appear. It shows that the Windows Operating System is installing the standard driver for the USB unit just detected.



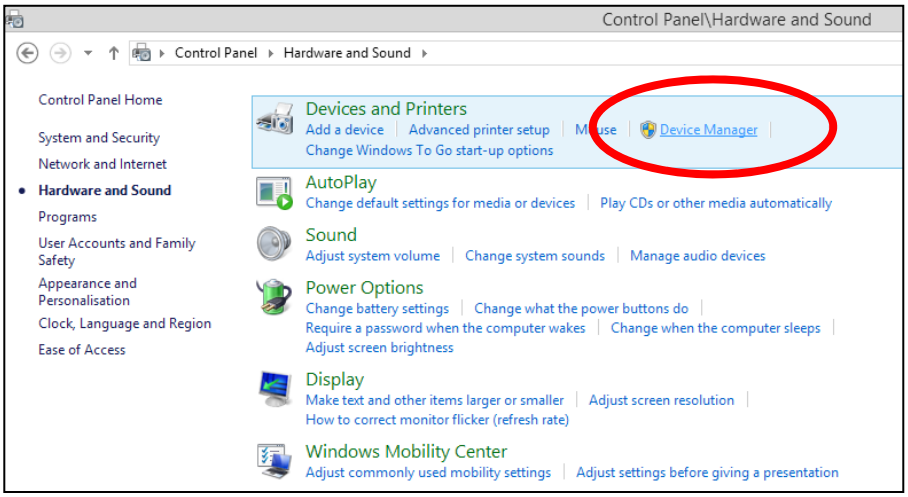
The window in the middle will change to the window here in the left.

Unfortunately, Microsoft® Windows does not include the XMOS ASIO and WASAPI driver in its standard drivers. Therefore, the driver installed automatically by Windows itself is a *standard USB driver*, and it does not interface the *ZeroUno* **DAC**.

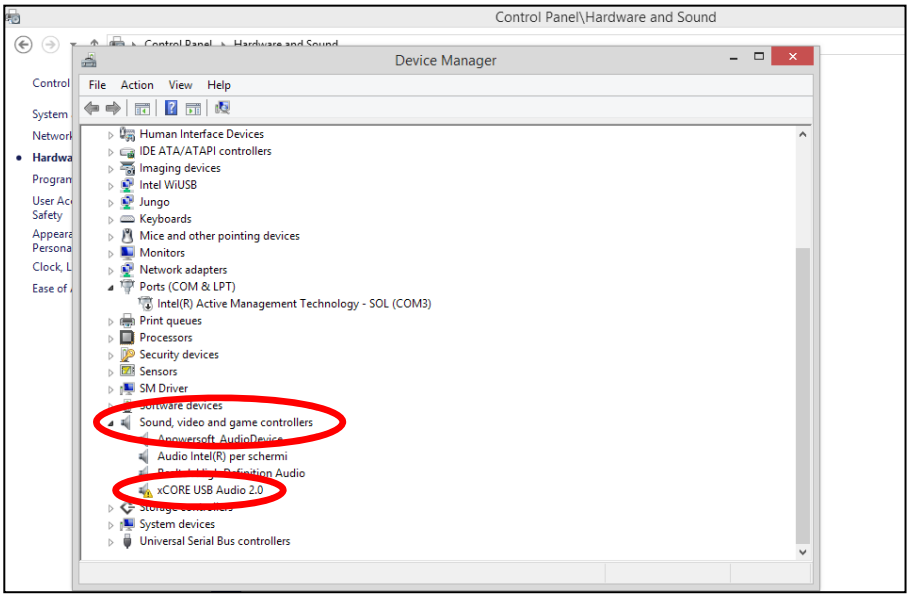


this is confirmed in the Control Panel of the Windows System

Double Click on Hardware and Sound setup.



