

AUX-ADAT-64

64x64 channel ADAT Extension
for FLX devices

User's Manual

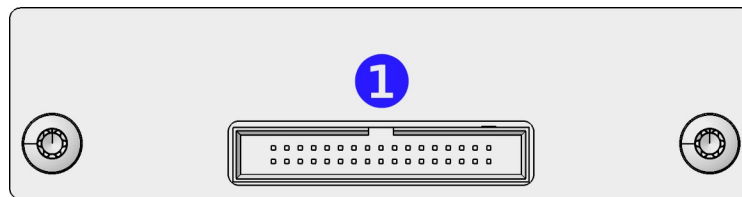
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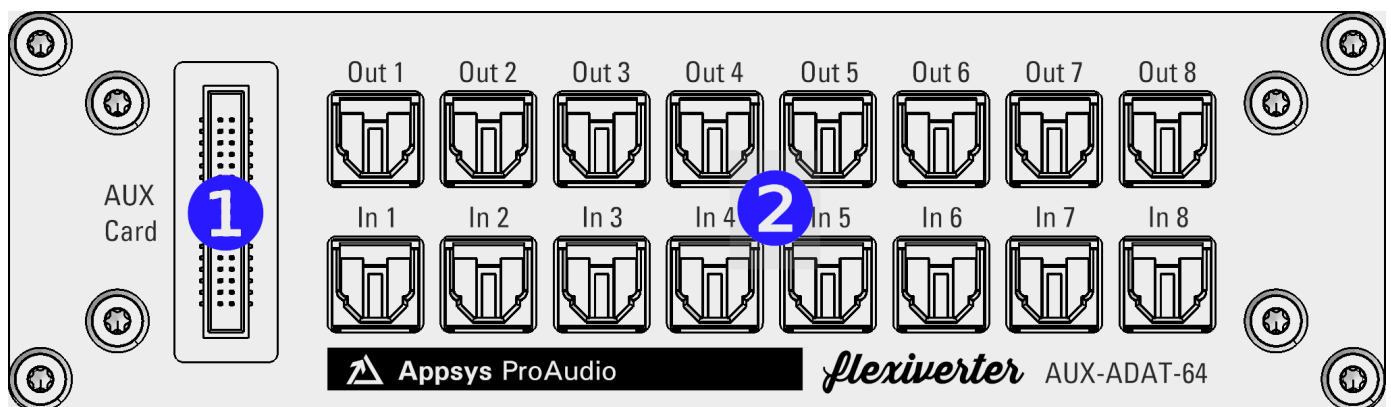
1. CONNECTORS

1.1. Card



- ① Flat ribbon cable to breakout box

1.2. Breakout box



- ① Flat ribbon cable to AUX card
- ② ADAT / SPDIF Inputs and outputs

2. DESCRIPTION

The AUX-ADAT-64 provides 64x64 channels of ADAT (on 8xIN, 8xOUT optical connectors). The first four inputs (1-4) support also SPDIF or AES3 optical, which is automatically detected. The first three outputs (1-3) support also SPDIF or AES3 optical, which can be set by the DIP switches (see chapter 4. DIP Settings)

The card can be fitted into every **flexiverter (FLX)** device for the following purposes:

- to use the **FLX as standalone converter** between the built-in interface and this extension card
- to **add extra output splits** to existing FLX devices by "tapping" channels of another conversion
- to **add additional channels/protocols to the FLX** when it is used in double-flexiverter or flexiverter + multiverter configurations

For a detailed description of possible configurations, please refer to the manual of your base FLX device.

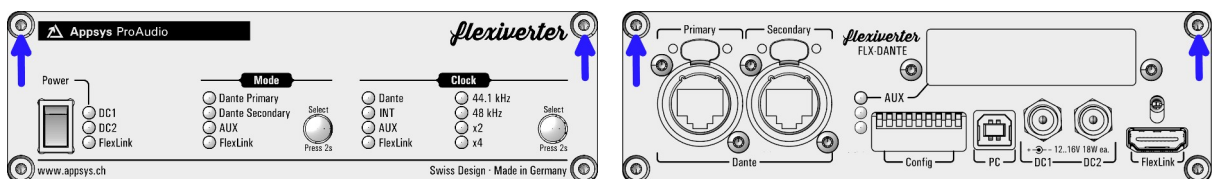
2.1. Box Contents

- 1 AUX-ADAT-64 extension card for FLX devices (with slot cover plate)
- 1 AUX-ADAT-64 breakout box
- 1 Flat ribbon cable (connection between extension card and breakout box)
- This manual

