

d:24

compact | versatile | powerful



The d:24 is a unique solution for any multi-channel application in the medium and high power range. Due to its out-standing performance measures and compact design, the d:24 sets new standards in science, industrial, professional and home install.

The 24 independent amplifier modules with 250W (at 4Ω) each guarantee for an easy and reliable setup of multi-channel audio systems while saving valuable rack space with its slim 3U.

If equipped with one of three digital input options (MADI, Dante or AES3) the d:24 can boast its incredibly high SNR and THD figures as required by world leading scientific institutes.

Features

- 250W per channel at 4Ω top notch class-D amplifier modules
- 6.5" resistive touch interface for metering, control and routing
- Remote control via a web interface and a RESTful API for integration in your automation system
- Controllable fan speeds for minimum noise or maximum cooling efficiency
- Digital inputs via MADI, Dante (AES67) or AES3 option boards with highest grade DACs (optional)
- DSP enabled delay, phase inversion, EQ, compression and limiting for each channel (optional)
- Panic Mute toggle for immediate hardware mute of all channels (optional)
- Compact size (3U, standard rack depth)
- Light weight (approx. 20 kg/44 lbs)

specifications

power

RMS output power (1 kHz sine, 15dBu)

	load	power	THD+N
single channel	4Ω	250W	<= 0.05%
	8Ω	125W	<= 0.04%
bridged	8Ω	495W	<= 0.04%
	16Ω	250W	<= 0.07%

ac mains

voltage	230VAC -5V; +20V 115VAC -5V; +10V
frequency	50/60Hz
connector	powerCON 32A by Neutrik
soft start	yes
ext. over-current release	20A (B20/C16)
typ. inrush current	<= 36A (<0.25ms)

idle losses

idle power	< 270W
standby	< 2.5W



performance

frequency response	-3dB @ 10Hz -2dB @ 50kHz
phase response	$\pm 25^\circ$ (20Hz-20kHz)
voltage gain	17dB ± 0.5 dB
power bandwidth	10Hz - 55kHz
SNR	> 112dB
inter channel cross talk	< 64dB
typ. THD (10Hz-30kHz)	
15dBu	$\leq 0.05\%$
0dBu	< 0.01%
-20dBu	0.03%

analog inputs

connectors	3x DB-25 (Tascam analog norm)
required level for 250W	15dBu
input impedance	95k Ω
max. input level	15dBu

digital input options

supported sample rates	44.1, 48, 88.2, 96kHz
MADI (AES10)	1x optical SC in/out (multimode) 1x BNC in/out 1x wordclock out
Dante	2x RJ45 (primary/secondary)
AES/EBU, S/PDIF (AES3)	2x DB-25 (Tascam analog norm) 16+8 ch. ASRC

output

connectors	24x 2-pin Euroblock
output impedance	< 100m Ω
min. load impedance	$\geq 4\Omega$ (single channel) $\geq 8\Omega$ (bridged)
hi-Z per ch, unloaded	approx. 32V _{RMS}
DC output offset	< 10mV

protection

DC output error	yes, per channel *)
over-current protection	yes*)
over-voltage main protection	yes

further connectors & switches

ethernet	etherCON by Neutrik
panic mute connector	4-pin Euroblock (cascadable)
power on/off	momentary switch (configurable)

user interface

touch display	resistive, 6.5"
network control	web interface, HTTP API

dsp

available per channel:	
• gain	+/- 20dB
• delay	≤ 11.5 ms
• phase inversion	
• crossover filters	low cut, high cut (Linkwitz-Riley, Bessel or Butterworth; up to 4th order)
• parametric equalizer	5-Band (bell, cuts, shelves)
• compressor/limiter	incl. soft knee
• matrix mixer	24x24 Matrixmixer (available for amplifiers with Dante card and firmware version higher than 3.0)

cooling

type	active, front-to-rear
fans	5, temperature controlled (adjustable via presets)
environmental temp. range	10°C - 30°C
recommended clearance	1U above & below

fusing

internal fuses	4x SMPS, 1x analog PSU, (1x Digital Board)
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dimensions & weight

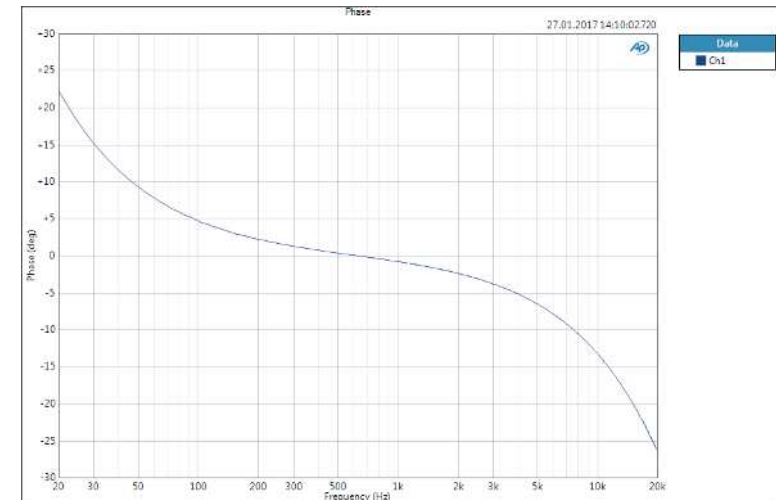
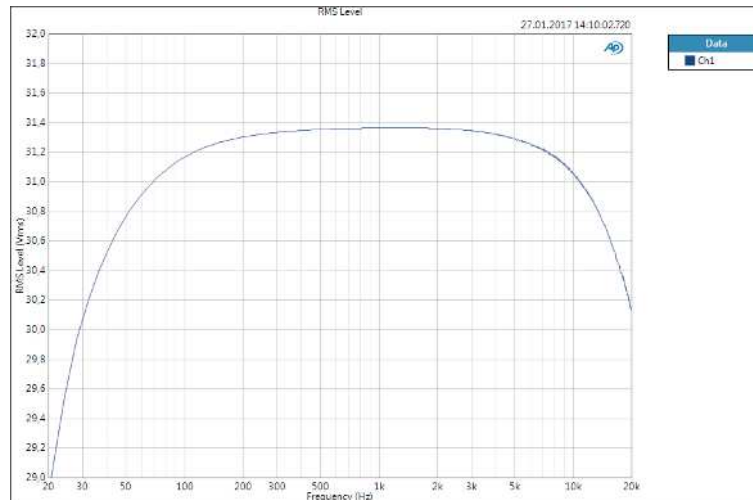
WxHxD	482,6mm (19") x 132,5mm (3U) x 517mm (20,4")
weight	approx. 20kg (44 lbs) - the weight depends on configuration

*) each channel affects a respective group of six output channels (1-6, 7-12, 13-18, 19-24)

exemplary measurement

input signal 20Hz - 20kHz stepped sine sequence
input level 15dBu
output load 4 Ω

frequency response /
phase response



voltage gain /
THD ratio

