

ETHERFACE

by  dspro



USER MANUAL

EU Declaration of Conformity

We,

Ds Pro Audio Ltda
Rua São Manoel, 1261/701
CEP 90.620-110 – Porto Alegre/RS – Brazil

Declare on our sole responsibility, that the following equipment(s)

EtherFace 3xAES50
EtherFace 2xMADI

Manufactured by:

Ds Pro Audio Ltda
Rua São Manoel, 1261/701
CEP 90.620-110 – Porto Alegre/RS – Brazil

Meets all the essential requirements of the European Council Directives:

Low Voltage Directive 2014/35/EU
Electromagnetic Compatibility Directive (EMC) 2014/30/EU

And conforms to the following harmonized standards:

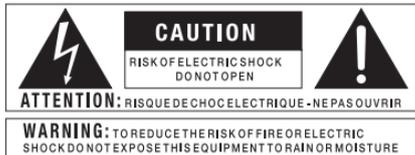
EN 60065:2014
EN 55103-1:2009
EN 55103-2:2009

At Porto Alegre, 02th of May, 2016.

A handwritten signature in purple ink, appearing to read "Rafael Lopes Susin".

**Rafael Lopes Susin
Managing Director
Ds Pro Audio Ltda**

SAFETY INSTRUCTIONS



There are no user serviceable parts inside the unit. Do not open the unit. Do not attempt to service the unit yourself. Refer all servicing to qualified personnel. Opening the chassis for any reason will void the manufacturer's warranty. Do not get the unit wet. If liquid is spilled on the unit, shut it off immediately and take it to a dealer for service.

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Use only attachments/accessories specified by the manufacturer.
12. Unplug this apparatus during lightning storms or when unused for long periods of time.
13. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

14. **MULTIPLE-INPUT VOLTAGE:** This equipment may require the use of a different line cord, attachment plug, or both, depending on the available power source at installation. Connect this equipment only to the power source indicated on the equipment rear panel. To reduce the risk of fire or electric shock, refer servicing to qualified service personnel or equivalent. If connected to 240V supply, a suitable CSA/UL certified power cord shall be used for this supply.
15. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.
16. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.



If you want to dispose this product, do not mix it with general household waste. There is a separate collection system for used electronic products, in accordance with legislation, that requires proper treatment, recovery and recycling.

Private household in the 25 member states of the EU, in Switzerland and Norway may return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar new one). For Countries not mentioned above, please contact your local authorities for a correct method of disposal. By doing so you will ensure that your disposed product undergoes the necessary treatment, recovery and recycling and thus prevent potential negative effects on the environment and human health.

In case a disposal of electronic waste is not possible, the recycling can also be done by DSPRO For this the device has to be sent free to the door to:

Ds Pro Audio Ltda
 Rua São Manoel, 1261/701
 CEP 90.620-110 – Porto Alegre/RS
 Brazil

Shipments not prepaid will be rejected and returned on the original sender's cost.

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1. INTRODUCTION

The EtherFace was design to interconnect any MADI or AES50 device to a computer thru its Ethernet ports, allowing the transfer of multichannel audio in both directions.

Besides live recording and virtual sound checks, its CoreAudio drivers for MACOS systems and ASIO drivers for Windows systems, allows you to use your favorite DAW for live plugin insertion, showing very low latency

With its reduced dimensions, EtherFace is portable giving you the flexibility to install it anywhere you need, like a reduce FOH, or a home studio.

This remarkable device cannot be measured by its sizes. With its three AES50 interfaces, it can handle up to 72 channels at 96 kHz in both directions at the same time. The MADI version gives you even more, reaching extraordinary 128, 48 kHz, bi-direction channels.

Congratulations, you now own an EtherFace device and your network card is now a virtual multichannel audio interface.

2. PACKAGE CONTENTS

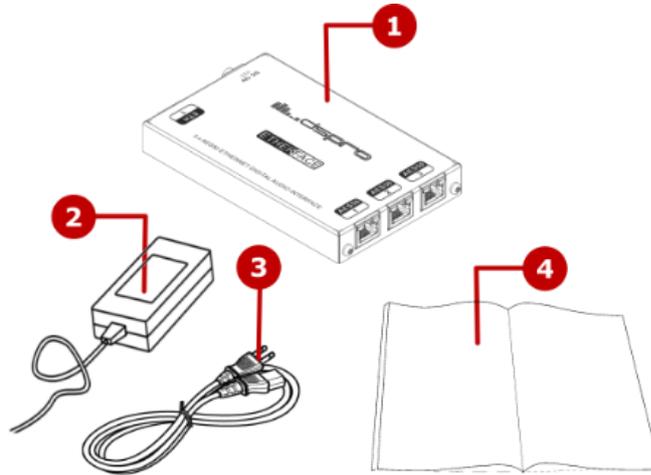


Figure 1 Package Contents

1. One EtherFace device
2. One AC/DC Adapter
3. One Power Cord
4. A Quick Start Guide (this guide)

3. INSTALLATIONS INSTRUCTIONS

1. Plug the AC power adapter in a socket outlet with protective earthing.

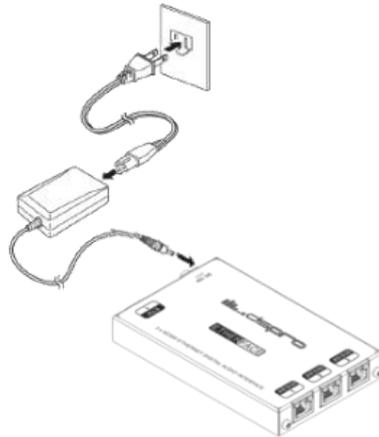


Figure 2 AC Adapter Connection

2. Connect the Ethernet cable to a computer *¹
3. Connect to the appropriate multichannel audio device:
 - a. EtherFace 3xAES50 – Connect the three AES50 ports *²

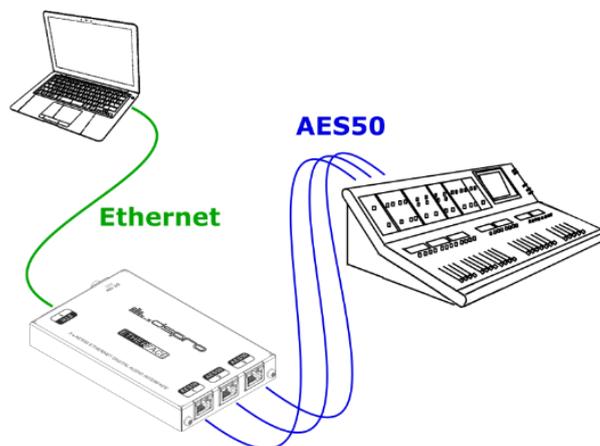


Figure 3 AES50 Connection

- b. EtherFace 2xMADI – Connect the two MADI ports *³

¹ Use CAT6 UTP cable. (FTP recommended)

² Use CAT6 FTP (shielded) cable

³ Use high quality 75Ohms coaxial cable.