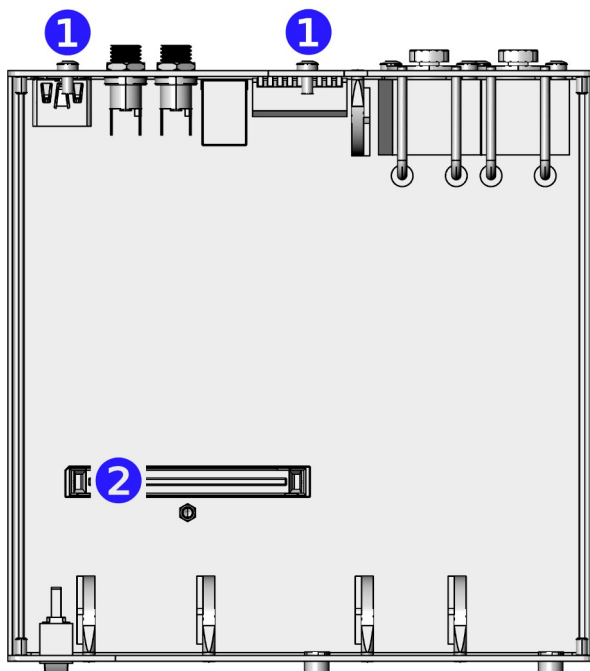
3. INSTALLATION

3.1. Opening the flexiverter

- Required: Torx T10 screwdriver
- Power off the device and detach all cables to avoid short-circuit or damage
- Detach the device from the rack-mount kit
- Remove the four top screws and the top cover by pulling it upwards:



3.2. Flexiverter Inside View



- ① Screws for AUX cover plate
- ② AUX card connector

3.3. Installing the card

- Remove the screws holding the cover plate, and the blank cover plate ①
- Insert the AUX card from inside, using the supplied cover plate.
Make sure it is correctly fitted to the card connector ②
- Secure the card using two cover screws ①
- The card has been installed correctly if you are able to select an audio routing mode involving AUX (long-press MODE button to enter Route Mode Selection).

3.4. Installing the breakout box

The breakout box – containing the optical connectors – shares the same form factor as the FLX device. It is suggested to mount both devices side-by-side using an [RM-FLX2](#) rackmount kit.

3.5. Connecting card with breakout box

Use the supplied flat ribbon cable to connect the extension card to the breakout box. NOTE: The ribbon cable fits either way, but we suggest to place the end where the polarization nose points **away** from the cable on the **card** side. This ensures that the cable **exit downwards** on the FLX device.


4. DIP SETTINGS

The behavior of the card can be controlled by DIP switches 4..6 on the FLX device. Changing the DIP settings will come immediately into effect.

NOTE: The settings below affect only data OUTPUT. The input format is always automatically detected, regardless of the settings. For INPUT, connectors 1-4 support SPDIF, AES3 optical and ADAT. Connectors 5-8 support only ADAT.

AUX-ADAT-64	<input type="checkbox"/> 4	<input type="checkbox"/> 5	ADAT output on all connectors 1-8 *	<input type="checkbox"/> 6	Clock source: Auto* ¹
	<input type="checkbox"/> 4	<input type="checkbox"/> 5	SPDIF/AES3 output on connector 1 ADAT output on connectors 2-8	<input type="checkbox"/> 6	Clock source: Always input 1 ¹
	<input type="checkbox"/> 4	<input type="checkbox"/> 5	SPDIF/AES3 output on conn. 1-2 ADAT output on connectors 3-8		

1 In older Flexiverter firmware versions (until 2.9), this switch had a different function: UP = Metadata format "Professional", DOWN = Metadata format "Consumer". Since 3.0, it's always "Consumer"

	 4 5	SPDIF/AES3 output on conn. 1-3 ADAT output on connectors 5-8
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* Default setting

Clock source: Has only an effect when the FLX devices clock source is set to "AUX".