Now Double Click on Device manager



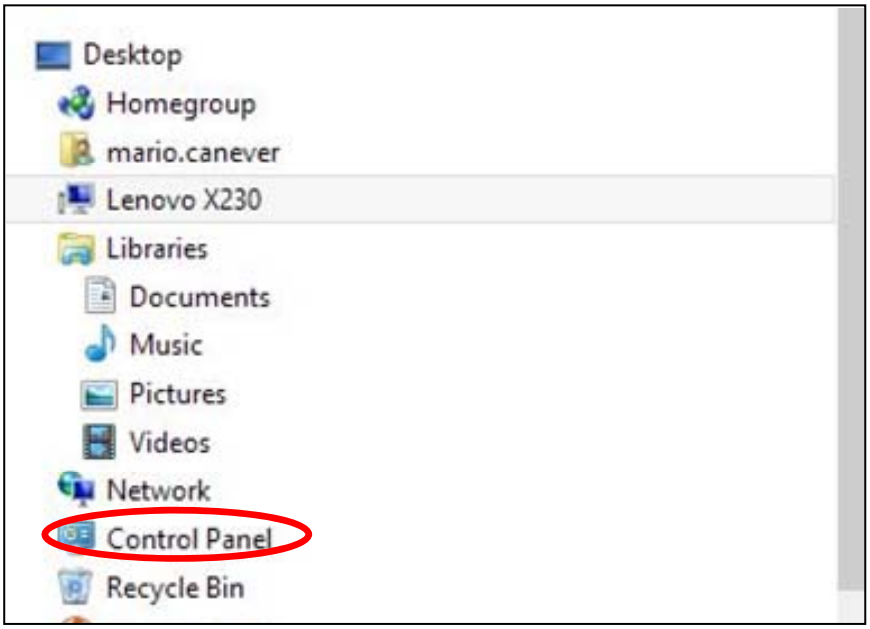
Paying attention to the *Sound, videos and game controllers* group, a ⚠ foregoes the *xCORE USB Audio 2.0*

The meaning is the unit is detected properly BUT the driver installed automatically does not work. Means the unit is not interfaced.

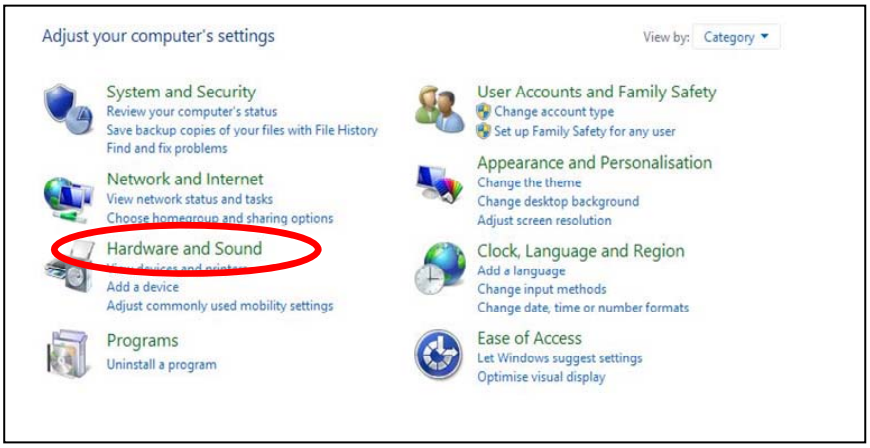
To solve the matter of the wrong driver loaded only follows step by step the CHAPTER 1. Go back to the CHAPTER 1 and do exactly what is written there.

