

MAXX SERIES

MA16 D²

MA24 D²

MA32 D²



DATA SHEET

AUDIO

Power Stage	Half-Bridge GaN amplifier (Gallium nitride)			
Output Power (EIAJ Test Standard 1kHz 1% THD)	4Ω	8Ω	8Ω Bridge-Mode	
	280W	140W	500W	
Max output Voltage	52 V _{peak}		104 V _{peak}	
Max output Current Limited	20 A _{peak}			
Emergency Shutdown Current	31 A _{peak}			
DC Offset	<20mV			
Frequency response	10Hz-20kHz / 4-8Ω: +0.2 -0.2dB			
S/N (A-weighted)	> 110dB(A) typ. 114dB(A)			
Analog Gain	Software Adjustable, 0dBFS on any Input Interface: 20V _p - 60V _p (default: 60V _p)			
THD+N @ 4Ω	1W	50W	280W	300W
	< 0.02% typ. 0.005%	< 0.025% typ. 0.005%	1%	2%
SMPTE IMD	< 0.1% @ 1/8 Power 4Ω			
CCIF IMD	< 0.1% @ 1/8 Power 4Ω			
Output impedance 20Hz - 10kHz	< 15mΩ typ. 7 mΩ			
Damping Factor 8 Ohm 20Hz - 10kHz	> 500 typ. 1000			
Crosstalk	channel enabled		channel disabled	
	typ. < 75dB	typ. 90dB (distant channels)	typ. < 100dB	
Protection	Overtemperature, DC and Overcurrent			

DSP

Architecture	FPGA based 32-bit fixed point
Inputs	16 x input matrix per channel (DANTE / AES67 via Dante Module / AES3 / MADI)
	sine, white- pink- brown-noise
Level Control	Mute, Volume, Phase
Filter per channel	32 x EQ / Highpass / Lowpass
Filter types	bell, notch, highshelf, lowshelf, allpass 1th / 2nd order
High- Lowpass types	6 - 48dB/Oct, Bessel, Butterworth, Linkwitz/Riley, Variable Q
FIR Filter	2048 Tabs, ASCII file import
Fraction Delay	48000 Samples / 330m / 1000ms (resolution 0.001 units) per channel
CurrentLimiter	Threshold [Ap]
Voltagelimiter	2 x Threshold [Vp], Attack, Release
Powerlimiter	Threshold [W], Attack, Release
Speakerdetection	20kHz Pilot Tone generating with Volume, Threshold, Debounce

	Latency @ 44k1 / 48kHz to Analog
digital input / without ASRC on AES3	41 samples, (24 samples DSP + 17 samples DAC)
Input	Latency @ 44.1kHz to Analog
DANTE / MADI	0.930 ms
AES3@44.1kHz	2.028 ms
AES3@48kHz	1.996 ms
AES3@88.2kHz	1.811 ms
AES3@96kHz	1.797 ms
Input	Latency @ 48kHz to Analog
DANTE / MADI	0.854 ms
AES3@44.1kHz	2.021 ms
AES3@48kHz	1.854 ms
AES3@88.2kHz	1.690 ms
AES3@96kHz	1.6875 ms
Input	Latency @ 88.2kHz to Analog

DANTE / MADI to Analog	0.896 ms
AES3@44.1kHz	2.008 ms
AES3@48kHz	1.916 ms
AES3@88.2kHz	1.432 ms
AES3@96kHz	1.416 ms
Input	Latency @ 96kHz to Analog
DANTE / MADI	0.823 ms
AES3@44.1kHz	1.952 ms
AES3@48kHz	1.856 ms
AES3@88.2kHz	1.365 ms
AES3@96kHz	1.330 ms

CONNECTOR

Control input connectors	RJ45 (1Gbit/s Ethernet)
Audio signal input connectors	RJ45 (DANTE / AES67), BNC 75R (MADI Coax, AES3id), SC Optic (MADI Fibre)
Speaker connector	Wuerth Elektronik 691352710002 Phoenix Contact MSTB 2,5/ 2-ST - 1754449
AC mains	IEC C20 inlet / IEC C19 plug

AC MAINS POWER

Power supply	Universal, regulated switch mode with PFC (Power Factor Correction)	
Operating Voltage	90 - 264VAC 50/60Hz	
AC Current typ.	@230V	@110V
	10A	16A
Inrush Current	50A max.	
Suggested circuit breaker	B16	

Earth Leakage Current	<2mA / 240V	
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32 CH Version		
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Power Factor	@230V	@110V
amps power off	0.46	0.85
idle	0.64	0.95
1/8 power @ 4 Ohm	0.96	0.98
Consumption / current draw	@230V	@110V
amps power off	36W	36W
idle	98W	102W
1/8 power @ 4 Ohm	1514W	1532W

24 CH Version		
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Power Factor	@230V	@110V
amps power off	0.44	0.83
idle	0.58	0.93
1/8 power @ 4 Ohm	0.94	0.99
Consumption / current draw	@230V	@110V
amps power off	36W	36W
idle	83W	84W
1/8 power @ 4 Ohm	1145W	1150W

16 CH Version		
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Power Factor	@230V	@110V
amps power off	0.44	0.83
idle	0.58	0.93
1/8 power @ 4 Ohm	0.94	0.99
Consumption / current draw	@230V	@110V
amps power off	36W	36W
idle	67W	68W
1/8 power @ 4 Ohm	775W	778W

