

SCHOEPS digital interfaces

Mini-DA42

AES42/AES3 converter with analog outputs

The Mini-DA42 powers digital microphones and has both digital and analog outputs.

The inputs and outputs of the Mini-DA42 are available through a Sub-D breakout cable.

On the Mini-DA42 there are a green Power LED and a red "Unlocked" Error LED which turns off as soon as the device successfully locks to the connected digital microphone.

Inputs:

- AES42, Mode 1 or AES3 (XLR-3F, 110 Ohms)
- power: DC 12 - 18 V / 200 - 500 mA, available through included AC adapter for 100 - 240 V, 50 / 60 Hz with HIROSE plug

Outputs (available through included Sub-D breakout cable):

- AES3 (XLR-3M, 110 Ohms)
- 2 × analog (XLR-3M), balanced, non-floating, maximum cable length: 300 m

Technical specifications:

- sampling rate: max. 192 kHz
- dynamic range: 112 dB (A, RMS), >98 dB (CCIR, q-peak)
- frequency range: 2 Hz - 20 kHz (–1 dB)
- THD + N: < –95 dB @ 1 kHz
- output level: max 14.5 dBu @ 0 dBFS. In normal operation the analog outputs will require some amplification, since digital input signal levels are typically rather far below full scale. When using the +30 dB level boost of the SCHOEPS SuperCMIT microphone, normal line inputs are sufficient.
- power consumption (including SuperCMIT): 200 mA
- dimensions in mm: 84 × 84 × 34; weight: 173 g (6.1 oz)

PSD 2U

Digital phantom powering

The PSD 2U comes with the SuperCMIT microphone. It provides the digital phantom power (DPP, 10V) for a digital microphone like the SuperCMIT. It can be connected to a normal digital AES3 input (XLR/RCA).

Inputs:

- AES42 Mode 1 (XLR-3F)
- power: DC 12 - 18V / 500 mA, available through included AC adapter for 100 - 240 V, 50 / 60 Hz with HIROSE plug

Outputs (available through included Sub-D breakout cable):

- AES3 (XLR-3M)
- AES3id (RCA)



*Mini-DA42:
AES42/AES3 converter with analog outputs*



*Breakout cable for Mini-DA42:
input: 1 × AES42/AES3,
output: 1 × AES3, 2 × analog*



*PSD 2U:
Powering box for digital microphones
with AES3 outputs (XLR/RCA)*

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Connecting the digital SuperCMIT microphone

The SuperCMIT is a digital microphone that conforms to the AES42 standard, Mode 1. You connect it to an interface offering Digital Phantom Power (DPP, 10 Volts).

The SuperCMIT runs on its own internal clock. If you run more than one SuperCMIT, or if you prefer to use an external clock, your digital input must use sampling rate converters (SRC).

Furthermore, in a normal workflow, the digital input should also offer sufficient gain (20 - 30 dB) for recording and monitoring in real time.

The following chart lists some currently available devices and shows their specifications with regard to the above requirements.

1. SCHOEPS PSD 2U

- powering box for 10 Volt digital phantom powering (DPP) with XLR and RCA outputs
- input: AES3, outputs: AES3 (AES/EBU) and AES-id (RCA)
- an AC adapter for 100 - 240 V, 50 / 60 Hz with HIROSE plug is included
- this device needs to be connected to an AES3 input with sampling rate converter (SRC)



2. SCHOEPS Mini-DA42

- miniature D/A converter with 10 Volt digital phantom powering (DPP)
- input: AES42
- outputs: AES3 (XLR-3M), 2 x analog (balanced, XLR-3M)
- an AC adapter for 100 - 240 V, 50 / 60 Hz with HIROSE plug is included



3. SoundDevices

a. 788T

- built-in DPP and SRC (= it has an AES42 Mode 1 interface)
- sufficient gain (+50 dB) in the digital input
- peak limiter and low-cut filter are available

b. other products from SoundDevices

- no DPP, need a powering device like the SCHOEPS PSD 2U or Mini-DA42
- no SRC in the digital input; the digital microphone has to be the master clock!
- no digital gain available, +30 dB gain option in the SuperCMIT should be used



4. ZAXCOM DEVA

- has no DPP, needs a powering device such as the SCHOEPS PSD 2U
- all newer Zaxcom devices have SRC in the digital inputs
- offers digital input gain: MENU → Input configure → "Analog input toggle" → choose the "digital input" → digital fader max. 30 dB gain
- a compressor / limiter can be inserted in the digital inputs



5. AATON Cantar

- with SRC in the digital input
- no gain adjustment in the digital inputs
- no DPP (at present)



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6. AETA 4MinX

- 2 × AES42 inputs with SRC

7. TASCAM HS-P82

- 8 AES/EBU inputs with SRC
- no DPP, needs a powering device such as the SCHOEPS PSD 2U or Mini-DA42
- no gain adjustment available in the digital inputs, +30 dB gain option in the SuperCMIT should be used
- peak limiter and low-cut filter are available



8. RME DMC-842

- 8 × AES42 input (= 4 two-channel inputs) with SRC, DPP and gain
- 8 × analog output (XLR)
- 4 × AES3 output (AES/EBU), 2 × ADAT output
- For operation with SCHOEPS digital microphones, the control pulses (CP) and sync pulses (SP) have to be turned off in the setup menu of the DMC-842 or the signal-to-noise ratio may decrease. The easiest way is to activate 'Auto CP/SP' and 'Auto SRC' in the setup of the remote software.



9. Lake People DAC C462

- input: AES42
- outputs: 1 × AES3 output, 2 × analog (XLR-3M)
- gain adjustable from 0 dB to 48 dB in steps of 6 dB
- headphone monitoring options with separate gain: L/L, L/R, R/R



10. Neumann

a) Neumann Connection Kit

- powering box for 10 Volt digital phantom powering (DPP) with XLR output
- input: AES42, output: AES3 (AES/EBU)
- this device needs to be connected to an AES3 input with sample rate converter (SRC)



b. Neumann DMI-2

- 2 × AES42 input
- 2 × AES3 output (AES/EBU)
- this device needs to be connected to an AES3 input with sample rate converter (SRC)



c. Neumann DMI-8

- no Mode-1 support → does neither work with the SCHOEPS SuperCMIT nor with the SCHOEPS CMD 2!

11. Zaxcom TRX942

- digital recording transceiver for boom
- availability not clear, launch has been announced
- custom-made AES42 input for the SuperCMIT
- transmission of one output channel only (can be selected)



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Device	DPP 10V	SRC	Analog output	Digital Gain	Headphone Output
1 SCHOEPS PSD 2U	✓	-	-	-	-
2 SCHOEPS Mini-DA42	✓	-	✓	-	-
3 SoundDevices a) 788T	✓	✓	✓	✓	✓
b) other products from SoundDevices	-	-	✓	-	✓
4 ZAXCOM DEVA	-	✓	✓	✓	✓
5 AATON Cantar	-	✓	✓	-	✓
6 AETA 4MinX	✓	✓	✓	✓	✓
7 TASCAM HS-P82	-	✓	✓	-	✓
8 RME DMC-842	✓	✓	✓	✓	-
9 Lake People LP DAC C462	✓	-	✓	✓	✓
10 Neumann Connection Kit and DMI-2	✓	-	-	-	-
11 Zaxcom TRX942	✓	-	-	✓	-