CHAPTER 3 Computer Status after a valid installation

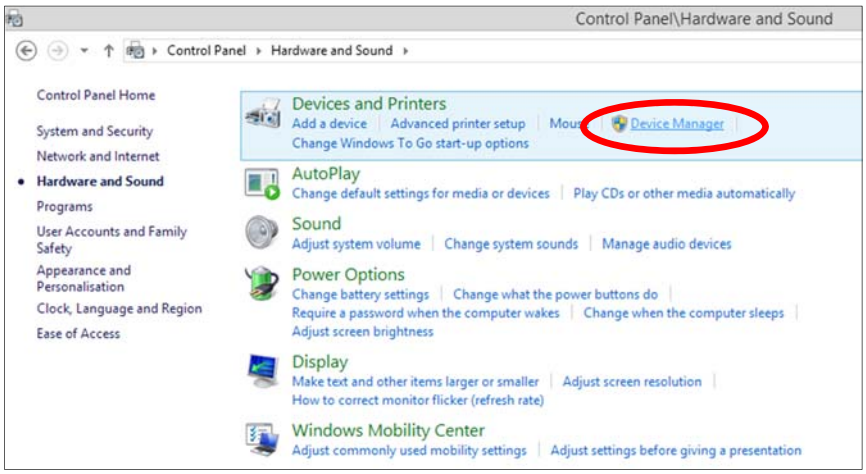
To check if the driver is properly installed in the Windows Operating System, follow the step by step procedure below. Even if the user does not check the computer, it will work fine. This section is only to complete the explanation.



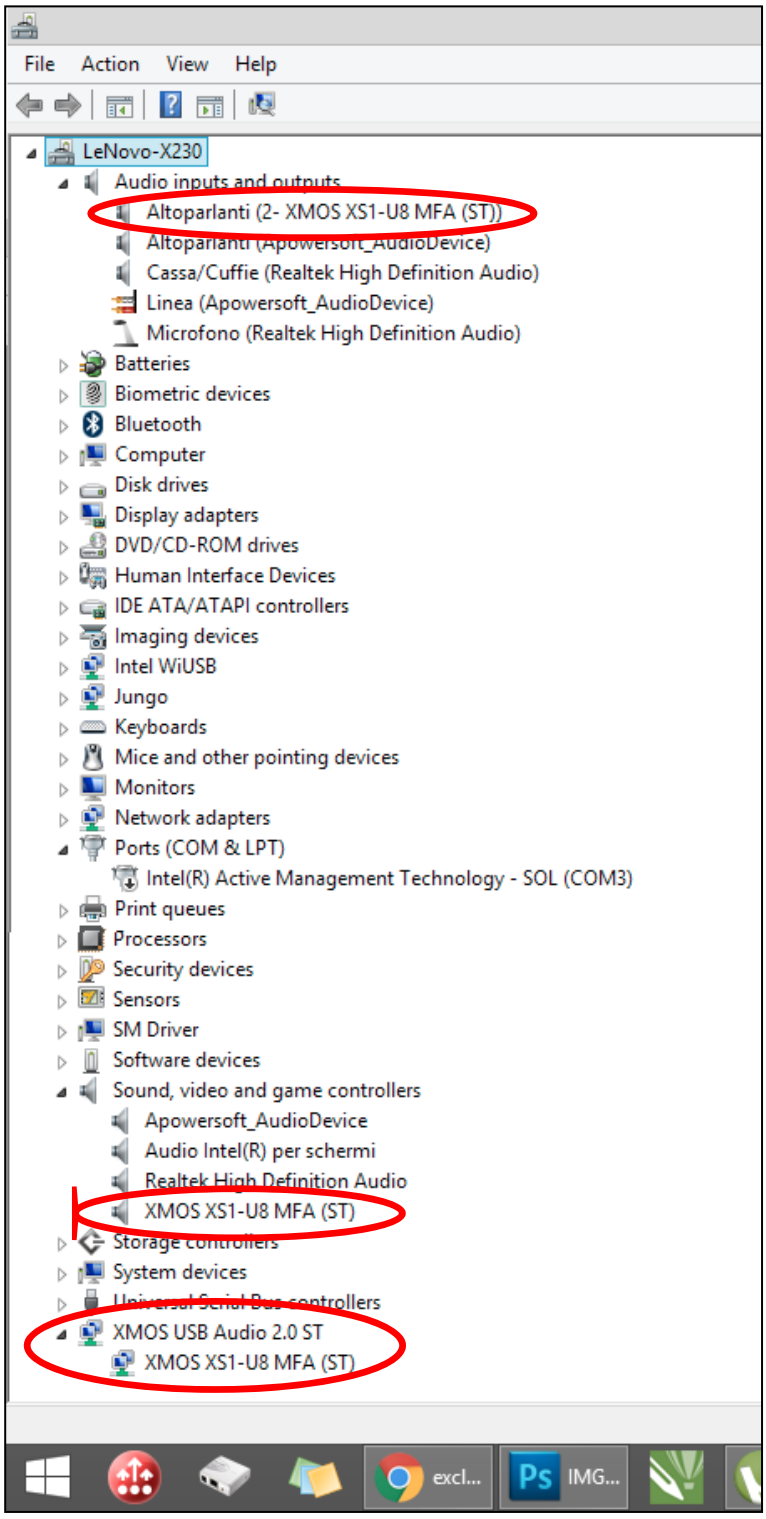
Open the Control Panel of the Windows Based system.



