

Solid State Logic

OXFORD • ENGLAND

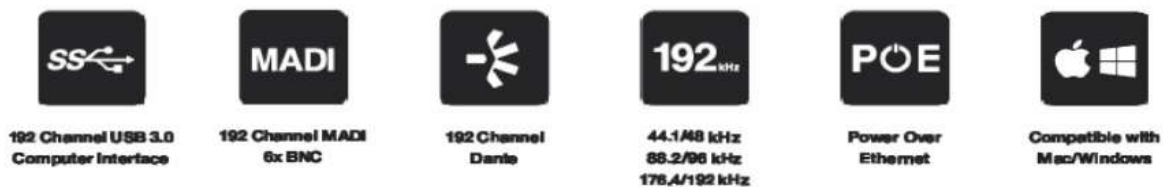
UMD192 User Guide



UMD192: Front Panel



UMD192: Rear Panel



Introduction to UMD192

High-capacity audio interface and format converter

UMD192 is a high-capacity USB audio interface for recording and playing back via MADI or Dante. Or alternatively can be used to bridge multiple MADI-connected devices into a Dante network. Bidirectional audio between any of the three formats is possible, with the third format also capable of taking a 'split' audio feed from either of the main connections.

UMD192 operates entirely without external software, with the exception of the Windows audio driver. All signal routing and configuration can be managed directly from the front panel, with an intuitive display providing clear feedback and status information. There is

no need to open an external application to view or adjust internal audio routing, and the Dante network can be used whenever more detailed, channel-level routing is required.

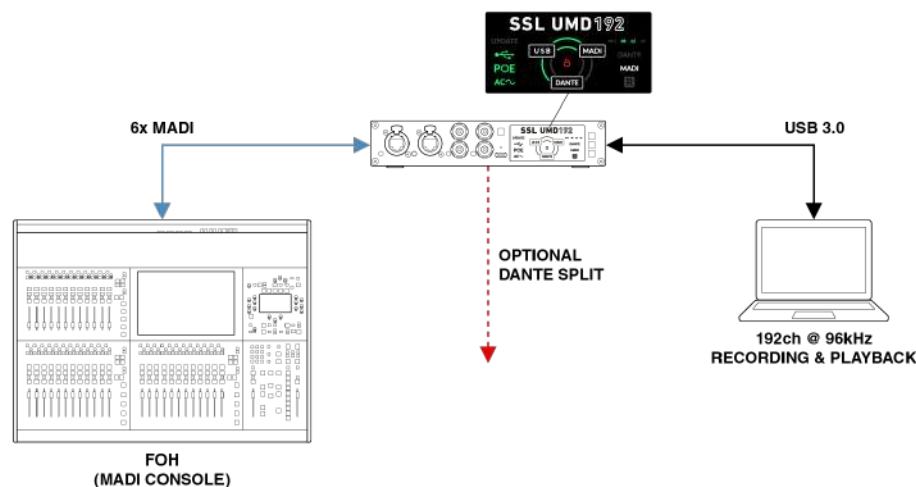
Features

- 192 channels at 48/44.1 kHz, 192 channels at 96/88.2 kHz, and 128 channels at 192/176.4 kHz
- USB 3.0 class-compliant interface
- Class Compliant Mac OS compatible; Windows support via SSL driver
- 6x MADI BNC pairs with redundant mode for 3x dual-redundant MADI connections
- Fully interoperable Dante AoIP with AES67 and ST 2110 (with DDM) support
- Ultra-low Dante latency—as low as 0.25ms
- Flexible clocking from MADI or Dante
- Ruggedised Ethernet ports (2x Primary, 2x Secondary) with Link & Activity LEDs
- Clear front-panel indicators for signal flow, sample rate matching, power status, and connectivity
- Intuitive front-panel controls, with a lockout feature to prevent accidental changes during operation.
- Multiple power options: AC, PoE, or USB—with redundancy support
- Lightweight and portable design for desktop, console-side, or rack-mounted use
- Included cables: USB-C to C, USB-A to C adapter, IEC power cable

Applications Overview

1. Live Sound: Recording & Virtual Sound Check

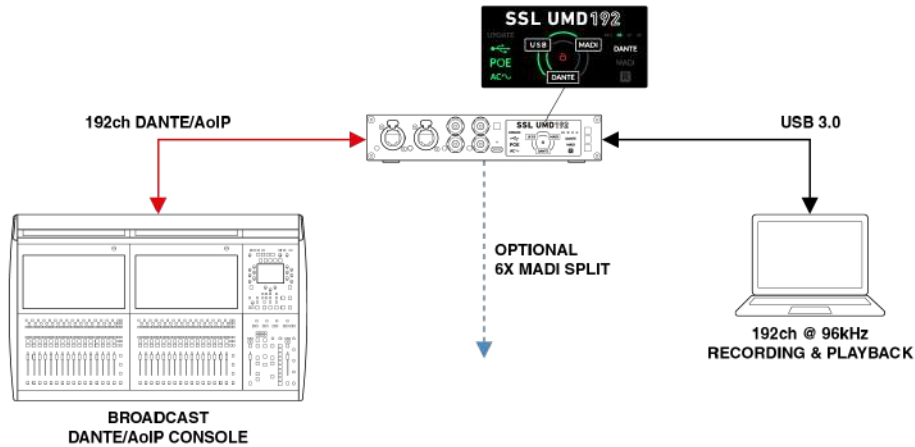
High capacity USB3 interface for MADI when working with large channel counts for recording or playback with any MADI based console or system. An optional Dante split feed is available in this example.