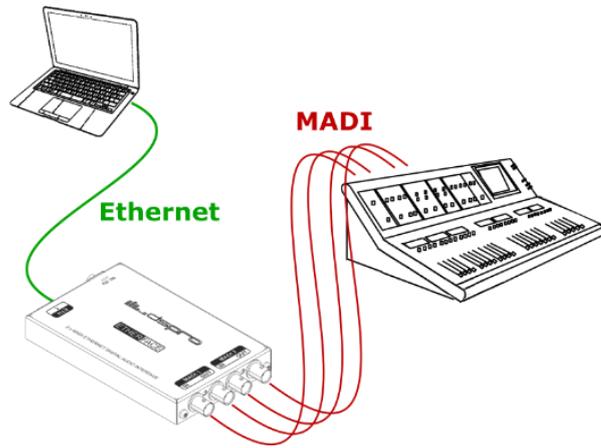


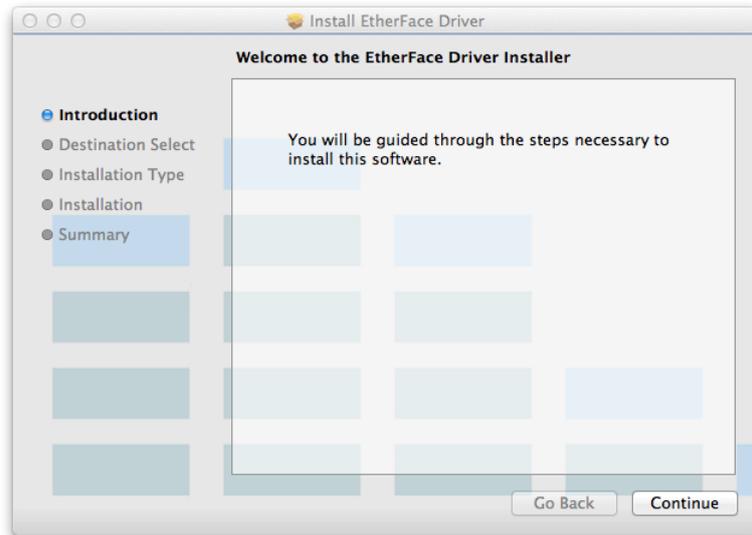
Figure 4 MIDI Connection

4. Download and install the correct driver for your system, ASIO for Windows® and CoreAudio for Mac OS® from the following website:

www.etherface.com.br

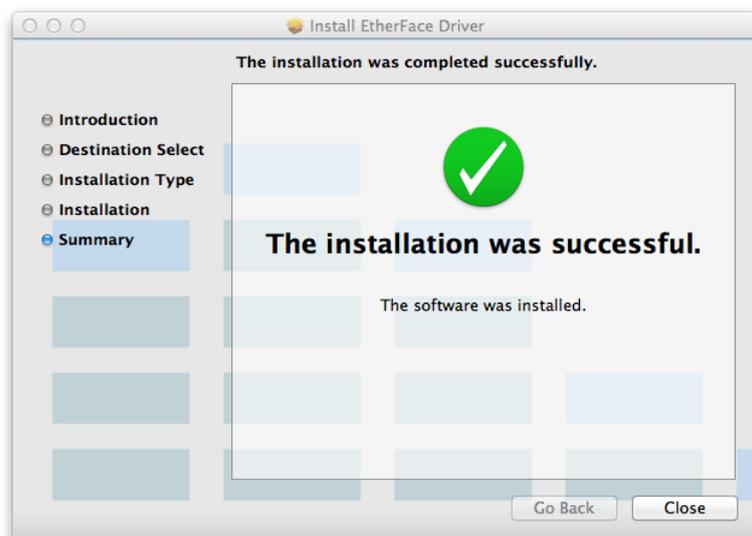
4. DRIVER INSTALATION

To install the driver double click "EtherfaceDriver_vx.y.pkg" and follow on screen instructions.

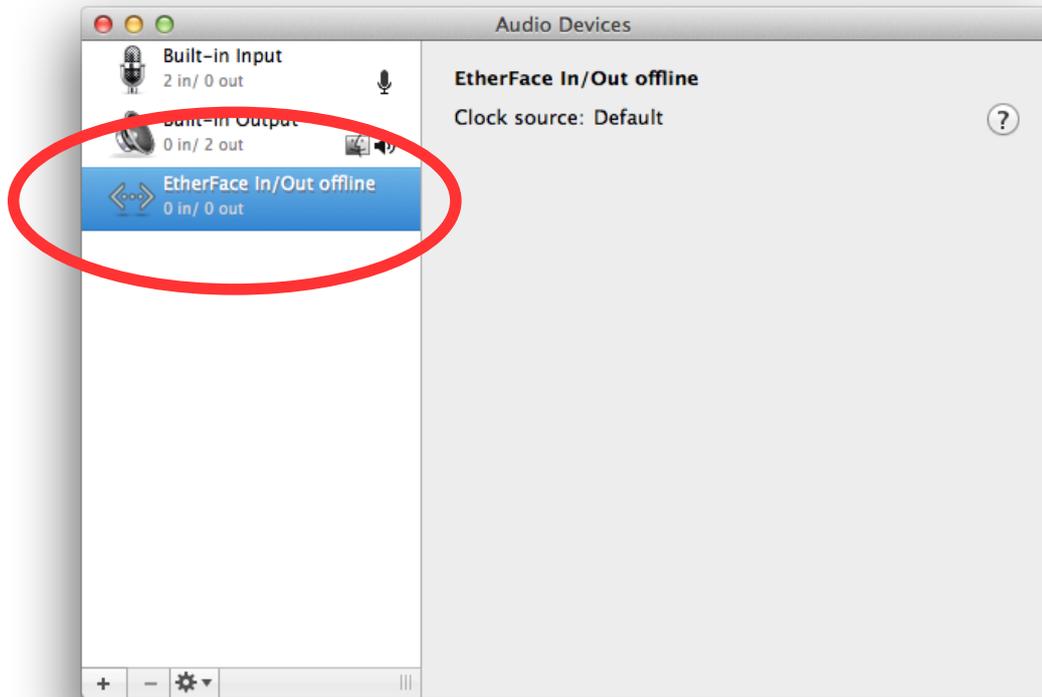


After clicking Install, you will need administrator privileges.

On successful installation, the following screen will be shown:



Now you can check the driver in Audio Devices configuration screen. If it is not there yet, the system may need to be restarted.