Double click on “Hardware and Sound”



Double Click on “Device Manager”

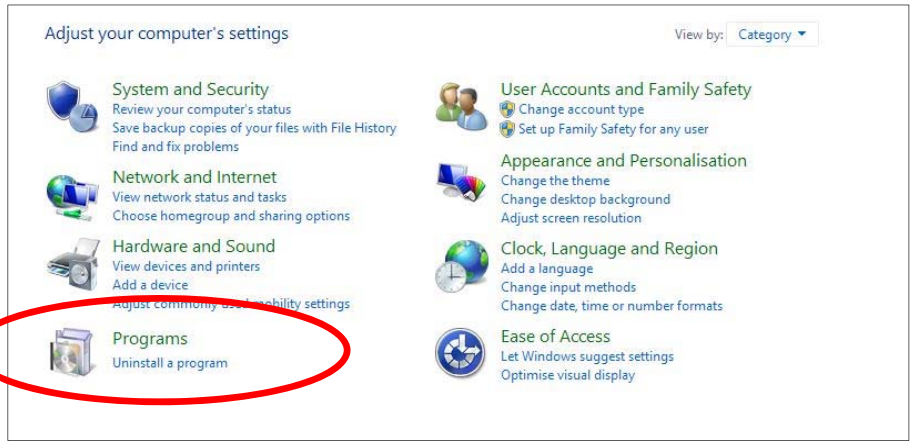


The XMOS XS1-U8 MFA Stereo (ST), really the name of the XMOS chip used by *ZeroUno* **DAC** unit appears in three different locations:

1 Windows Audio output device. *ZeroUno* **DAC** can be used as output device for all Windows System Sounds. *ZeroUno* **DAC** is an alternative to the speaker installed on the computer itself.

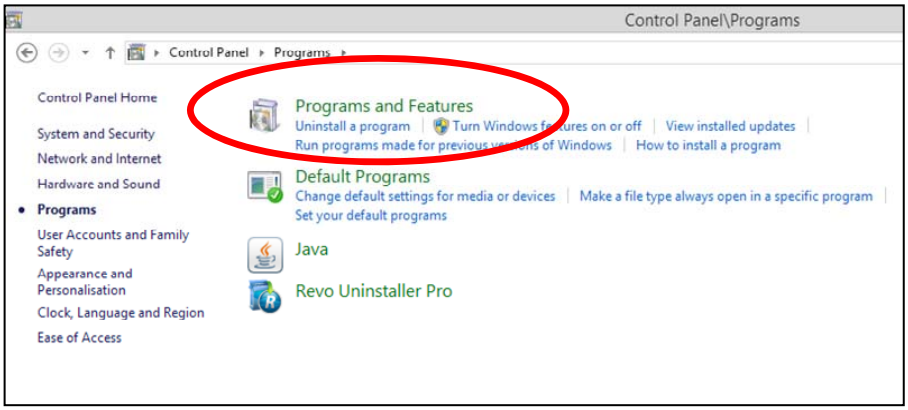
2 Windows® Audio output device. *ZeroUno* **DAC** can be used as output device for all Windows System Sounds and Windows® Applications

3 This is ASIO unit used by the Personal Computer to send the tracks from the Storage Memories (HHD, SSD, Flash …) directly to *ZeroUno* **DAC** not involving with Windows Operating System. This is the well know ***exact bit transfer***.