Note: the same Live sound recording and virtual soundcheck use case can be done with a Dante enabled console, with the console and the split connection swapped.

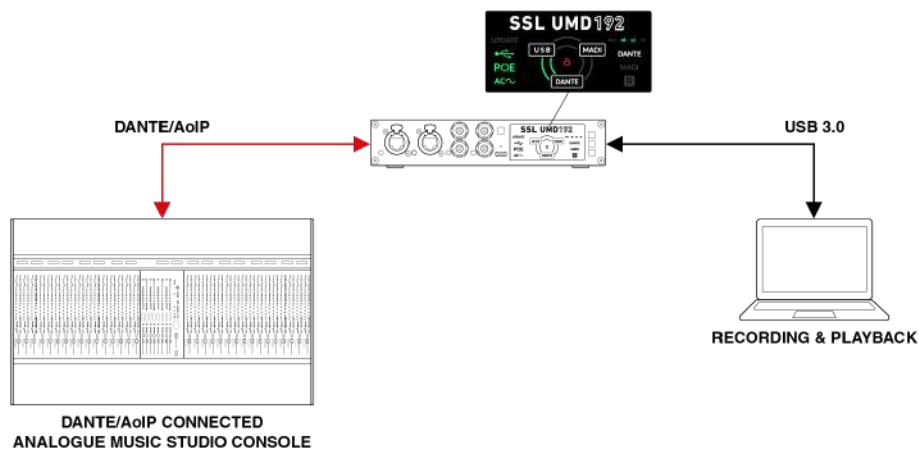
2. Mobile Live Recording: Recording & Playback

High capacity USB3 interface for Dante when working with large channel counts for recording and playback with Dante enabled digital consoles. An optional MADI split feed is available in this example.



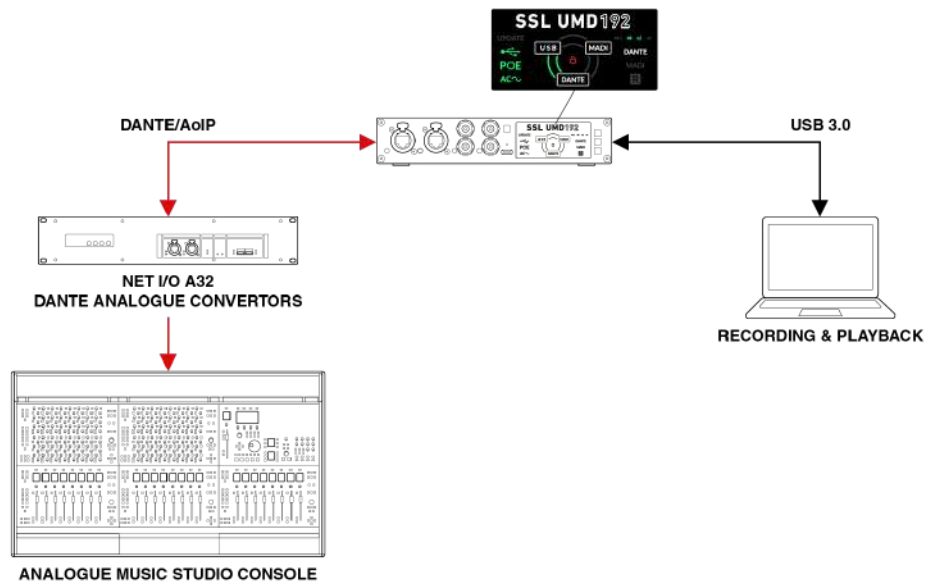
3. Recording Studio: Recording & Playback

High capacity USB3 interface for Dante when working with large channel counts for recording and playback with Dante connected analogue music studio consoles.



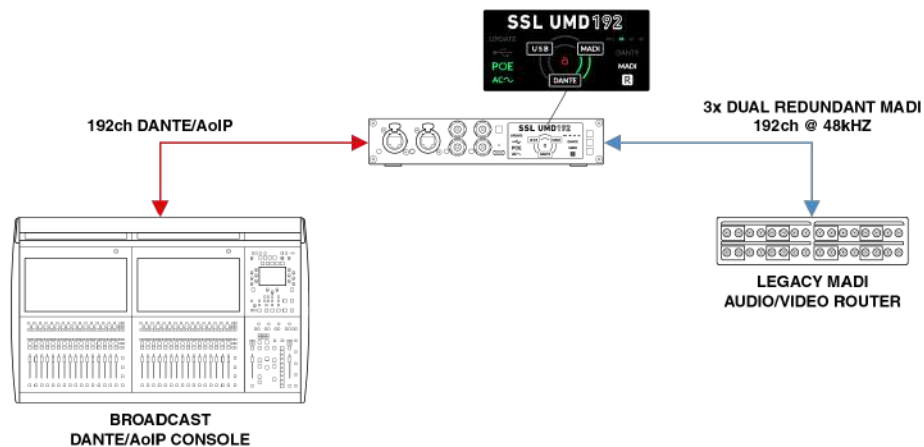
4. Recording Studio: Recording & Playback

High capacity USB3 interface for Dante when working with large channel counts for recording and playback with analogue music studio consoles. In this example an SSL Net I/O A32 analogue to Dante converter is utilised between the analogue console and the UMD192 Dante I/O.