5. SYSTEM REQUIREMENTS

The minimum system requirements for the proper operation of the driver is:

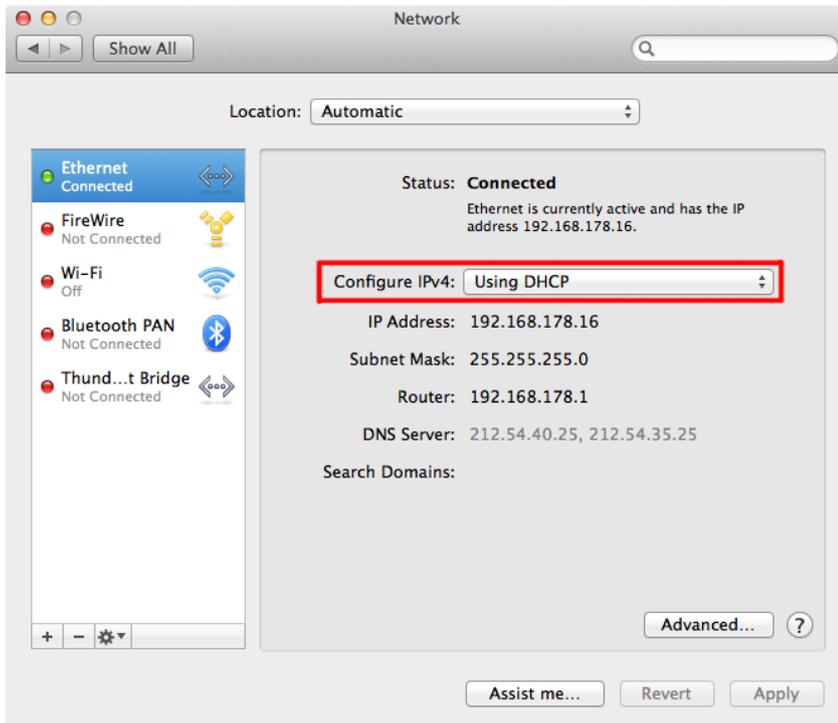
- Mac OS X 10.8 "Lion"
- 2GB RAM memory
- 2GHz two cores CPU

5.1. Enable DHCP

Go to **System Preferences** -> **Network**.



Select *Ethernet* and configure "Using DHCP":



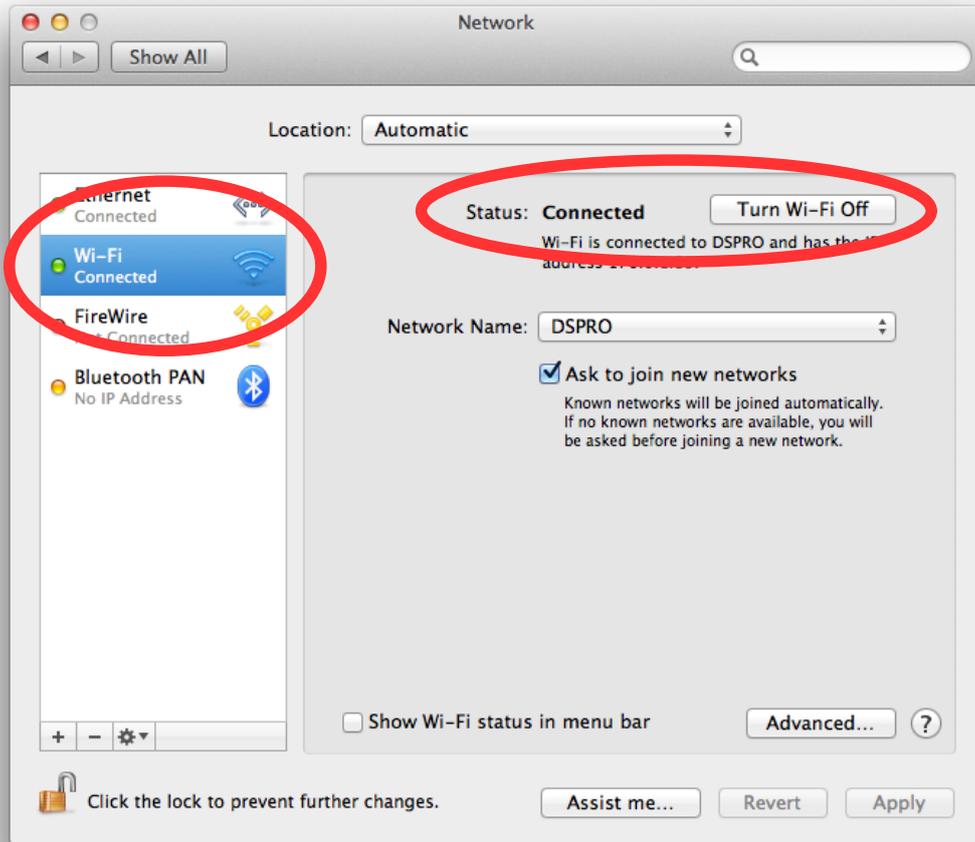
5.2. Disable Wi-Fi interface

Other network interfaces interfere with audio packet receptions and they need to be turned-off.

Go to **System Preferences -> Network**.



In the network configuration panel, select Wi-Fi and check if it is disabled. If it is not, click on *Turn Wi-Fi Off*.



6. NETWORK TOPOLOGIES

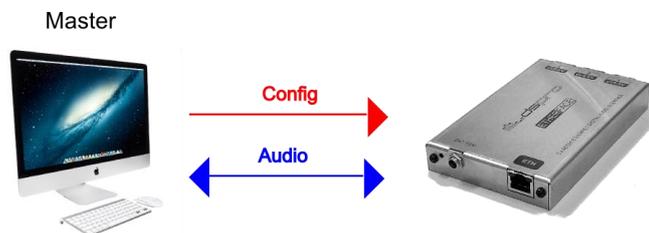
The EtherFace device can communicate and stream audio to several computers at the same time. However, only one computer at a time can manage and stream audio to it. In addition, only one EtherFace device can be present in the same network.

There are three modes of operation:

- **Master:** Computer sends and receives audio streams, and the application is able to manage EtherFace device configurations.
- **Master (Rec Only):** Computer only receives audio streams, but the application is still able to manage EtherFace device configurations.
- **Slave (Rec Only):** Computer only receives audio streams, and the application is NOT able to manage EtherFace device configurations.

6.1. Master Mode

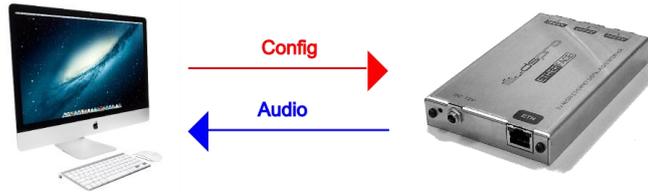
In a topology where the EtherFace is directly connected to a computer, the Master Mode is the most indicated.



