MATRIX AUDIO X-SPDIF 3 USB Digital Audio Interface User Manual

USB Digital Audio Interface
User Manual

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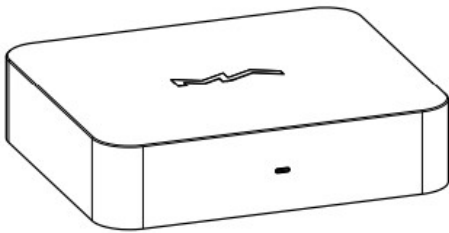
Product

Quick start guide

USB cable

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Parts and Names

Front Panel
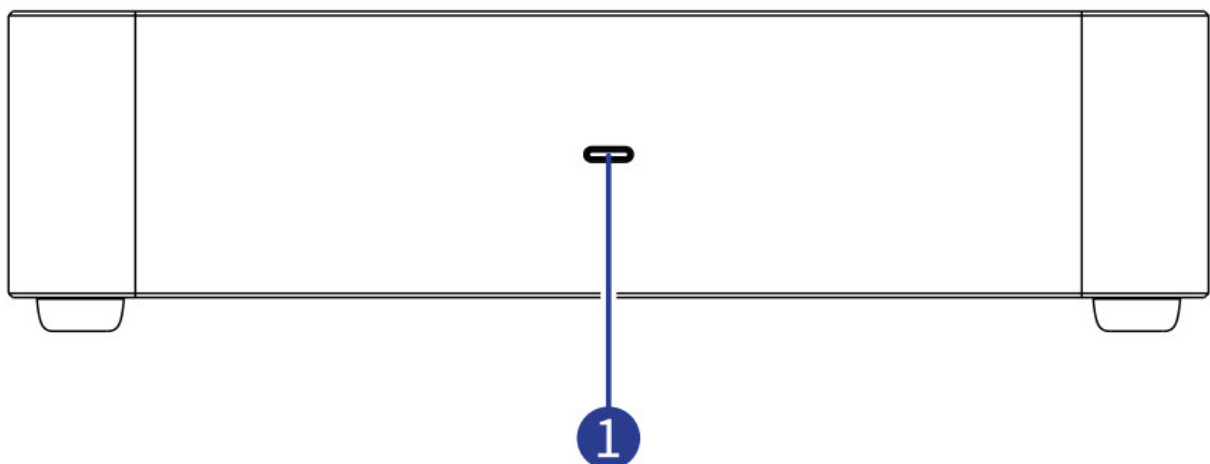
1. **LED Indicator**

- ⬤ Not Playing (yellow)
- ⬤ PCM (green)
- ⬤ DSD DoP (blue)
- ⬤ DSD Native (white)

Note: When the USB port is not connected or the connected device has no driver, the X-SPDIF3 is under a status of unable to work, the LED will not light up, and the unit will stay on standby.

The DSD status indicates the input data stream format of DSD, not the output data format from the IIS• LVDS port.

Pear Panel
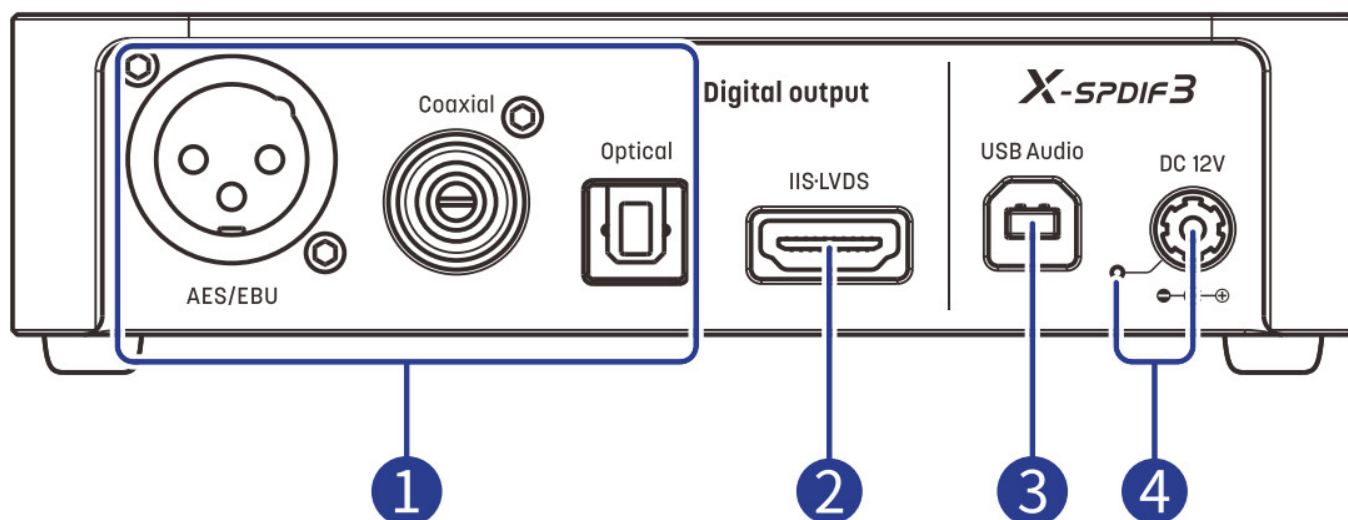
1. **Optical / Coaxial / AES**

