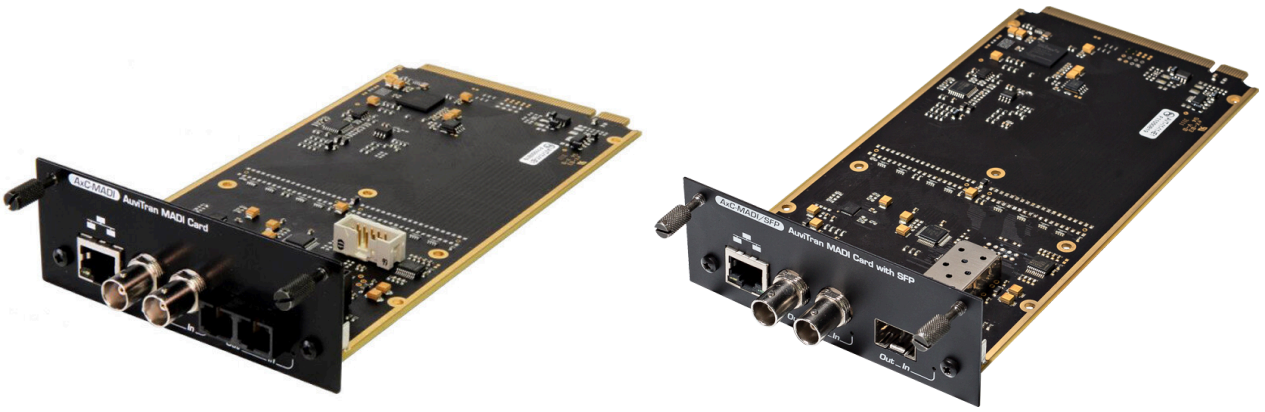
User Manual
AuviTran Audio ToolBox
AxC-MADI &
AxC-MADI/SFP



User manual version	Date	Owners	Firmware version
V2.0	May 2026	SBT / OPT	From 12.029 / 3.008
V1.0	2013	YAE	Before 12.029 / 3.006

PRECAUTIONS

- Do not apply excessive pressure on connectors or any other part of the board. Do not touch the metallic sharp parts (pins) of the product.

- This product is electrostatic sensitive; this must be checked before it is touched or used.

- The disconnect devices of the Audio ToolBox unit are the appliance inlet of the auxiliary power supply and the appliance inlet on the rear side of the unit. These must be easily reachable.

- To prevent electric shock, unplug the unit before handling. The achievement of other operations not mentioned in this document is prohibited. Repairs can be performed only by a technician trained and qualified.

- Each connection must be Safety Extra Low Voltage kind (SELV), and must stay inside buildings.

LIMITATION OF LIABILITY

In no case and in no way, the provider of this Product (AuviTran, the distributor or reseller, or any other party acting as provider) shall be liable and sued to court for damage, either direct or indirect, caused by and to the user of the board and which would result from an improper installation or misuse of the Product. “Misuse” and “improper installation” mean installation and use not corresponding to the instructions of this manual.

Please note that graphics given in this manual (drawings and schemes) are only examples and shall not be taken for a real vision of all the equipment configuration.

AuviTran is constantly working on the improvement of the products. For that purpose, the product's functionalities are bound to change and be upgraded without notice. Please read carefully the User’s manual as the new functionalities will be described therein.

TRADEMARKS

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TABLE OF CONTENTS

1. OVERVIEW

The MADI (Multichannel Audio Digital Interface) technology integrated into this system provides high-performance digital media networking designed to meet the rigorous quality and performance demands of the professional audio and broadcast markets. It delivers superior audio quality (16-bit/48 kHz and higher), high channel capacity, and ultra-low latency measured at less than 1 millisecond.

Built upon the established AES10 guidelines, this MADI implementation offers a robust and industry-proven interoperability standard for high-performance, multichannel professional digital audio distribution.

Key Architecture & Infrastructure Features:

- Hardware Reliability: Utilizing standard coaxial (BNC) or optical fiber links, the protocol operates on highly resilient and cost-effective hardware infrastructures dedicated to professional audio.
- Signal Integrity: Full bandwidth isolation is maintained natively, eliminating any risk of network packet collision or interference from standard IT data traffic.
- Sample-Accurate Synchronization: Precise clock alignment is achieved across the network by defining a common clock system (via Word Clock or direct MADI stream embedding). This ensures perfectly synchronized playback across all audio channels and devices, providing the ultra-low latency required for critical live sound and broadcast applications.