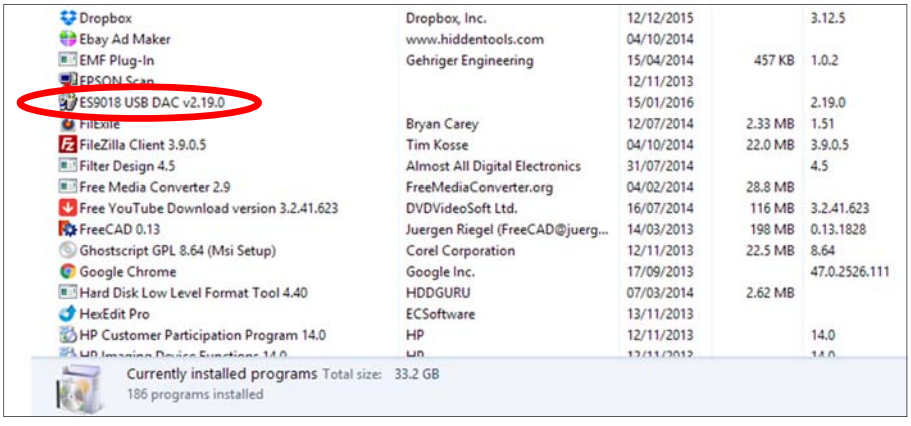
To again check the installed driver follow what is written in this page.

Chose the Control Panel, and double click on Programs



Now double click on Programs and Features

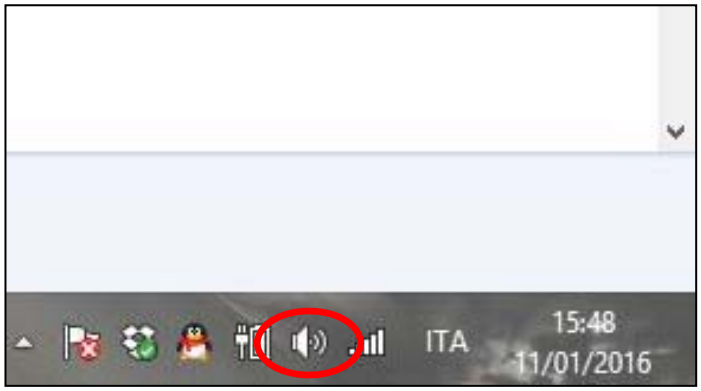
Scroll down until ….



the *ES9018 USB DAC v2.19.0* is located.

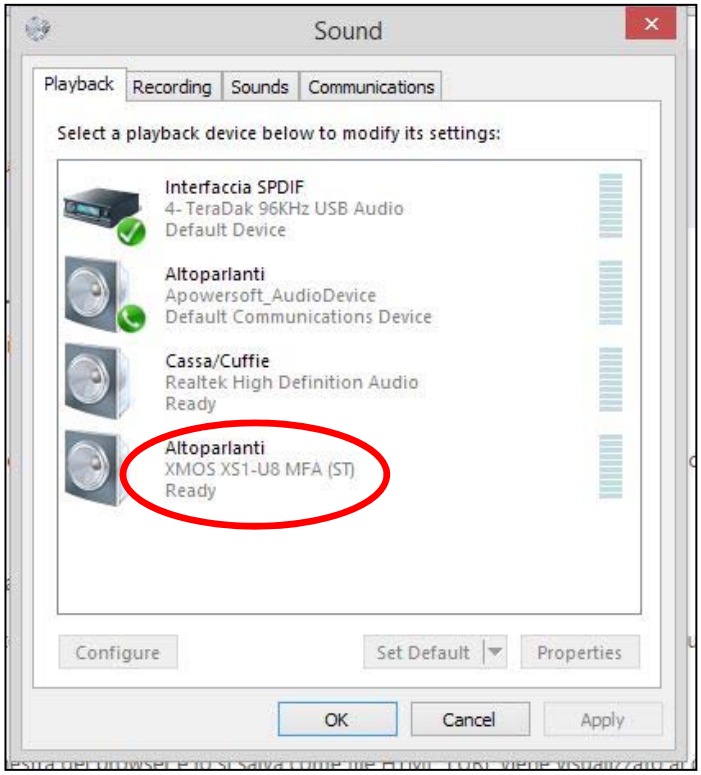
ES9018 is the chip name of the SABRE32.