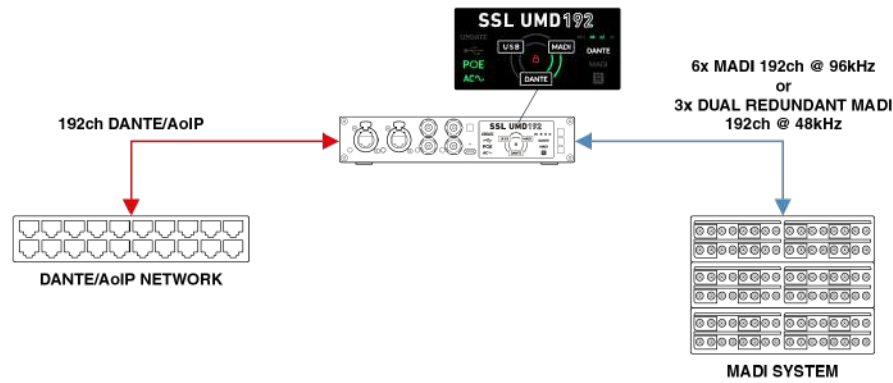
5. Broadcast: High density MADI – Dante/AoIP bridging (with console)

High density MADI interface providing redundant MADI connectivity and bridging to a Dante connected broadcast console



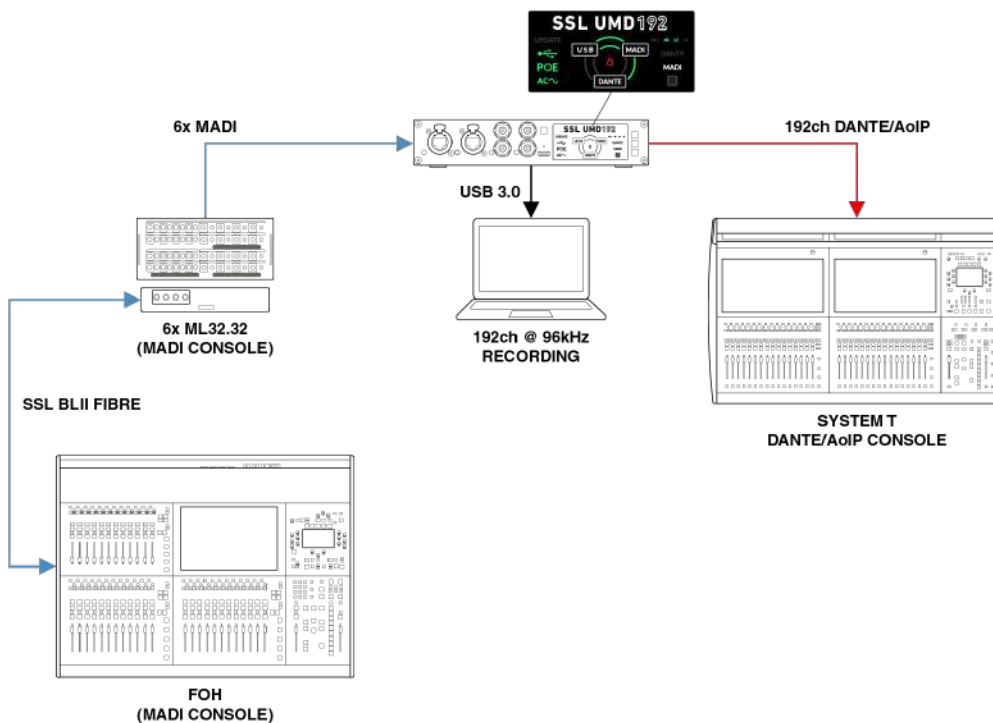
6. Broadcast, Events & Live: High density MADI – Dante/AoIP bridging

High density MADI interface providing single or redundant MADI connectivity and bridging to a Dante network.



7. Live Sound: Stage input recording and distribution

In this example the split outputs of the SSL ML32.32 MADI Stagebox feed the Dante console (e.g. System T) & the USB split feeds the computer for recording.



Blacklight II™ (a.k.a. BLII) is SSL's proprietary digital multichannel audio format. It provides 256 redundant bidirectional uncompressed audio channels from an SSL BLII and Dante equipped Live console to/from Dante networks over fibre at 24-bit and at either 96 kHz or 48 kHz resolution.

Getting Started

Unpacking

The unit has been carefully packed and inside the box you will find the following items:

- UMD192
- USB3 C to C USB3 Cable
- USB3 C to A adapter - **see note on USB2 & USB3 mode below.**
- IEC Power Cable for your region
- Safety Guide

USB Cables & Power

Please connect the SSL UMD192 to your computer using the provided USB cable. The USB connector on the front of SSL UMD192 is a C type. The type of USB port you have available on your computer will determine if the USB C to A adapter is required.

For full capacity to be available UMD192 requires USB3.0 or higher. The USB3 C-to-A adapter can operate in either USB2 or USB3 mode depending on the orientation of the USB-C cable. If the UMD192 indicates USB2 mode (shown by the USB LED lighting orange), rotate the USB-C cable 180 degrees within the adapter to switch to USB3 mode.

For best stability and performance, we recommend using the included USB cable & adapter if you need it. It should be possible to use a longer cable; however, this does depend on the quality of the cable (cables with lower-quality conductors tend to drop more voltage over the cable length).

Registering Your SSL UMD192

To register your product, head to www.solidstatellogic.com/get-started and follow the on-screen instructions. During the registration process, you'll need to input the serial number of your unit. This can be found on the label on the base of your unit. Note the serial number begins with the letters UMD.