   The optical, coaxial, and AES ports output up to 24Bit/192kHz PCM signal conforming to S/PDIF standard and 1Bit/DSD64 signal under DoP standard.

   Note: When the front-end device is outputting Native DSD, the S/PDIF output ports will turn off, and the Native DSD signal only output from the IIS•LVDS port.

2. **IIS·LVDS port**

   The ground wire of 115. LVDS port is electrically isolated with the ground of USB input and power input.

   The IIS•LVDS port outputs a maximum 32Bit/768kHz sampling rate PCM signal, DSD64/128/256/512 signal on Native DSD standard, and DSD64/128/256 signal on DoP standard.

3. **USB Audio port**

   Windows7/8/10/11 system environment is required to install supplied drivers.

   Mac OS X10.6.4 or above is not required to install drivers.

   Most Android devices work with this product via an OTG cable.

   The iOS devices work with this product via Lightning to USB Camera Kits.

4. **External power input and LED indicator**

When the product works with devices with low USB output current such as mobile phones or tablets, an external power supply is required. The USB bus power will be disconnected automatically when an external power supply is connected, the LED indicator will light up.

Note: Please note the polarity of the DC power plug, the output voltage of the power supply should not be higher than 12V, otherwise the device will be damaged.
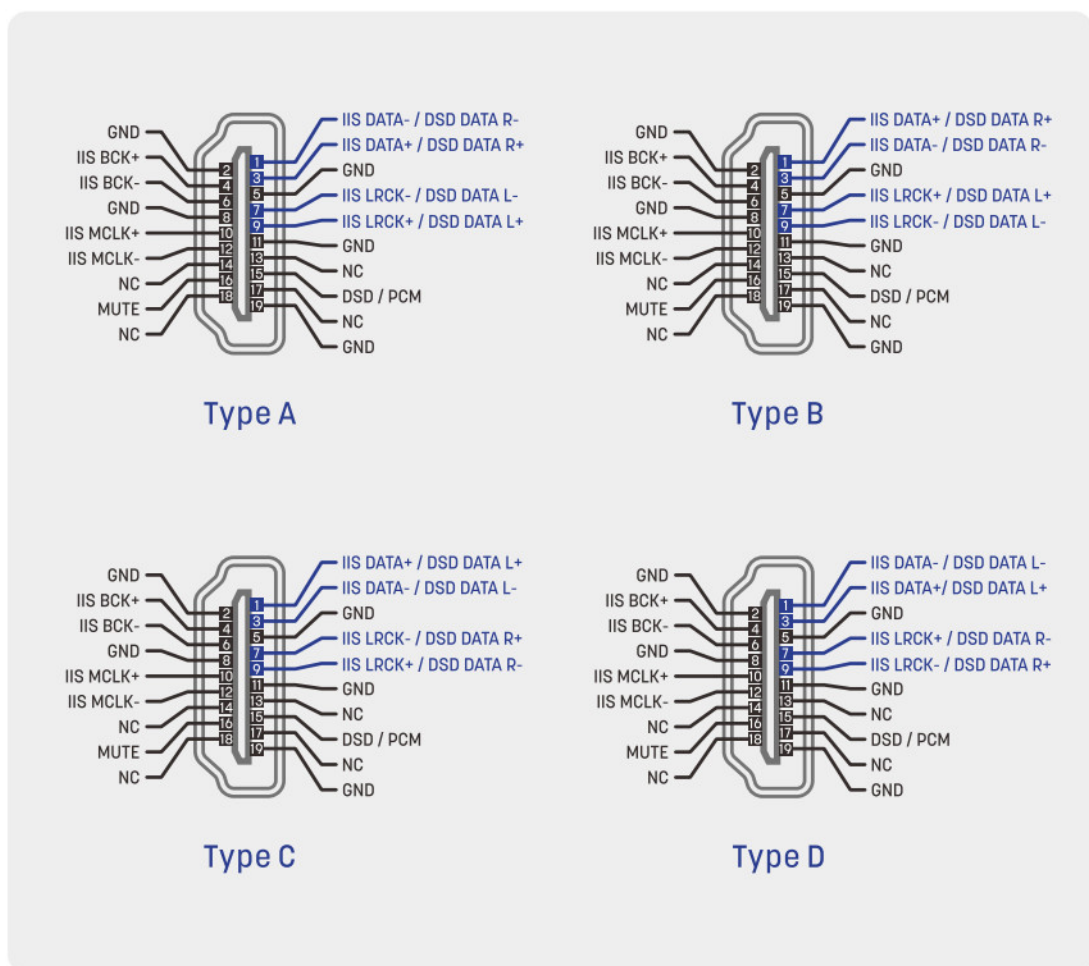
Bottom
IIS·LVDS port configuration
The functions of the IIS·LVDS port can be set up by the DIP switches on the bottom of the unit. As shown below:
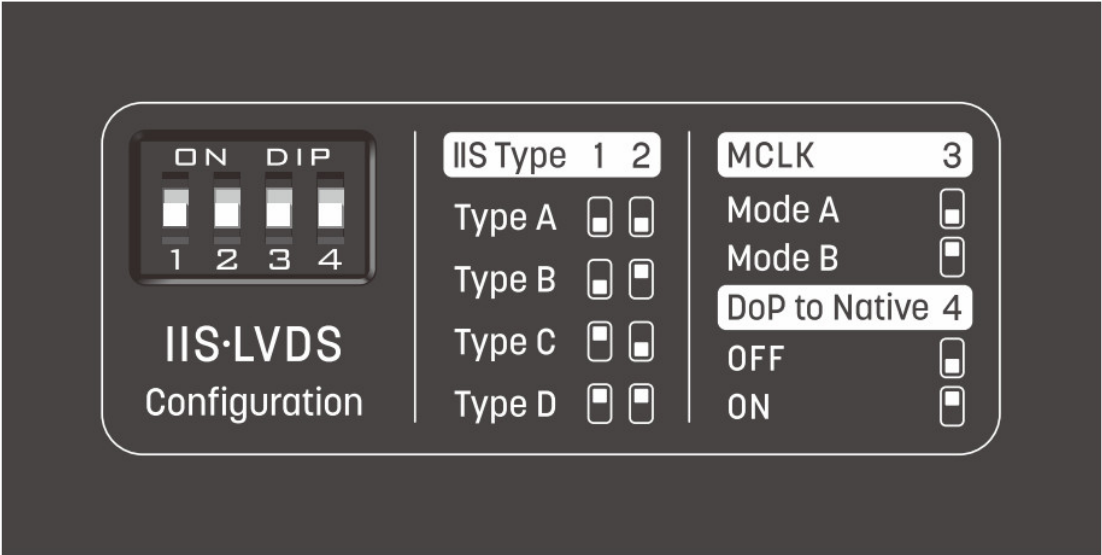
1. **IIS· LVDS port definition settings**

   The pin definition of the IIS·LVDS port can be set up by the DIP switches on the bottom of the unit. The definition diagrams are shown below:

Type A

Type B

Type C

Type D

2. **CLK mode switch**

   By setting this DIP switch to ON, the MCLK frequency will be fixed at 128fs, to match the ESS series D/A chips which are working under synchronous mode. The output frequencies are shown in the table below. When the DIP switch is ON, the correspondence frequencies are in column Mode B. When the DIP switch is OFF, the frequencies are in column Mode A. The MCLK output frequencies will conform to the frequency standards listed in the table below :

| Sampling Rate (kHz)	Mode A		Mode B	
	MCLK (fs)	Frequency (MHz)	MCLK (fs)	Frequency (MHz)
44.1	512	22.579	128	6.
48	512	24.576	128	6.
88.2	256	22.579	128	11.
96	256	24.576	128	12.
176.4	128	22.579	128	23.
192	128	24.576	128	25.
352.8	128	45.158	128	45.
384	128	49.152	128	49.
706.6	64	45.158	64	45.
768	64	49.152	64	49.