Reading *ES9018 USB DAC v2.19.0* means the unit is properly installed.
Check completed.



As said before, the *ZeroUno* **DAC** is seen by Windows Operating System also as an output device so it can used instead of the System Speakers.

Double clicking on the speaker icon on the right bottom of the monitor, can be checked the active device for the Windows Applications and System sounds.



Double clicking over the XMOS icon, the Windows default device becomes the *ZeroUno* **DAC**.

The window here on the left reports the configuration of the computer used for testing. TeraDak, Apowersoft and Realtek were the Input&Output units active on the computer used to write this documentation.

99.9% the user will have another report but the XMOS XS1-U8 MFA (ST): this unit must be present in any System too.

Example to make the user familiar with the Personal Computer:
setting as default device for the Personal Computer the XMOS XS-1, and if by the browser (Chrome, Explorer or whatever) a web radio is connected, and the "speakers" set as default is the *ZeroUno* **DAC**, the user will listen to the web radio by the *ZeroUno* **DAC**.

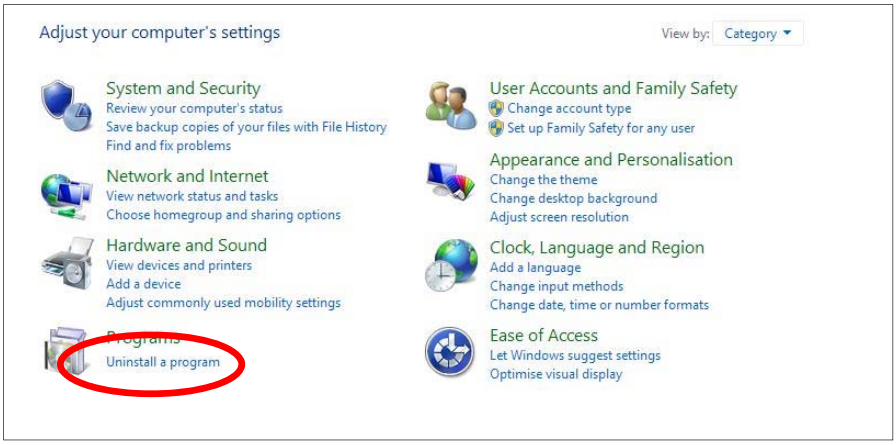
Usually to listen to the favourite's tracks or wed radios or whatever, a Music Player is recommended. It offers advanced options and can let the *ZeroUno* **DAC** exhibits the maximum performances.

Foobar, JRiver®, Audirvana® are popular to do the job; anyway other Music Players can be used.