6.2. Master (Rec Only) Mode

Master (Rec Only) Mode is used when the user wants to reduce computer resources usage by not sending audio streams, saving performance for other task it may have. In recording scenario where now playback is needed, this is the safest mode.

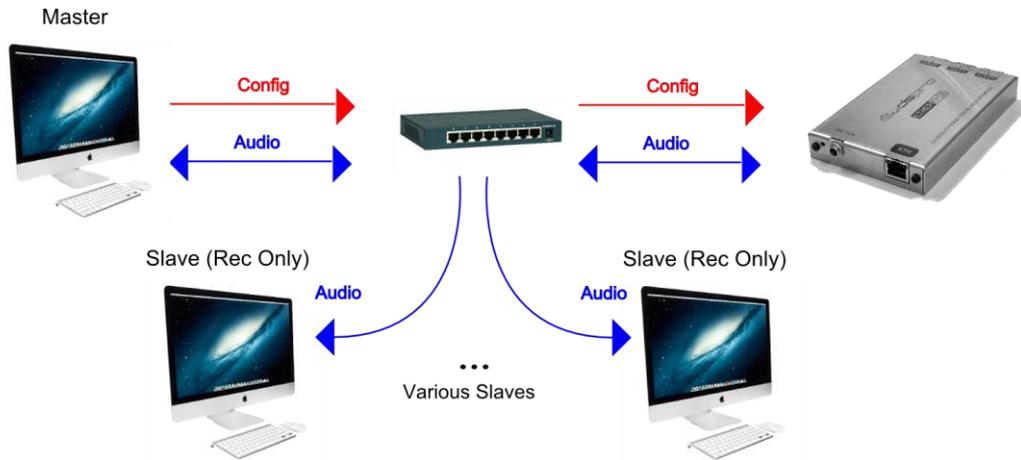
Master (Rec Only)



6.3. Slave (Rec Only) Mode

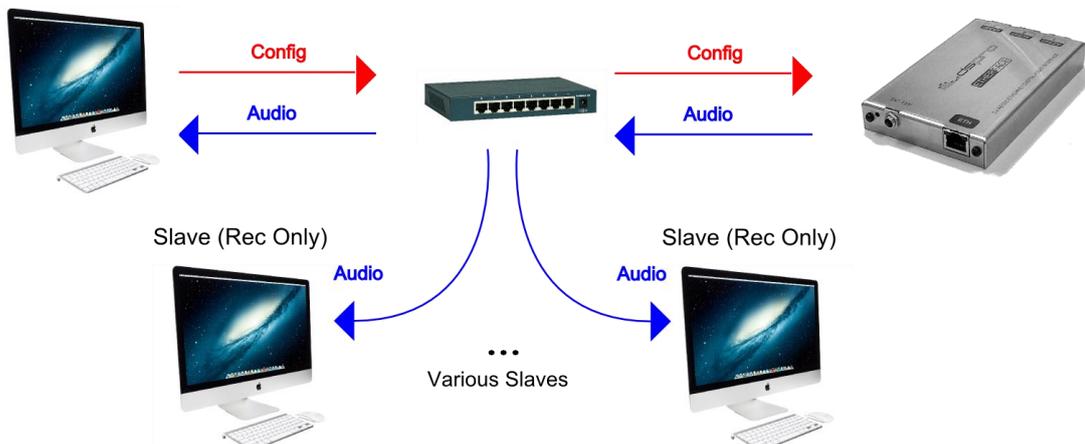
In the case where more than one computer are connected to the same EtherFace device, only one, and at least one, can be configured as *Master*, either *Master* or *Master (Rec Only)*. All other must be *Slave (Rec Only)*.

In the following scenario, one computer is *Master*, and is able to manage the device and send audio streams. All computers receive the EtherFace audio, but no one gets the audio streamed by the *Master* computer. The *Master* audio streams are only seen by the EtherFace device.



In the next scenario, the main computer is in *Master (Rec Only)* mode. The behavior is similar to the previous one, but no audio stream is sent to the EtherFace.

Master (Rec Only)



6.4. *Unsupported Mode*

It is not possible to connect more than one EtherFace to the same network or the same computer.



7. DRIVER CONFIGURATION

7.1. Opening Configuration Panel

There are two ways to open configuration panel for EtherFace driver.

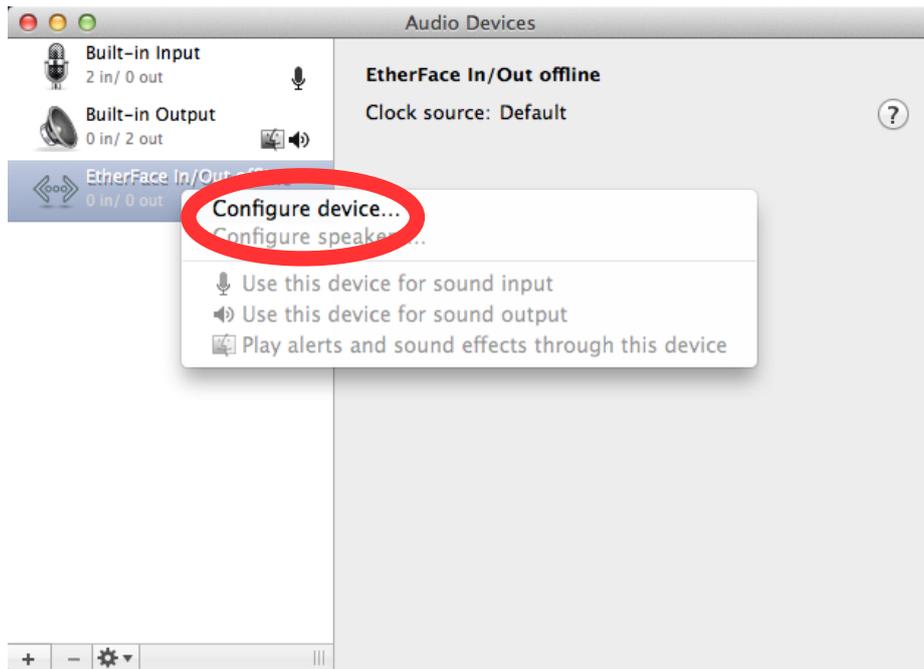
The first one is the EtherFace Driver app in **Applications** system folder. You can find it in **Launchpad**:



The other one is thru **Audio MIDI Setup**. In the following figure, we can see it in **Launchpad**:



In **Audio MIDI Setup** screen, right click *EtherFace In/Out* and choose *Configure Device*.