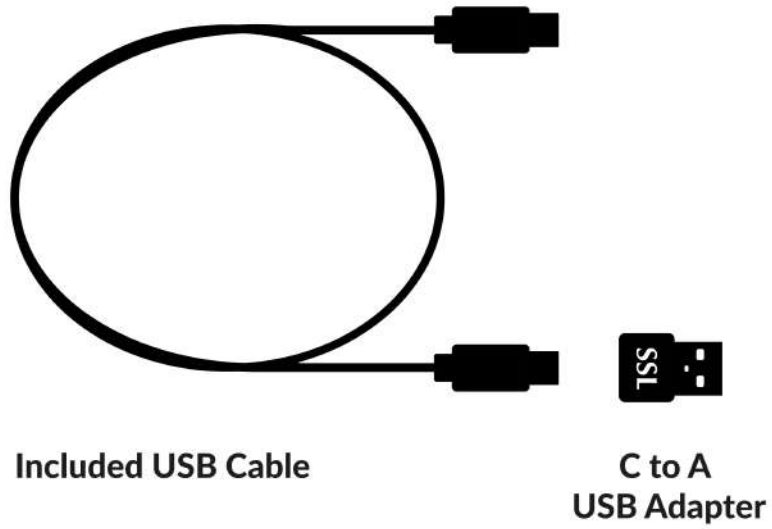
Quick Start

USB Connectivity and Driver Installation

If you are using the unit as a MADI <> Dante Bridge this may not be required.

Connections

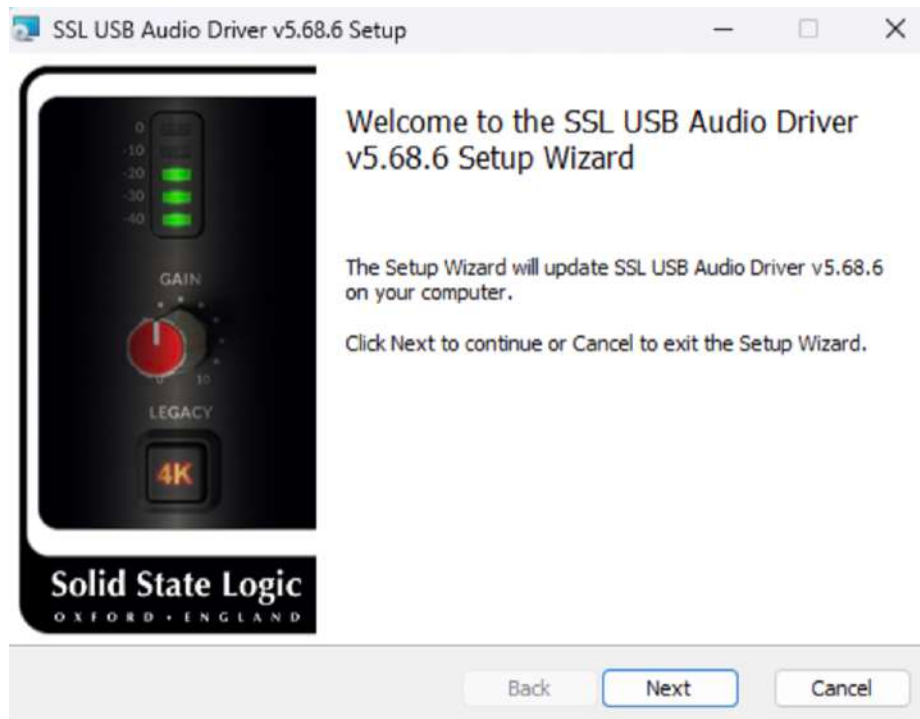
Connect your SSL USB audio interface to your computer using the included USB cable.



Driver (Windows)

(Windows ONLY) Download and install the SSL USB ASIO/WDM Driver to use with your UMD192.

Note - This driver will be updated when UMD192 starts shipping to customers later in February 2026.