- When set to "Auto", the clock is taken from the first valid input, and may switch automatically when the input signal status changes.
- When set to "Always input 1", the clock is always taken from input 1. Use this setting if the inputs are coming from different devices, to ensure a reproducible clock source selection.

5. SELF-TEST

The card can be tested for correct operation by the user. This is done using the self-test mode, in which a special random test pattern is output on all channels. This pattern is looped back via an external cable into the corresponding inputs, where it is checked for consistency.

- Connect **all** output ports of the AUX card to the respective inputs using a loop-back cable.
- Turn off the FLX, and hold down button while switching on again
- Press again until the "CLOCK" LEDs show "INT/48kHz" in  cyan color. The device is now in self-test mode.
- The "AUX" LED in the MODE sections shows the result of the self-test:
 -  red: error/no connection
 -  green (loopback data received ok)
- Press again or power off the device to exit self-test mode.

6. SPECIFICATIONS

Paramete	Value
Dimensions	Card: 118x80mm (WxH) Breakout box: 152x152x44mm (WxDxH, excluding connectors)
Weight	Card: 52g Breakout box: 437g
Operating temperature	0.. +55°C, non-condensing

Paramete	Value	
Storage temperature	-40.. + 85 °C, non-condensing	
Cable lengths	Breakout cable: 50cm / 20 in. Toslink: Up to 5m / 15 ft.	
Channel count	ADAT mode	Each I/O: 8@48kHz, 4@96kHz (S/MUX), 2@192kHz (Q/MUX)
	SPDIF mode	Each I/O: 2@48kHz, 2@96kHz
Sample rates	ADAT mode	44.1kHz, 48kHz, 88.2kHz, 96kHz, 176.4kHz, 192kHz
	SPDIF mode	44.1kHz, 48kHz, 88.2kHz, 96kHz
Latency	Interface < > Flexiverter internal: 2 samples	

7. APPENDIX

7.1. Available AUX cards

At the time of writing (2024-07), the following AUX cards are available:

Item	Description
AUX-ADAT	16x16ch ADAT I/O (2x Toslink In + 2x out). Supports also S/PDIF
AUX-ADAT-64	64x64ch ADAT I/O (8x Toslink In + 8x out on external breakout box)
AUX-AES3	8x8ch AES3 I/O on 1x DB25, fully transformer isolated
AUX-DANTE	64x64ch DANTE network card
AUX-MADI-COAX	64x64ch MADI for coaxial cable (BNC connectors)
AUX-MADI-OPTO	64x64ch MADI optical, SC connector (Multimode 125um 1310 nm)
AUX-MADI-SFP	64x64ch MADI for SFP (Small-Factor Pluggable) modules
AUX-TDM	Up to 32x32ch Time Division Multiplexing TDM/I2S, 3.3V LVCMOS
AUX-WORDCLOCK	BNC wordclock I/O

7.2. Available FLX devices

At the time of writing (2024-07), the following FLX devices are available:

Item	Description
FLX-AES3	16x16 channel AES3 flexiverter (with AUX slot)
FLX-AES3/SRC	16x16 channel AES3 flexiverter with individual SRCs on each input
FLX-AES50	96x96 channel AES50 flexiverter (with AUX slot)
FLX-DANTE	64x64 channel DANTE flexiverter (with AUX slot)
FLX-DANTE/SRC	64x64 channel DANTE flexiverter with integrated 64x64ch Sample Rate Converter
FLX-MADI	128x128 channel MADI SFP & MADI coaxial module (with AUX slot)

7.3. Warranty

We offer a full two (2) year warranty from the date of purchase. Within this period, we repair or exchange your device free of charge in case of any defect*. If you experience any problems, please contact us first. We try hard to solve your problem as soon as possible, even after the warranty period.

* Not covered by the warranty are any damages resulting out of improper use, willful damage, normal wear-out (especially of the connectors) or connection with incompatible devices.

7.4. Manufacturer contact

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7.5. Recycling



According to EU directive 2002/96/EU, electronic devices with a crossed-out dustbin may not be disposed into normal domestic waste. Please return the products back for environment-friendly recycling, we'll refund you the shipping fees.

7.6. Document Revision History

2: Changed function of DIP6 from base device firmware 3.0 on
1: Initial release

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