3. **DoP code conversion**

When playing DSD audio through DoP, set this DIP switch to ON to convert the DoP data to Native DSD data and output from the IIS•LVDS port. Set this switch to OFF, and the DSD data will output in the same format as the front-end device. (This setting will not take effect immediately when current DSD audio is playing, it takes effect on the next track.)
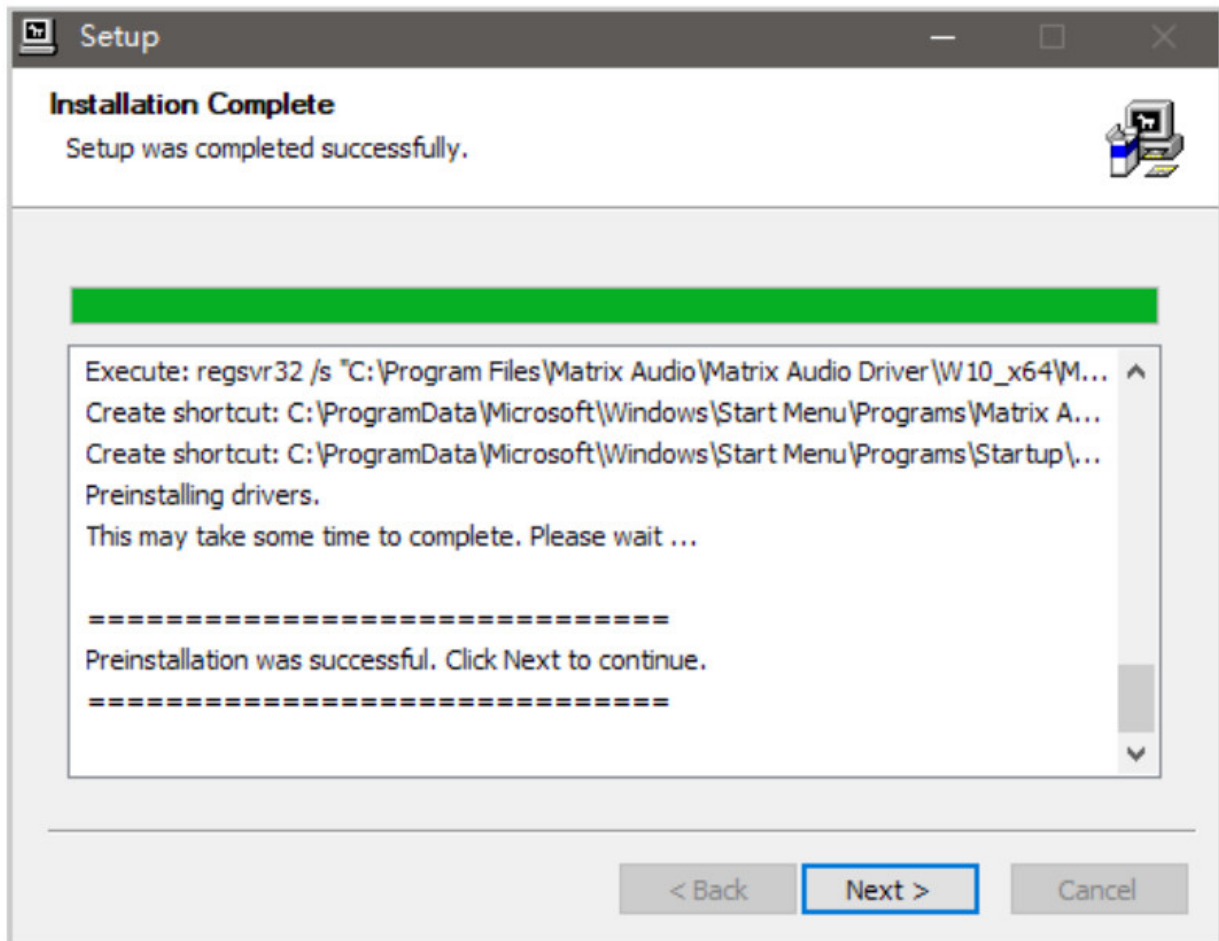
4. Install X-SPDIF3 drivers for Windows.