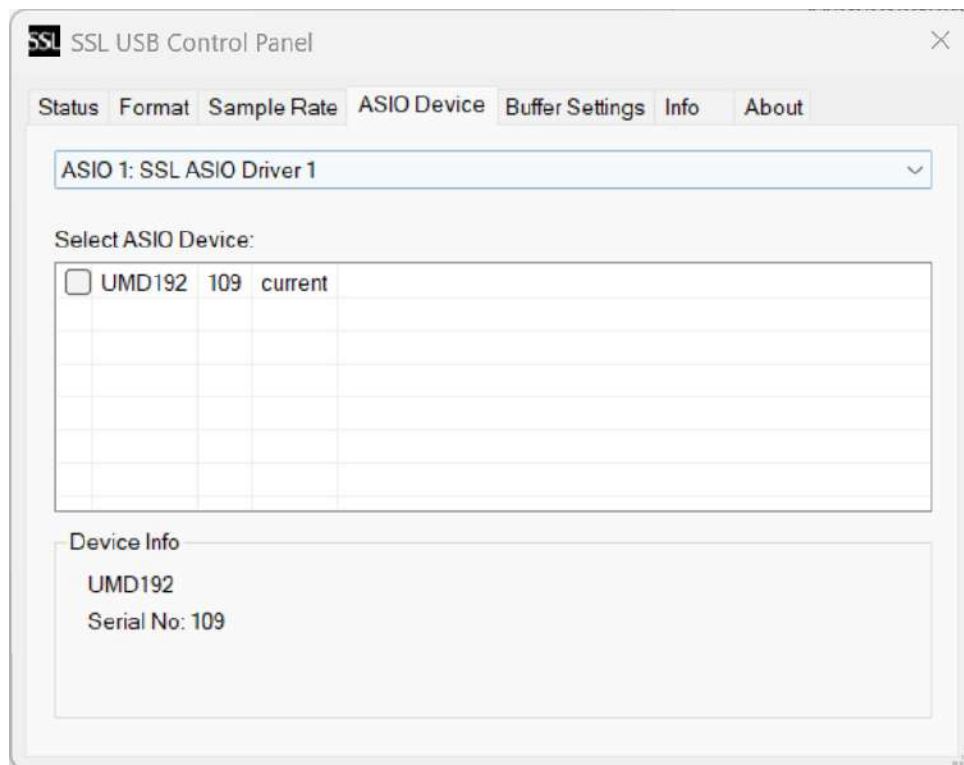


SSL USB Control Panel (Windows Only)

If you're working on Windows and have installed the USB Audio Driver required to make the unit operational, you will have noticed that as part of the installation the SSL USB Control Panel will be installed onto your computer.

This Control Panel will report details such as the Sample Rate and the Buffer Size your UMD192 is running at. Please note that UMD192's sample rate is determined by the Dante or MADI clock source, and it not controllable from your DAW.

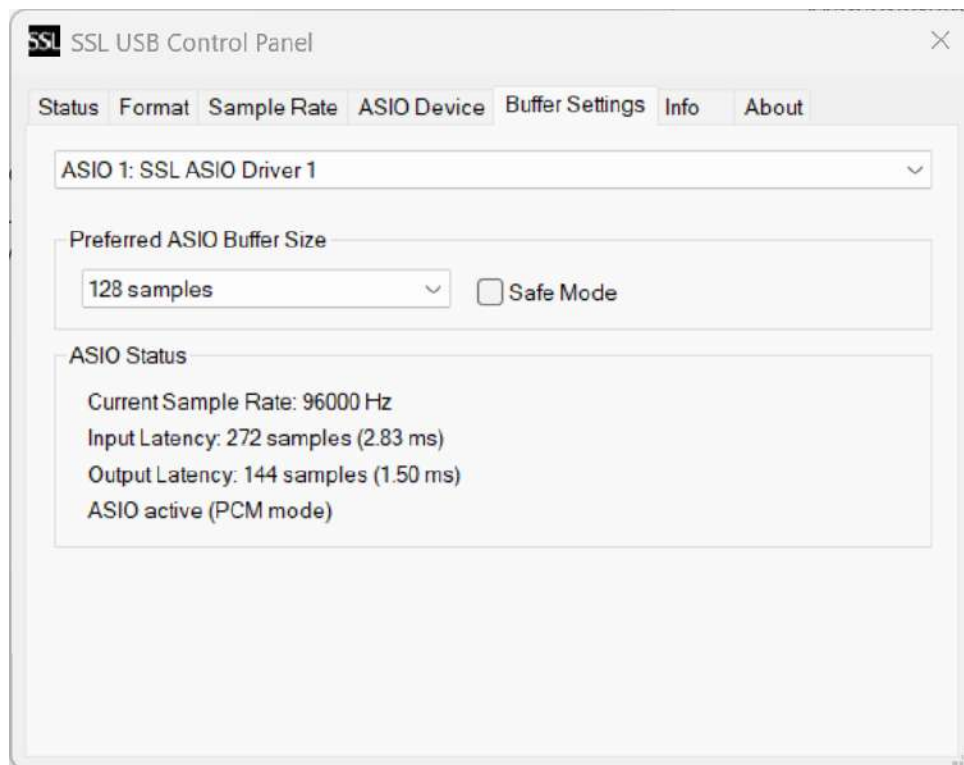
The Control Panel is also where you can assign your UMD192 to an ASIO Device, allowing multiple ASIO applications working with multiple SSL USB devices to be used on a single system or in a multi-client environment.



Please refer to this [article](#) for a detailed explanation of linking your interface to one of the 4 ASIO driver slots to UMD192

Safe Mode

Safe Mode can be controlled from the SSL USB Control panel using the tickbox on the 'Buffer Settings' tab. Safe mode defaults to ticked but can be unticked. Unticking Safe Mode will reduce the overall Output Latency of the device, which may be useful if you are looking to achieve the lowest possible round-trip latency in your recording. However, unticking this box may cause unexpected audio clicks/pops if your system is under strain.



Windows Optimisations

For stable high-channel-count performance on Windows, a modern high-performance machine and appropriate system optimisations may be required.

If you are having issues playing back audio from your PC, such as clicks and pops in your recording, you may need to optimize Windows for audio.