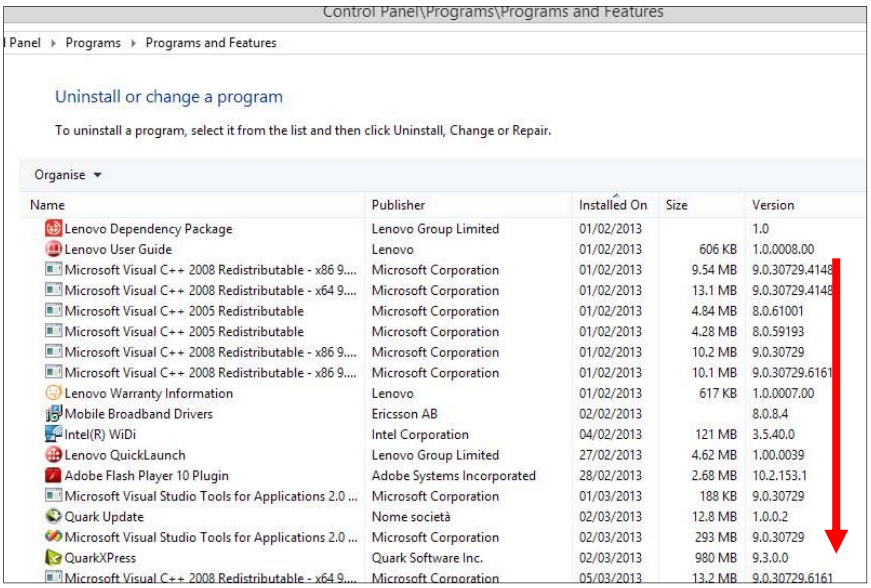
In another section of this documentation is discussed how to setup the JRiver® music player for the optimum interface with *ZeroUno* **DAC**.

CHAPTER 4 How to uninstall the driver

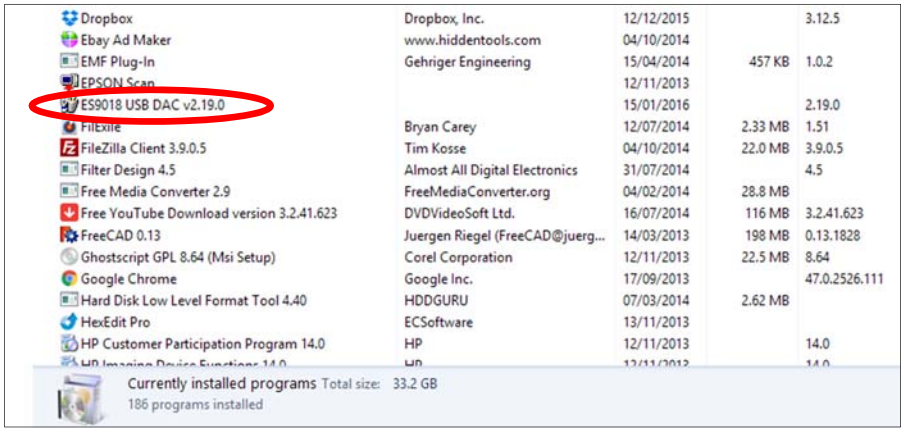
When there is the need to install an updated version of the driver, it is a good policy to uninstall the old one before. This avoid any confusion between old and new things installed.



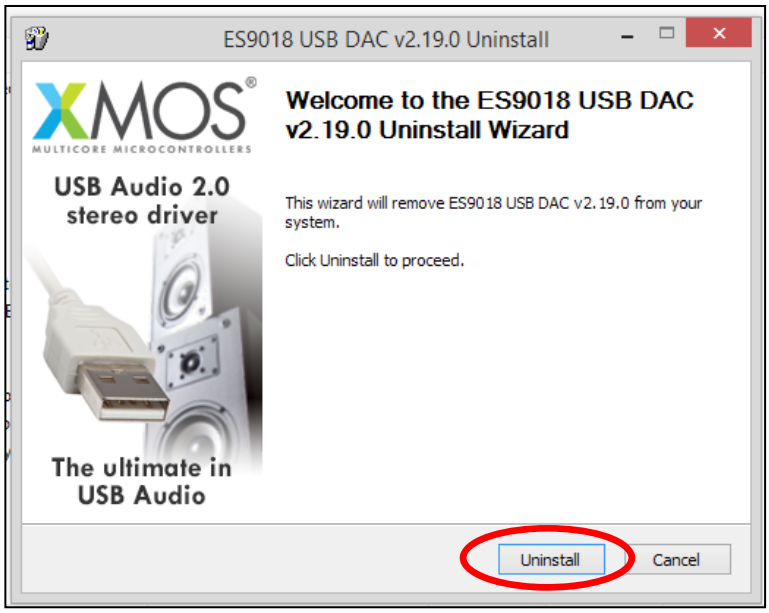
Chose the Control Panel, and double click on Uninstall a Program