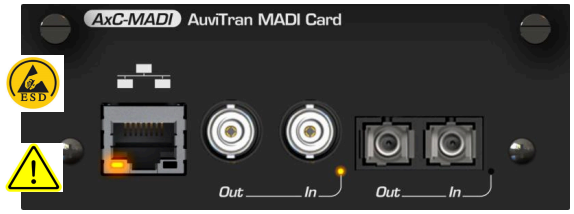
Gateway access to the MADI ecosystem is provided to the AuviTran Audio ToolBox platform via the AxC-MADI card. When combined with other network AxC cards, advanced bridging possibilities are unlocked for professional audio configurations (including MADI-to-AES67/Ravenna, MADI-to-Dante, and MADI-to-AVB bridges). This structural versatility delivers unique connectivity options, including dynamic software patching solutions, comprehensive remote control management, and multi-channel ASIO recording or playback.

2. TECHNICAL SPECIFICATIONS

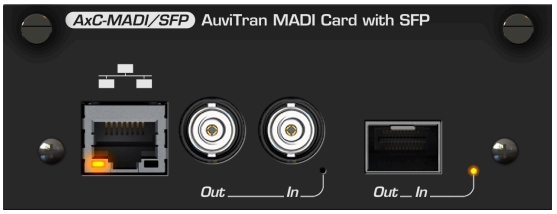
AxC–MADI & AxC-MADI/SFP: MADI interface cards for the AuviTran Audio ToolBox platform	
Size	200 mm x 100 mm x 40 mm – 7.9”x3.9”x1.6” Format AuviTran Audio ToolBox platform cards
Power supply	+12V / +3.3V - Through AuviTran Audio ToolBox backplane
Storage: Temp/Humidity	- 5°C to 70°C / 0% to 95% (non-condensing)
Operating: Temp/Humidity	0 °C to 50°C / 5% to 90% (non-condensing)
Connectors	• 1 x Neutrik EtherCon RJ45-XLR female connectors • 2 x BNC connectors • 2 x coax connectors or 1 x SFP port
Audio Outputs	64 channels at 48 kHz
Audio Inputs	64 channels at 48 kHz
Sample format	24 bit
Sample rate	44.1 kHz and 48kHz; 96kHz ready
Synchronization	Automatic from Madi network

Control and monitoring Environment	
AVS-Monitor	AVS-Monitor enables to remotely set, control and monitor a Madi network and provides enhanced control pages to manage the specific parameters of cards inserted in the different slots
Merging Madi Virtual Sound Card	The optional Madi Virtual Soundcard software allows the PC/Mac to connect to a Madi audio network. lien

3. FRONT PANEL / WIRING



AxC-MADI front panel



AxC-MADI/SFP front panel

MADI connection is assumed via Co-Axial cabling or Optical connector. Automatic selection is default mode and performed by AxC-MADI & AxC-MADI/SFP, but mode can be forced using the setup interface. The network connector is reserved for future use.

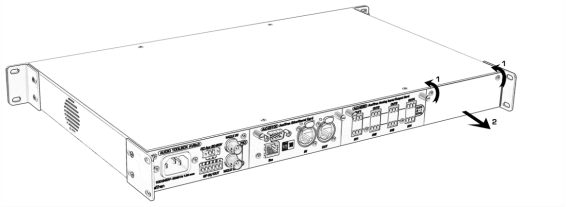
4. CARD INSERTION / EXTRACTION

WARNING

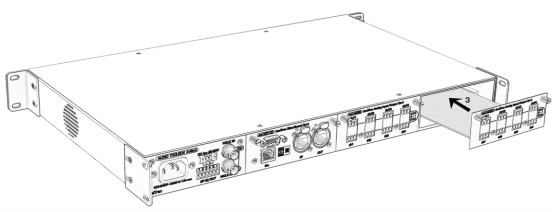
- ➔ The cards are electrostatic sensitive; this must be checked before they are touched or handled.
- ➔ The Toolbox must be powered off before inserting any AxC card. (unplug the power cable).