Recommended optimisations include:

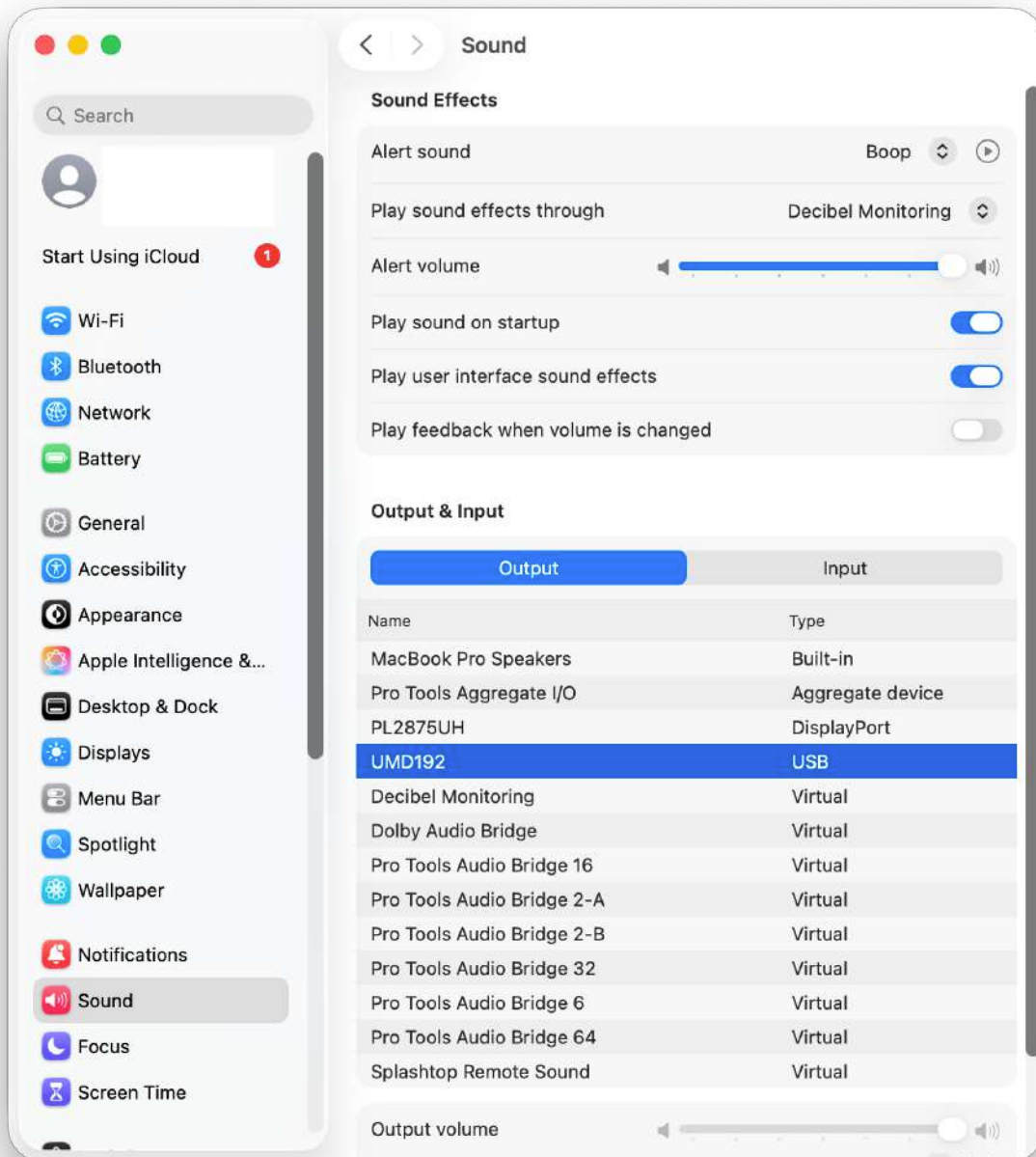
- Selecting the High Performance or Ultimate Performance power plan and using an external power supply when operating a laptop. In some cases, creating a custom power plan tailored for audio performance may be beneficial.
- Increasing the buffer size in the SSL USB Control Panel.
- Disabling Wi-Fi and/or minimising any network activity unrelated to Dante audio.
- Reducing the number of running applications and background processes.

As a performance benchmark, systems using 13th-generation Intel® Core™ i5 processors or higher, or Intel® Core™ Ultra (or later) machines running on mains power, have successfully sustained 192 × 192 channels of uninterrupted, glitch-free audio during extended testing.

Some further points about optimisation can be found here - [Optimising your computer for SSL USB audio interfaces – SSL Support](#)

macOS setup

Simply go to 'System Preferences' then 'Sound' and select UMD192 as the input and output device (drivers are not required for operation on Mac).



Network AoIP/Dante Connectivity

UMD192 provides both primary and secondary network connections on the front and rear of the unit. The Primary and Secondary ports are intended for connection to redundant networks. The dual front-and-rear layout allows the unit to be wired permanently to a switch via the rear ports, while the front ports make it easy to connect a computer or an additional Dante device when the unit is installed in a rack.

If you are using the Dante functionality of UMD192 you are likely to require Dante Controller running a computer connected to the same network as the UMD192. There is no Dante control via the USB connection on the UMD192.

Refer to Audinate's Dante Controller user guide for complete information on Dante Controller software. Detailed information is available from Audinate's website including download information and the Dante Controller User Guide:

<https://www.getdante.com/products/software-essentials/dante-controller/>

Network Config

Each device requires its own unique IP address. This may be automatically configured, provided by a DHCP server or assigned manually. Unless shipped as part of a preconfigured system, Network I/O units are set to obtain an IP address automatically.

If the IP settings need to be changed to a fixed address – to match the network environment in which the unit is to be installed – this can be achieved using the Dante Controller application.

Remember that the computer's network adapter configuration will also need to be updated to match the Network I/O.

The primary and secondary ports must not be connected to the same logical network. Ideally, separate switching hardware should be provided for primary and secondary networks. Creating VLANs on shared hardware is acceptable but does not provide the most robust redundancy.