7.2. The Configuration Panel

The EtherFace Driver configuration panel has the following layout:



1. **Driver ON/OFF:** controls driver operation. Driver always starts disabled and it needs to be turned on every time you boot the system to start receiving and transmitting audio. Application only allows you to enable the driver once it has detected a compatible device connected to the computer.
2. **Operation Mode:** choose the operation mode.
 - **Master:** driver transmits and receives audio from EtherFace Device. This computer is responsible for the EtherFace configuration.
 - **Master (Rec Only):** driver only receives audio from EtherFace Device. This computer is responsible for the EtherFace configuration.
 - **Slave (Rec Only):** driver only receives audio from EtherFace Device. This computer does not configure the EtherFace.
3. **Buffer:** sets the size of buffer in number of samples. It is used in both directions, in the computer reception of the packets sent by EtherFace, and in the EtherFace reception for the packets sent by the computer. EtherFace reception has a maximum buffer of 10 thousand samples, though, depending on the number of enabled channels, the buffer may be limited to available memory. This configuration is independent of DAW buffer; however, performance is usually better when both buffers are configured identically.
4. **Channels:** number of enabled IN and OUT channels. In *Master (Rec Only)* and *Slave (Rec Only)* modes of operation, there is no OUT channels.

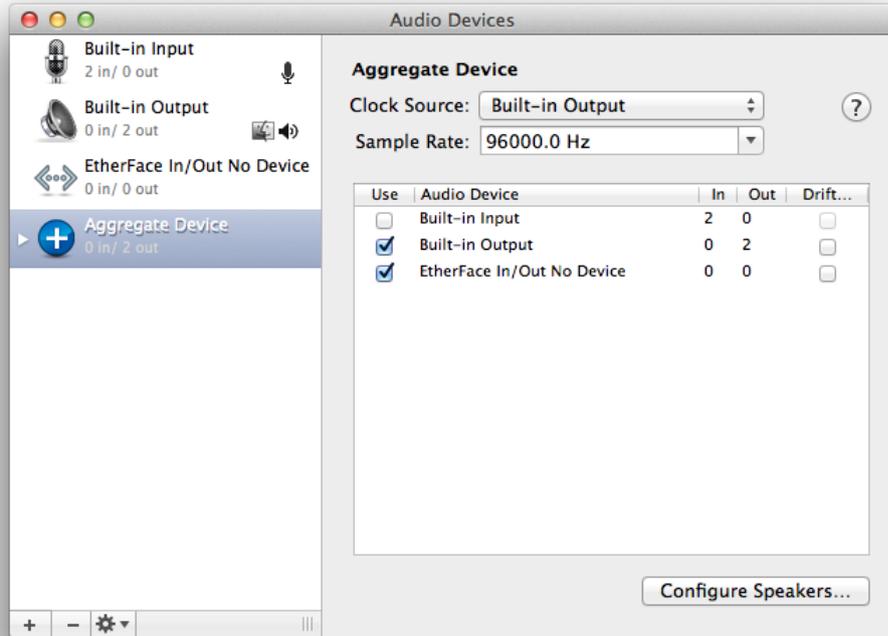
- 5. Network Interface:** defines the network interface used by the driver. If the *Auto* Checkbox is marked, the driver will search for a compatible device in all cabled network interfaces and will lock to the first one it finds.
- 6. Equipment:** shows the EtherFace model connected to the computer and a figure of its panel.
- 7. Sample Rate:** sample rate of the audio in the AES50 interfaces.

7.3. Step by Step Configuration

1. Configure Ethernet port to use DHCP.
2. Disable Wi-Fi interface
3. Connect the EtherFace to the computer.
4. Open Driver Configuration Panel. It will keep the last configuration used. If it detects the device the following screen should be presented:

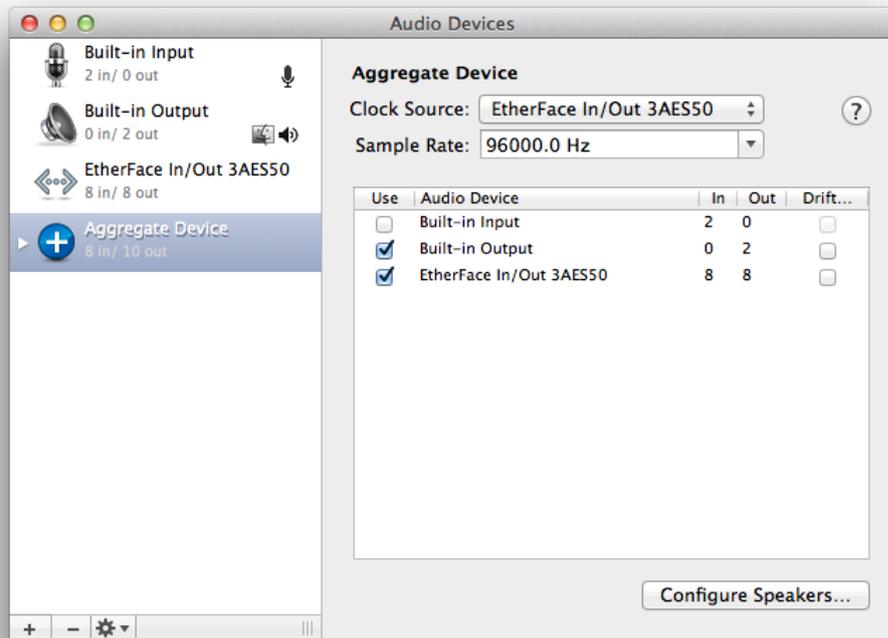


- 5.** Set the operation mode to *Master* or *Master (Rec Only)* if you do not need playback functionality.
- 6.** Configure the number of channels.
- 7.** Configure the Buffer you need.
- 8.** Select the network interface or check the *Auto* box (recommended) for automatic detection.
- 9.** Before you enable the driver, if you go to **Audio MIDI Setup** you should see EtherFace with zero channels and a string "no device" in the name.