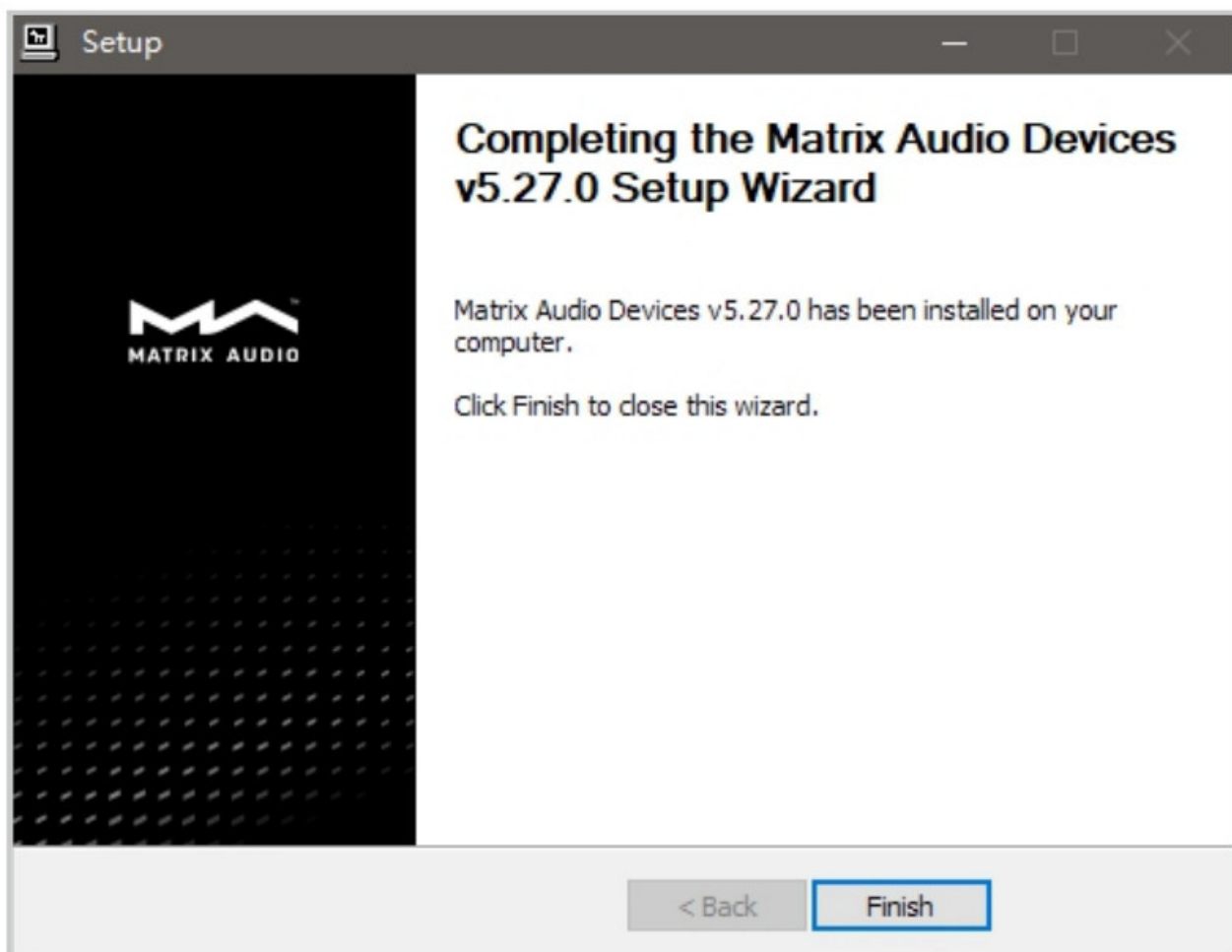Double-click the driver setup file, then click "Next".