AES67 & ST 2110 RTP

UMD192 supports AES67 utilising Audinate's AES67 mode. See - AES67 Config

UMD192 must be enrolled in a managed Dante Domain using Dante Domain Manager in order to access the advanced clocking options and the additional ST 2110 RTP configuration features beyond those provided by Audinate's standard AES67 mode. See - AES67 and SMPTE Domains

MADI Connectivity

UMD192 provides six MADI BNC pairs, supporting three dual-redundant MADI connections. Each MADI input automatically detects whether it is operating in 64-channel or 56-channel mode. When a connection is running in 56-channel mode, the MADI In Sync LED will display a slow periodic flash to indicate this state.

Legacy (SMUX) format MADI is not supported.

Channel Counts for each Interface at each Sample Rate

Sample Rate	1 FS (44.1/48 kHz)	x2 FS (88.2/96 kHz)	x4 FS (176.4/192 kHz)
USB3.0 Channel Count	192	192	128
Dante Channel Count	192	192	128
MADI Channel count (redundant mode OFF)	192	192	96
MADI Channel count (redundant mode ON)	192	96	48

Front Panel Operation and Indication

Front Panel Controls

UMD192's front-panel controls are locked by default to prevent accidental changes. Pressing and holding the padlock button temporarily unlocks the controls, allowing the other buttons to be used to change modes. Changes are only applied once the padlock button is released, giving the user the opportunity to cycle through options and return to the original setting before committing.

Button Icon	Name	Function
	Lockout	Press and hold to unlock other front panel controls. Press and hold until the red lock symbol in the centre of the circle in the indicator panel turns off
	Mode	Press to cycle through the signal flow modes – <i>Available when front panel is unlocked.</i>
	Clock source	Press to toggle between Dante and MADI as clock source – <i>Available when front panel is unlocked.</i>
	MADI Redundancy	Press to toggle between MADI Redundancy on or off. Redundant mode applies to all MADI ports. – <i>Available when front panel is unlocked.</i>

Signal Flow

Bidirectional audio between any of the three formats is possible, with the third format also capable of taking a 'split' audio feed from either of the main connections. This results in 9 possible signal flow modes, with an additional mode in which all interface outputs are looped back to their inputs (useful for testing).

Indication	Mode	Details
	USB-MADI	Audio bidirectionally between USB and MADI.
	USB-MADI (Dante from MADI)	Audio bidirectionally between USB and MADI, plus Dante transmit feed from the MADI input.
	USB-MADI (Dante from USB)	Audio bidirectionally between USB and MADI, plus Dante transmit feed from USB playing back from the computer.
	MADI-Dante	Audio bidirectionally between MADI and Dante.
	MADI-Dante (USB from Dante)	Audio bidirectionally between MADI and Dante, plus USB feeding into the computer from Dante receive.
	MADI-Dante (USB from MADI)	Audio bidirectionally between MADI and Dante, plus USB feeding into the computer from MADI input.
	USB-Dante	Audio bidirectionally between USB and Dante.
	USB-Dante (MADI from USB)	Audio bidirectionally between USB and Dante, plus MADI output from USB playing back from the computer.
	USB-Dante (MADI from Dante)	Audio bidirectionally between USB and Dante, plus MADI output from Dante receive.



Loopback
mode

Each of the 3 formats (USB, MADI & Dante) are all looped back on themselves, with no internal signal flow between formats. Useful for testing.

P&H mode to enter loopback. Will not enter this mode when rebooted.

Error / State Indications per Audio Transport

Each of the transport indications on the front panel provide information on their status using colour.

Colour	USB	MADI	Dante
White	Connected USB3.0 full channel mode	Incoming sample rate matches sync source	Dante sample rate matches sync source
Cyan	Connected USB3.0 - USB reduced mode enabled		
Orange	Connected – only USB2 available	Incoming MADI sample rate does NOT match Dante (Dante is the sync source)	Dante sample rate does NOT match MADI rate (MADI is the sync source)
Red	Not connected	Sync source set to MADI but no valid MADI sync input detected. MADI output rate defaults to last valid, free running.	<i>Dante Sync Error – See Dante Controller</i>

Detailed Features

Clocking

UMD192 can either be clocked from the Dante/AoIP network or clocked from the incoming MADI stream on port 1. When MADI ports are in redundant mode the MADI clock source will come from the active MADI input on the redundant pair.

Sample Rate

UMD192 supports 44.1, 48, 88.2, 96, 172.6 and 192 kHz sample rates. Indication on the front panel is 44.1 or 48, with x2 or x4 displayed if the higher frequencies are in use.

UMD192 will follow the clock source sample rate. The sample rate therefore can be configured from Dante Controller (or a control software with Dante Sample rate config capability – e.g. SSL Live or System T consoles, or via the configuration of the MADI

devices connected to MADI port 1.

MADI

UMD192 provides six MADI BNC pairs, supporting three dual-redundant MADI connections.

Sample Rate:	1 FS (44.1/48 kHz)	x2 FS (88.2/96 kHz)	x4 FS (176.4/192 kHz)
MADI Channel count (redundant mode OFF)	3x64 = 192	6x32 = 192	6x16 = 96
Ports	(1) (2) (3)	(1) (2) (3) (4) (5) (6)	(1) (2) (3) (4) (5) (6)
MADI Channel count (redundant mode ON)	2x 3x64 = 192	2x 3x32 = 96	2x 3x16 = 48
Ports	R1(1&2) R2(3&4) R3(5&6)	R1(1&2) R2(3&4) R3(5&6)	R1(1&2) R2(3&4) R3(5&6)

A green Sync LED next to the MADI In/Rx port lights when a valid MADI signal is received.