10. Enable the Driver by clicking in the **Driver ON/OFF** button

11. Now, in **Audio MIDI Setup** you should see the number of channels and the EtherFace device type:



12. If necessary, do a Performance Test. See Chapter 6.

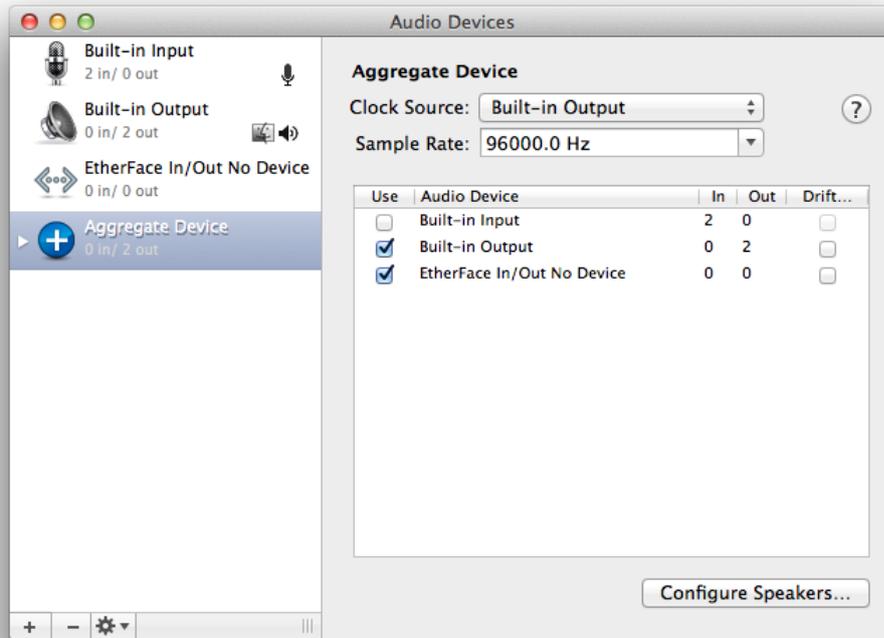
7.4. Working With Multiple Computers

After you have at least one computer configured as Master, others can be added to receive the audio streams from the EtherFace.

1. Configure Ethernet port to use DHCP.
2. Disable Wi-Fi interface
3. Connect the EtherFace to the computer.
4. Open Driver Configuration Panel. It will keep the last configuration used. If it detects the device the following screen should be presented:

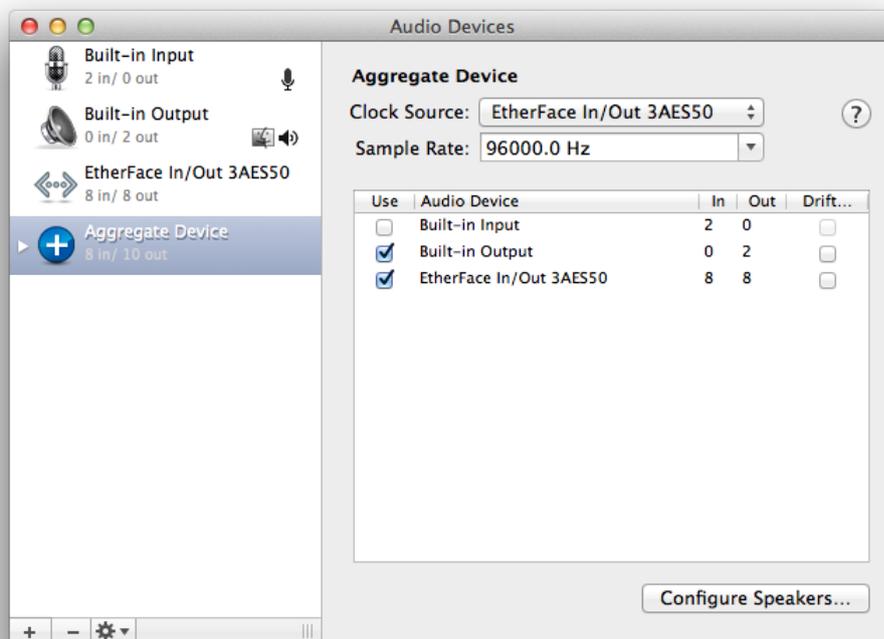


5. Set the operation mode to *Slave (Rec Only)*.
6. Number of channels will reflect the Master configuration.
7. Configure the Buffer you need. This will only affect the computer reception. EtherFace reception buffer is configured by the *Master*.
8. Select the network interface or check the *Auto* box (recommended) for automatic detection.
9. Before you enable the driver, if you go to **Audio MIDI Setup** you should see EtherFace with zero channels and a string "no device" in the name.



10. Enable the Driver by clicking in the **Driver ON/OFF** button

11. Now, in **Audio MIDI Setup** you should see the number of channels and the EtherFace device type:

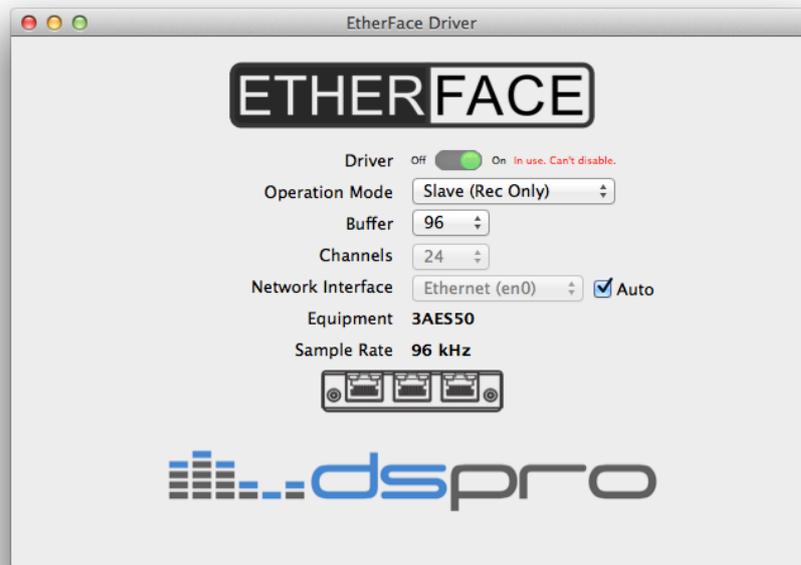


12. If necessary, do a Performance Test. See Chapter 6.

7.5. Disabling the Driver

There are three ways to disable the Driver:

- Closing the Configuration Panel. The Driver will be automatically disabled after all applications using it are closed.
- Clicking in the ON/OFF button in the Configuration Panel. If the driver is in use by another application, an error message will be shown: "*In use. Can't disable*". Close the other application to be able to turn the driver off.