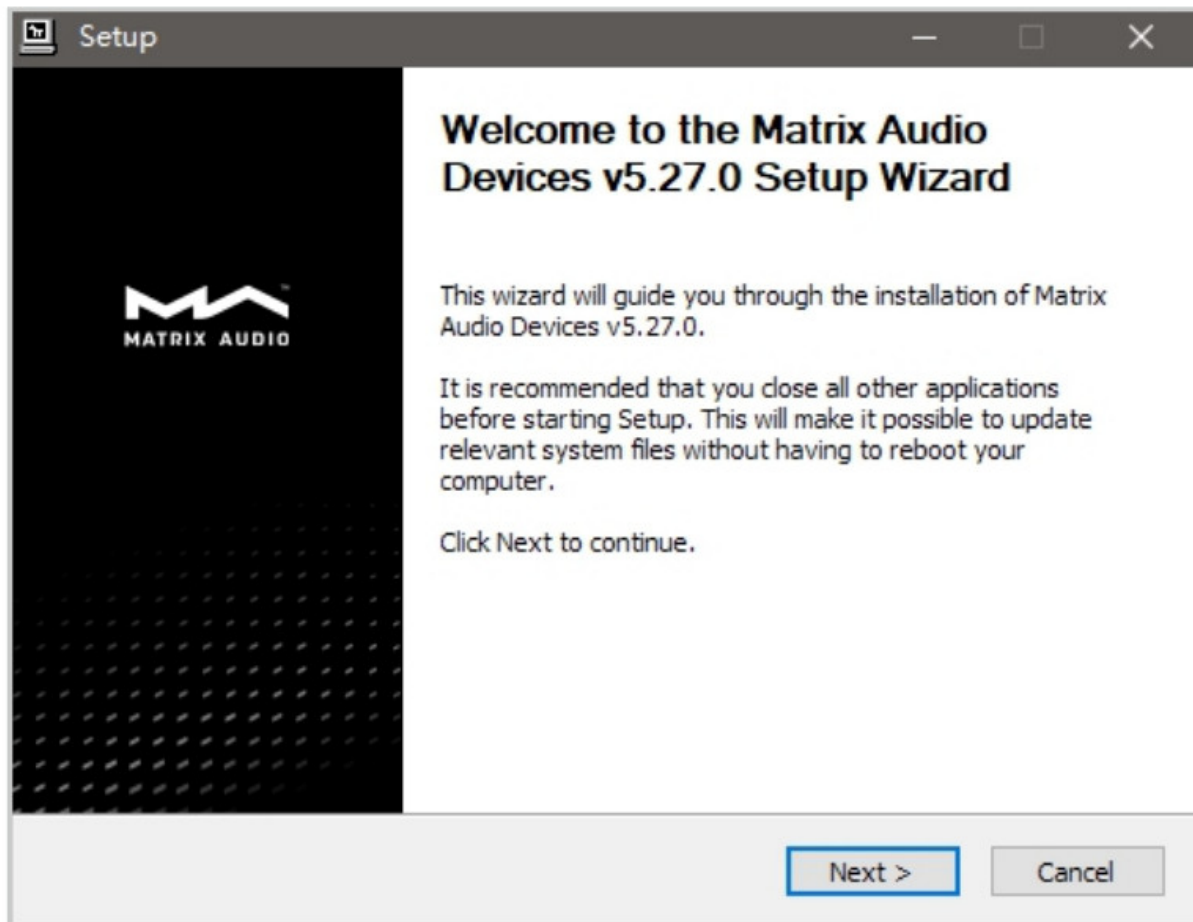
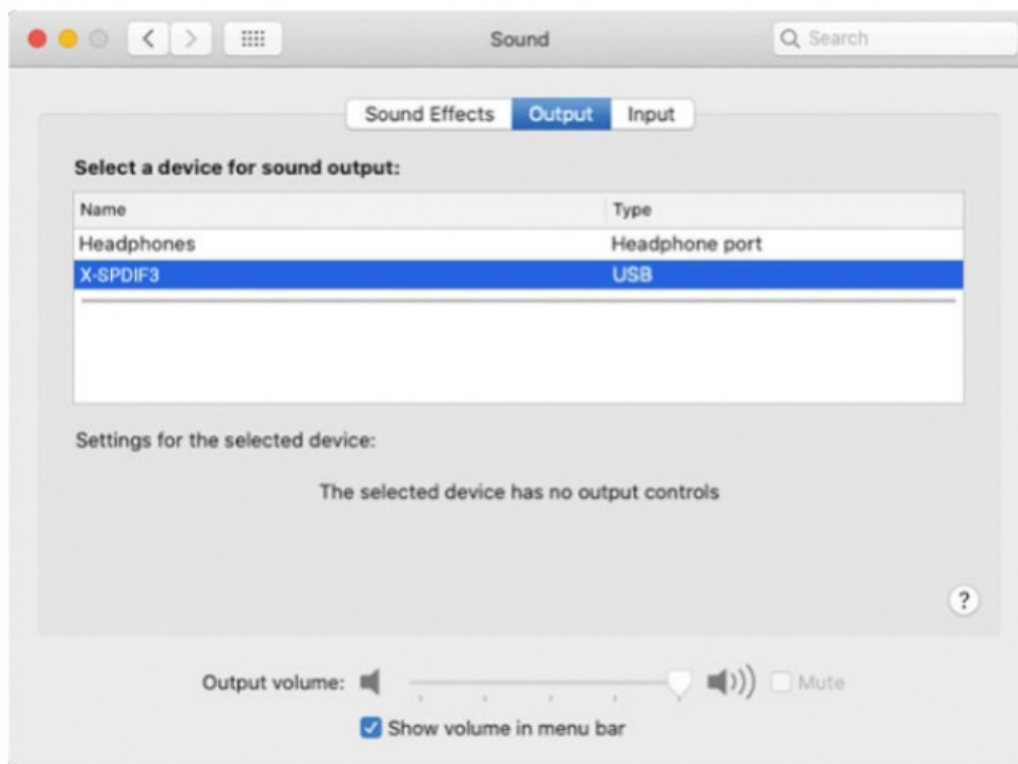Select the installation