4.1. AxC-Card Insertion

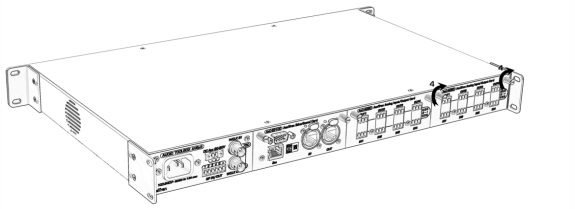
The following procedure applies to all the Audio Toolbox models.



1. Unscrew and remove the plate blocking the AxC card slot location.



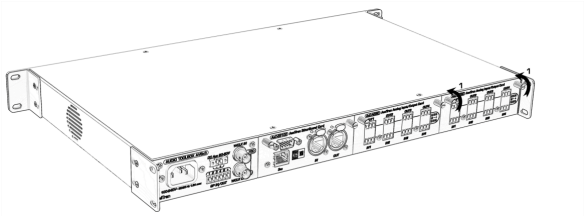
2. Insert the AxC card by carefully sliding it into the two side rails of the slot.



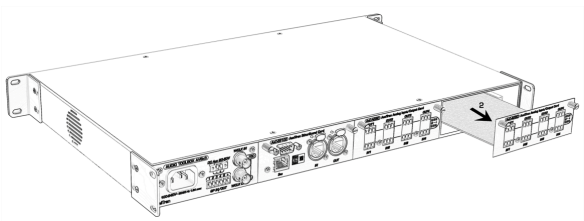
3. Tighten the two screws of the AxC card.

4.2. AxC-Card Extraction

The following procedure applies to all the Audio Toolbox models.



1. Unscrew the AxC card that has to be removed.
The two screws remain attached to the AxC card.



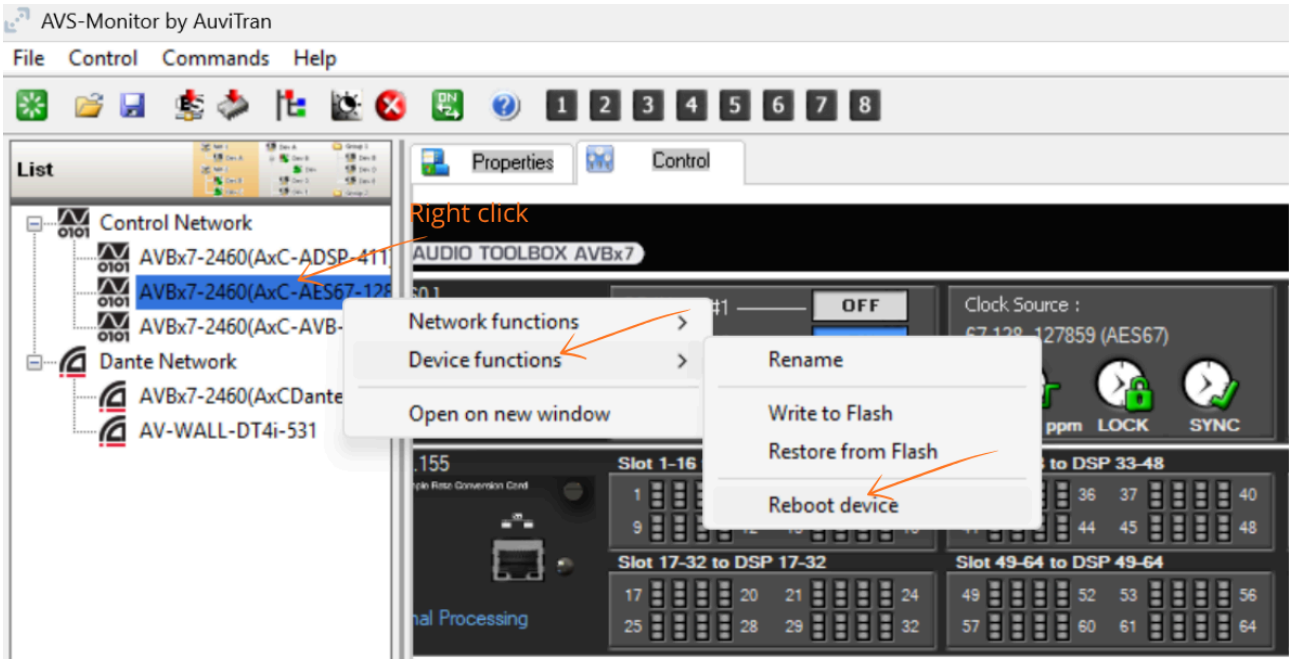
2. Pull the AxC card to withdraw it from the chassis.