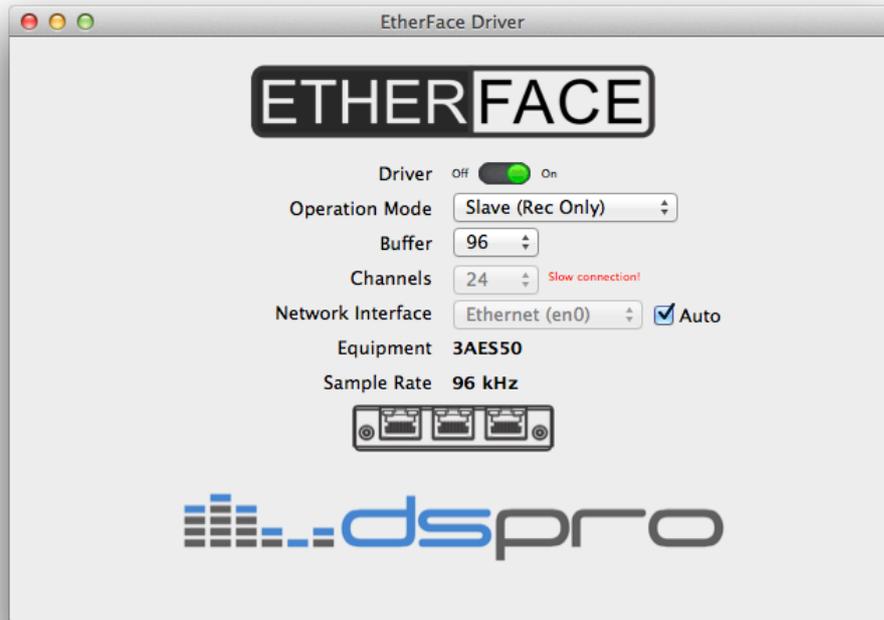
- Restart the computer. The driver needs to be enabled every time you boot the computer.

7.6. Warning message

7.6.1. Slow Connection

This message is shown at the right side of the Channel configuration when the connection between the computer and EtherFace Device is not Gigabit Ethernet.

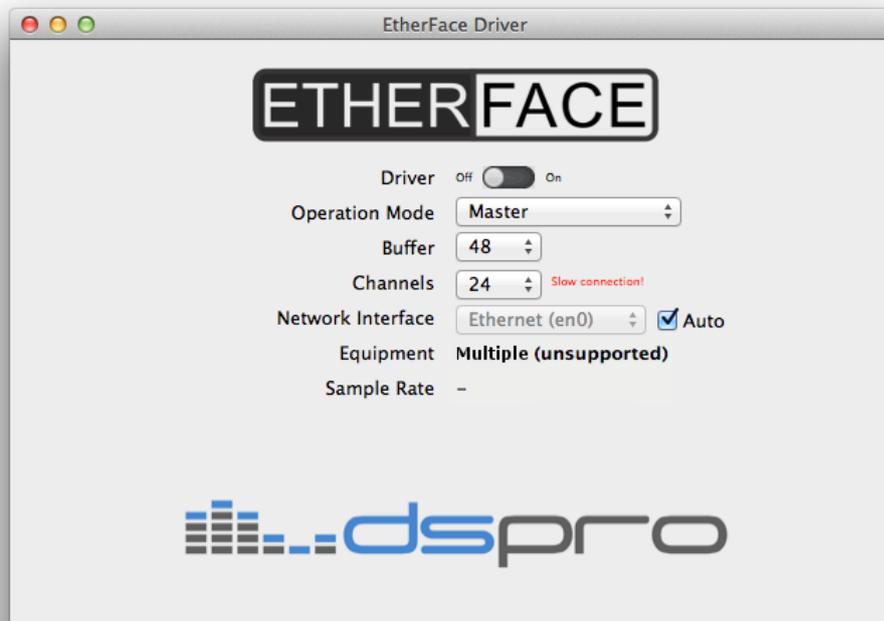
This affects the maximum number of channels and it can be caused by several reasons like poor cable connectivity or a bad Ethernet switch.



7.6.2. Multiple Devices

When the driver detects more than one device connected to the same port, this message is shown.

There is no support for multiple devices at the same time.

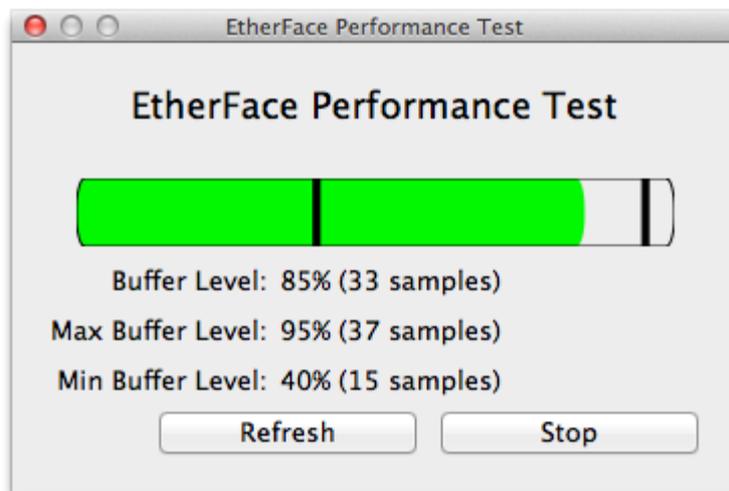


8. PERFORMANCE TEST

The application has a tool to help you configure the right buffer size for your application.

To access it, go to the top menu and choose *Tools->Performance Test*.

This test was design for you to be able to check the buffer status while the computer is performing all the activities demanded in your project, presenting valuable information for the correct dimensioning of a safe buffer size.



There is a *Start/Stop* button to control the test and a *Refresh* button to reset the minimum and maximum values.

1. **Buffer Level:** indicates the current buffer level. Is represented by the colored bar that can be:
 - **Green:** Safe buffer level
 - **Yellow:** Buffer is near critical zone
 - **Red:** Buffer has reached the critical zone.
2. **Max Buffer Level:** the maximum buffer level after the last refresh. It is represented by a black bar at the right side of the graphic.
3. **Min Buffer Level:** the minimum buffer level after the last refresh. It is represented by a black bar at the left side of the graphic.

This test should be done while the computer if fully loaded with your other applications and plugins.

9. LED INDICATIONS

Device LEDs give you a visual feedback of the equipment status.

9.1. DC 12V

This LED indicates if power is applied to the device.

9.2. ETH Port

This port has two LEDs:

Orange	Green	Picture	Status
OFF	OFF		No link
OFF	Blinking		Link 100M + activity (limited channel count)
ON	Blinking		Link 1G + activity.

9.3. AES50 Ports

As ETH port, AES50 ports also have two LEDs each. The table below shows each possible state:

Orange	Green	Picture	Status
OFF	OFF		No link
OFF	ON		Audio and Clock Sync.

ON	OFF		No Audio or Clock Sync.
Blinking	ON		Each orange blink represents a bit error.
Blinking	Blinking		Corrupted Firmware. Update needed.

9.4. MADI Ports

Each MADI ports has one Green LED to indicate Frame Sync.

10. FIRMWARE UPDATE

The EtherFace equipment firmware should be compatible with the driver version, otherwise it will not be possible to enable the driver.