path and click "Install".
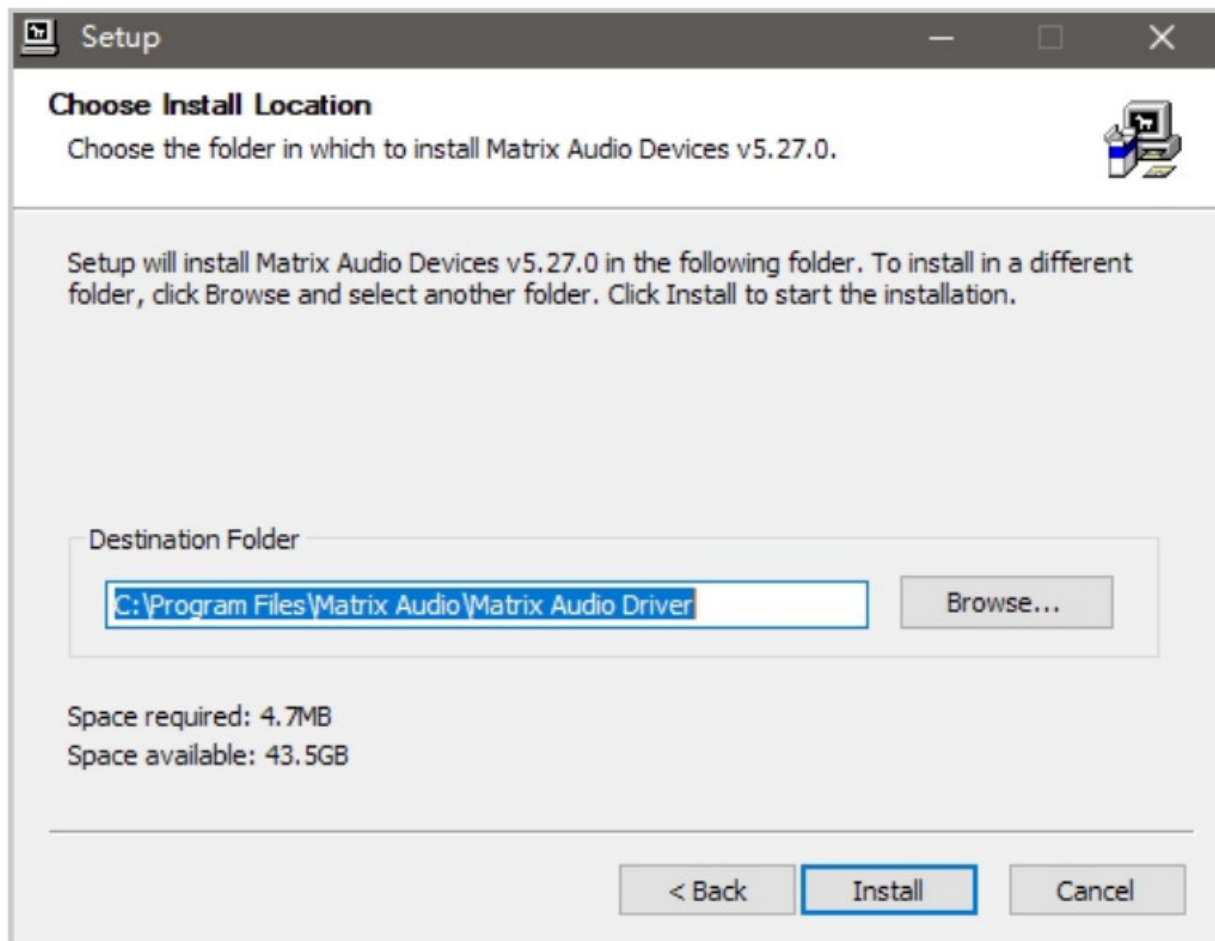
After installation, click "next".