5. SOFTWARE REMOTE CONTROL

5.1. Useful things

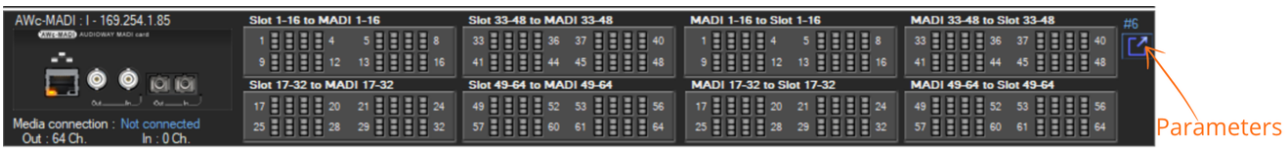
5.1.1. Rebooting a device

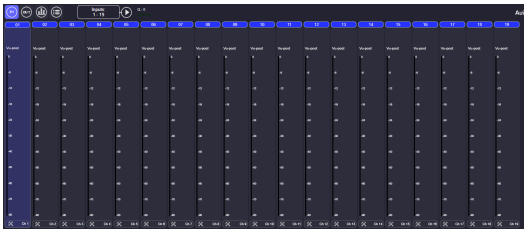
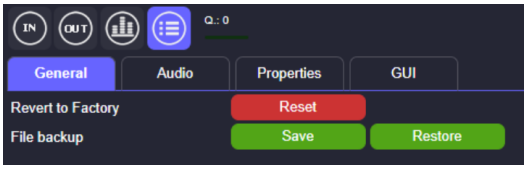
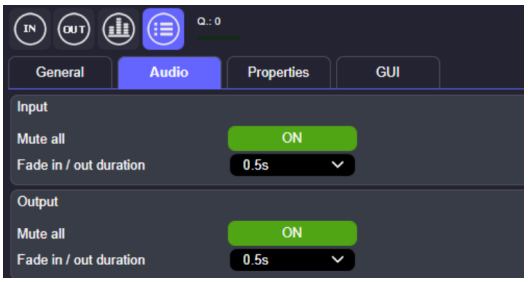
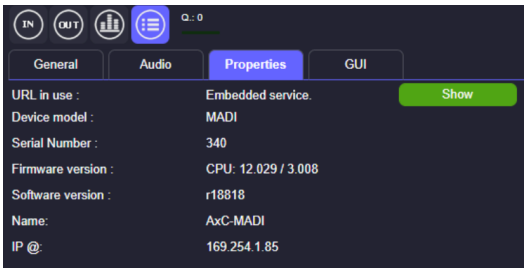
To reboot a device, the following steps must be performed: the device is right-clicked in the 'List', 'Device Function' is selected, and 'Reboot device' is clicked. (Only the card will be rebooted) :



5.1.2. Parameters

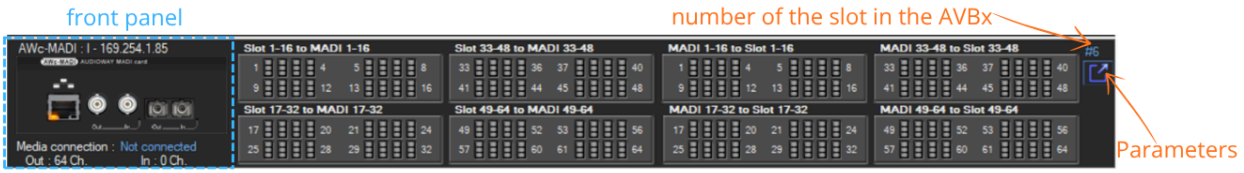
To gain access to the AxC-MADI parameters, the share button located on the right side of the card in AVS-Monitor is to be clicked :