The driver application has the compatible firmware version within it, allowing equipment update as needed.

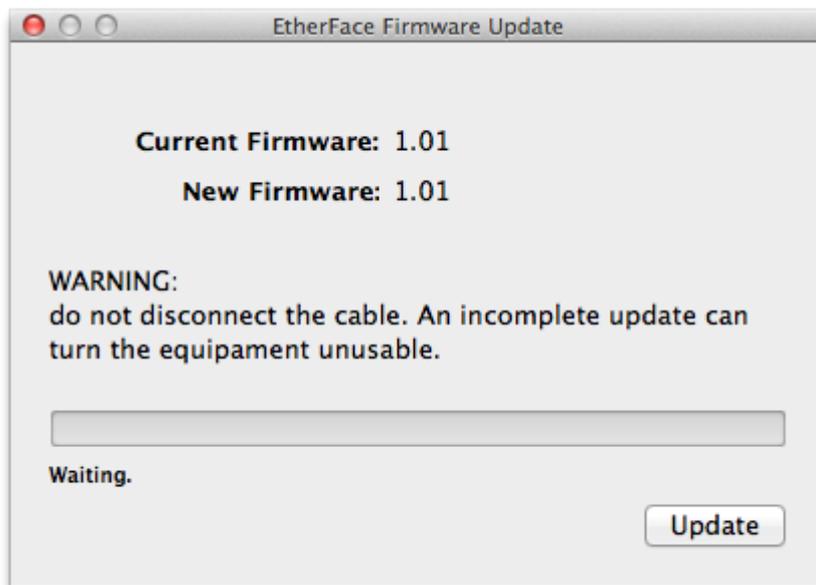
10.1. Update Procedure

The driver must be disabled for a firmware update.

Connect the EtherFace straight to the computer and wait until the application detects the device.

Open the Firmware Update screen in the menu *Update -> Firmware Update*.

Confirm the new version and click *Update* to install the new firmware.

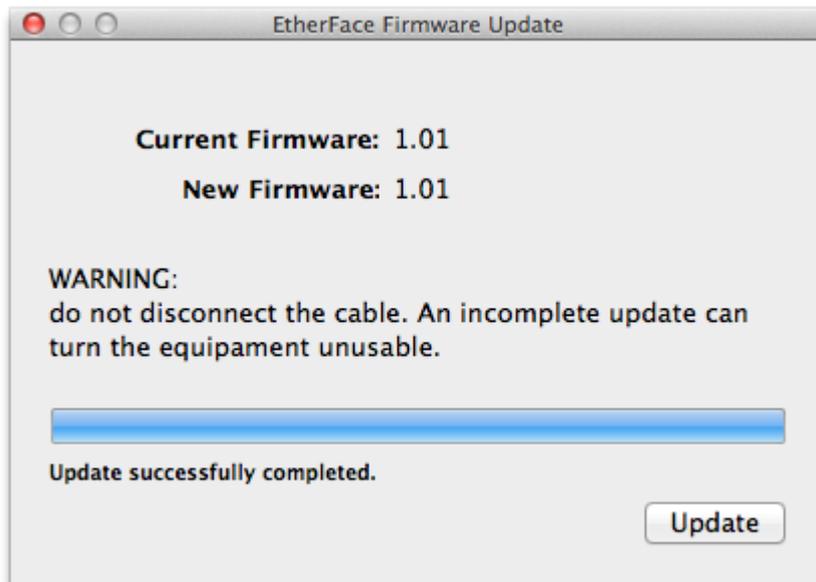


Wait until the progress bar reaches 100%.



DO NOT DISCONNECT THE DEVICE OR TURN THE POWER OFF

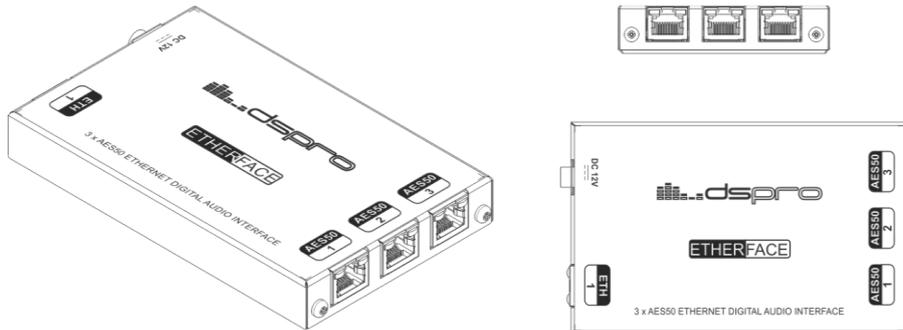
Once completed the message *"Update successfully completed."* should appear.



The equipment will automatically be rebooted.

11. TECHNICAL SPECIFICATIONS

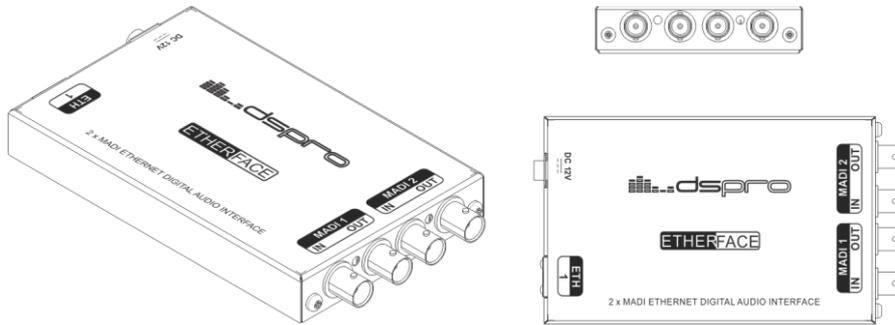
11.1. EtherFace 3x AES50



This EtherFace version has three AES50 ports for 24 channels in 96 KHz, allowing up to 72 IO channels.

SPECIFICATIONS	
AES50 ports	3
Channels	72 (24 per port)
Sample Rate	96kHz
Power	External DC 12V
PC interface	DSPRO Proprietary Protocol
DAW interface	ASIO or CoreAudio
Latency	2ms (Round Trip Delay)
Dimensions	134x84x19 mm

11.2. EtherFace 2x MADl



This EtherFace version has two MADl ports for 64 channels in 48 KHz, allowing up to 128 IO channels.

SPECIFICATIONS	
MADl ports	2
Channels	128 (64 per port)
Sample Rate	48kHz
Power	External DC 12V
PC interface	DSPRO Proprietary Protocol
DAW interface	ASIO or CoreAudio
Latency	2ms (Round Trip Delay)
Dimensions	134x84x19 mm

CONTACT US

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- Phone: +55 51 3044 4469

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