Click "Finish" to complete the installation.

5. macOS does not need a driver. Select "MATRIX Audio X-SPDIF3" as the output device in Sound Preferences.

Appendix

Technical specifications
Sampling rates of Optical/Coaxial/AES ports
PCM 16-24Bit/44.1kHz,48kHz,88.2kHz,96kHz,176.4kHz,192kHz DSD 64(DoP)
Sampling rates of IIS•LVDS port
PCM 16-32Bit/44.1kHz,48kHz,88.2kHz,96kHz,176.4kHz,192kHz,352.8kHz, 384k1-1z,705.6kHz,768kHz
DSD 64/128/256/(DoP) , DSD 64/128/256/512(Native)
Power supply specifications
USB bus power supply: 5V/1A
External power supply: DC 12V, ≥400mA
Power supply plug: Outer diameter 5.5mm; inner diameter 2.1mm (+ for inner, – for outer)
Note: The input power supply should not be higher than 12V, otherwise the product could be damaged. The USB bus power supply will be disconnected when the external power supply is connected. An external power supply is required when using the product with low USB output current devices such as mobile phones or tablets.
Other specifications
Weight: 1kg
Dimension : 142 x 124 x 38mm (Wx Lx H,including protruding parts)

142mm

124mm

38mm
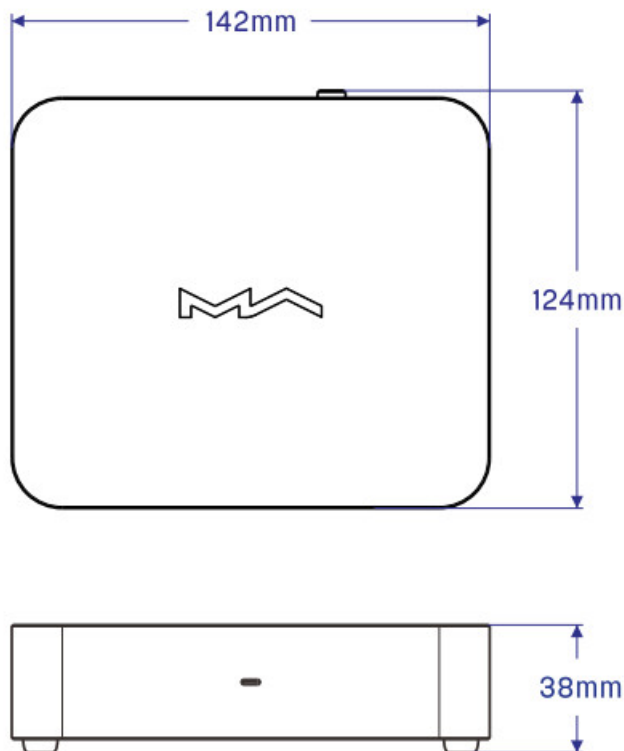
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Documents / Resources

	MATRIX AUDIO X-SPDIF 3 USB Digital Audio Interface [pdf] User Manual X-SPDIF 3, USB Digital Audio Interface, X-SPDIF 3 USB Digital Audio Interface, Digital Audio Interface, Audio Interface, Interface