Each MADI input automatically detects whether it is operating in 64-channel or 56-channel mode. When a connection is running in 56-channel mode, the MADI In Sync LED will display a slow periodic flash to indicate this state. In 56-channel mode, no channel re-ordering or shuffling occurs when routing between USB and/or MADI. Channels that would normally be 57–64 on that MADI stream remain present but carry no audio.

Legacy (SMUX) format MADI is not supported.

Redundant MADI

The whole unit can operate in standard or in redundant MADI mode.

When in standard mode there are six MADI ports labelled 1 through 6. Ports 1 to 4 are located on the rear panel and ports 5 and 6 on the front panel.

When in redundant mode all ports are setup as redundant pairs indicated by alternate labelling R1 (1&2), R2 (3&4) on the rear of the unit, and R3 (5&6) on the front.

Power

UMD192 supports:

- AC power

- Power over Ethernet (rear Pri port) - PoE+ (30W)
- USB power.

Any or all power sources can be utilised providing several options including power supply redundancy. (If no PoE switch is possible a PoE injector can be used to provide mains PSU redundancy).

Each power source is indicated on the front panel with the following colour coding:

Colour / Status	Description
Green	Power good.
Black (Off)	Power source has not been connected since boot.
Red Flashing	Power has been connected since boot but no longer present or sufficient.
Yellow/Green Flashing	Power ok but there has been an interruption since boot.

These states apply to any of the available power sources; AC, USB, PoE when available.

To clear the flashing states press-and-hold the Unlock button on the front panel.

USB Reduced Mode

UMD192 provided the ability to reduce the USB channel capacity and therefore data rate when running in USB3.0 mode. When running in USB2 mode the channel capacity is always the same.

Sample Rate:	1 FS (44.1/48 kHz)	x2 FS (88.2/96 kHz)	x4 FS (176.4/192 kHz)
USB Channel Count	192	192	128
USB 2.0 Channel Count	32	16	8

If connected to a USB2 port on a computer or via a USB2 cable UMD192 will provide a reduced channel count on USB

Dip switches on the rear of the unit allow the USB Rx(in) and Tx(out) to be independently put into $\frac{1}{2}$, $\frac{1}{4}$ or $\frac{1}{8}$ mode – see table later. This can be used for reducing the load on the computer, therefore saving CPU power consumption. The unit will need a power cycle after these are changed.

4 dip switches independently allow a reduction in channel capacity for USB Rx and Tx (Sw1, Sw2, Sw3, Sw4)

	1 FS		x2 FS		x4 FS	
Sample Rate:	(44.1/48 kHz)		(88.2/96 kHz)		(176.4/192 kHz)	
Direction	In- Rx (receive)	Out- Tx (transmit)	In- Rx (receive)	Out- Tx (transmit)	In- Rx (receive)	Out- Tx (transmit)
USB3.0 no reduced mode (_ _ _ _)	192	192	192	192	128	128
Reduced Receive modes						
USB3.0 reduced mode ½ Rx (X _ _ _)	96	192	96	192	64	128
USB3.0 reduced mode ¼ Rx (_ X _ _)	48	192	48	192	32	128
USB3.0 reduced mode ⅙ Rx (XX _ _)	24	192	24	192	16	128
Reduced Transmit modes						
USB3.0 reduced mode ½ Tx (_ _ X _)	192	96	192	96	128	64
USB3.0 reduced mode ¼ Tx (_ _ _ X)	192	48	192	48	128	32
USB3.0 reduced mode ⅙ Tx (_ _ XX)	192	24	192	24	128	16
Transmit and Receive modes can be combined – Any combination of the 6 modes above is valid - Example:						
USB3.0 reduced mode ½ Rx & ½ Tx (X _ X _)	96	96	96	96	64	64

Updates

To update the unit please use the update instructions found here [UMD192 update process](#)

Reset Options

1. P&H Lock switch.

2. P&H Mode and R Switch – Sets unit into reset mode – Inner circle red – When in reset mode there are 3 options
 1. P&H Mode switch – restarts unit from this state).
 2. P&H Sync switch – set IP to DHCP
 3. P&H R – full Dante Clear Config (This clears the device name, channel labels, IP address settings, sample rate, latency and existing audio routes back to factory defaults)

When either action is completed the unit auto restarts.

If user wants to exit reset mode manually - Press either Lock switch or wait until the mode times out after 10sec and reverts to Normal mode.

Hibernate Mode

The unit front panel indication reduces in brightness after 5min. The front panel brightness is restored to normal once any switch is pressed.

It is possible to disable hibernation for a single power-on session by holding the P&H Lock switch for approximately 10 seconds while powering up the unit.

Dimensions, Weight and Other Information

Dimensions / Weight	Depth	Height	Width	Weight
UMD192 Unit	245mm/9.65 inches	45mm/1.77 inches	215mm/8.46 inches	1340g / 2.95 lbs
UMD192 Boxed (Including outer shipping box)	300mm/11.81 inches	115mm/4.53 inches	340mm/13.39 inches	2600g / 5.73 lbs

Parameter	Value
Power	12W
Acoustic Noise	None – Silent
Operating Temperature	1 to 40 deg C
Storage Temperature	-20 to +50 deg C