Schreenshot	Explanation
  	Monitoring input channels of the card. Monitoring output channels of the card. Monitoring all input and output channels of the card
	General settings to: • Revert to factory the settings • Save or restore the settings of the card
	Audio settings to: • Mute all inputs of the card • Mute all output of the card
	Properties of the card to find : • Serial Number • Firmware version • Software version • IP of the card
	GUI settings tchoose : • Themes of the UI • Slice name position • Slice range • Layers select • QOS • Double click to init faders • Vu meters width

5.2. Device control

AuviTran's AVS Monitor software allows remote control of the Audio Toolbox device, and the AxC-MADI and MADI/SFP. For general AVBx3 rack remote control features, please refer to AuviTran Audio Toolbox AVBx3 rack user's manual.



Each block of 16 channels has its own feedback status:

- Status of the sound in the slot

- In addition, device information can be found under front panel

Device information

➔ Media connection : Not connected or connected

➔ Channel number status for in and outs : 0 to 64 ch with increment of 4

5.3. Clock Setup

There are two ways to configure audio clock inside the Audio Toolbox:

- Audio Toolbox is slave, and receive audio clock from Madi network
- Audio Toolbox is master, and will feed the clock to the Madi network

5.3.1. Madi Master – ToolBox Slave

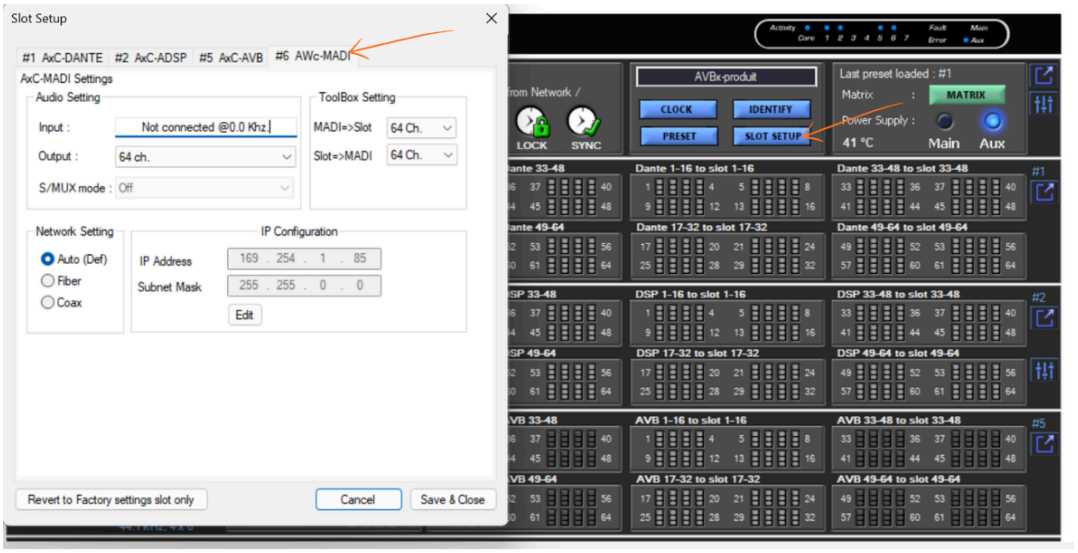
The Madi network is established as the clock master, and the ToolBox is synchronized with the AxC-Madi card by proceeding as follows: The ToolBox clock setup page is opened in the AVS-Monitor software, where the clock source is configured to the AxC-Madi card.

5.3.2. Madi Slave – ToolBox Master

To force the Madi network to be synchronised with the Toolbox clock, please proceed as follows: open the AVS-Monitor Software, select the ToolBox clock setup page, and select the clock source:

5.4. Device setup

Advanced parameters for AxC-MADI device can be defined using dedicated setup window:



Network settings

- ➔ Auto-detection
- ➔ Fiber
- ➔ Coax

Coax output setup

- ➔ 56 output channels
- ➔ 64 output channels

Number of channels exchanged with ToolBox slot

- ➔ 0 to 64 MADI=>Slot channels by step of 4 channels
- ➔ 0 to 64 Slot=>MADI channels by step of 4 channels