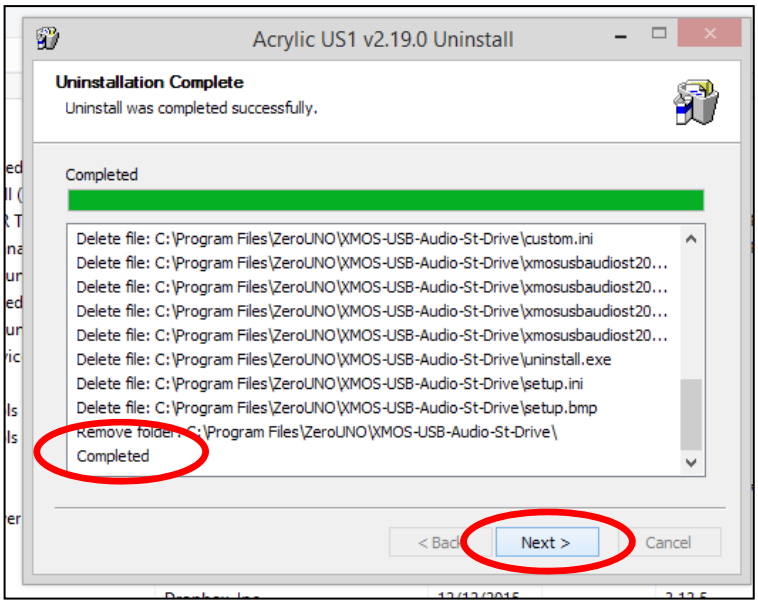
Scroll down until locate the *ES9018 USB DAC v2.19.0*



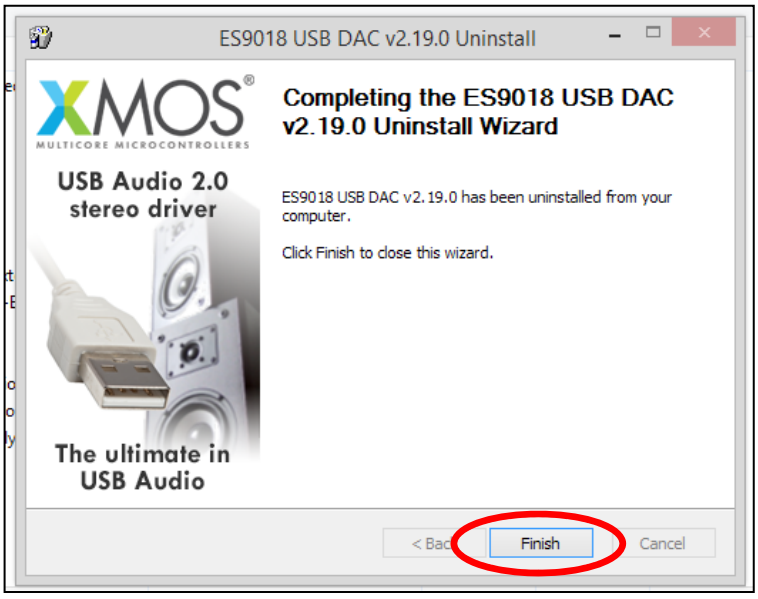
Double Click on *ES9018 USB DAC v2.19.0* and the uninstall procedure will start automatically.



chose Uninstall



The procedure is automatic and at the end, when *Completed* appears, chose Next



Click on Finish and the driver is totally uninstalled.