THERMAL

Enviromental operating temperature	0 - 40°C			
Thermal dissipation	Fan, variable speed, temperature controlled front to rear airflow			
	32 CH			
	@230V		@110V	
amps power off	31 kcal/h	123 BTU/h	31 kcal/h	123 BTU/h
idle	84 kcal/h	333 BTU/h	88 kcal/h	349 BTU/h
1/8 power @ 4 Ohm	269 kcal/h	1066 BTU/h	270 kcal/h	1071 BTU/h
	24 CH			
	@230V		@110V	
amps power off	31 kcal/h	123 BTU/h	31 kcal/h	123 BTU/h
idle	71 kcal/h	282 BTU/h	72 kcal/h	286 BTU/h
1/8 power @ 4 Ohm	210 kcal/h	833 BTU/h	212 kcal/h	840 BTU/h
	16 CH			
	@230V		@110V	
amps power off	31 kcal/h	123 BTU/h	31 kcal/h	123 BTU/h
idle	58 kcal/h	230 BTU/h	58 kcal/h	230 BTU/h
1/8 power @ 4 Ohm	150 kcal/h	595 BTU/h	152 kcal/h	603 BTU/h

USER INTERFACES

Hardware	Multicolor LED, LCD Display with 6 navigation Keys
Software	Webpage, RESTful-API
Third Party Plugins	Q-SYS, Loxone

DIMENSIONS / WEIGHT

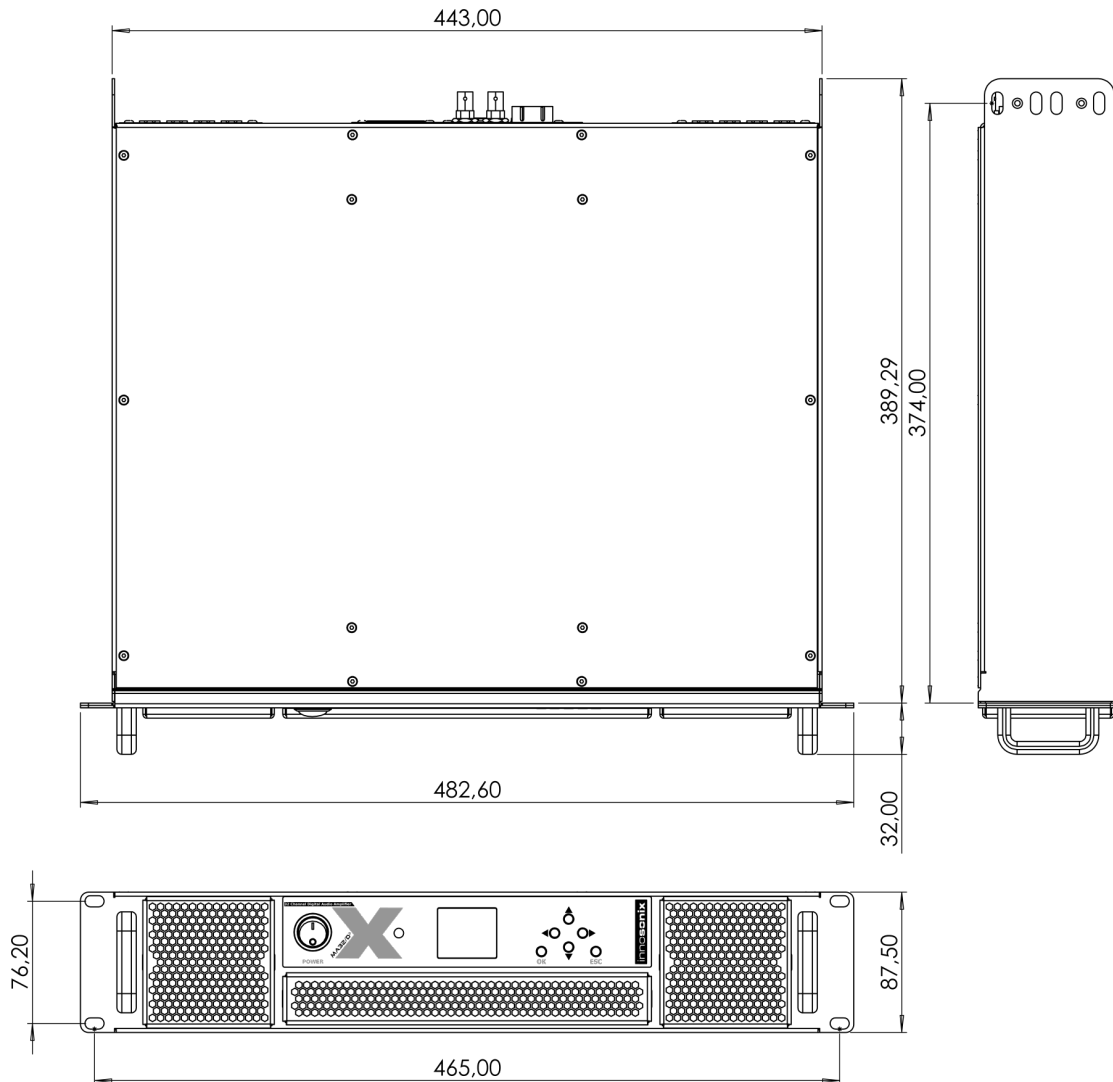


Figure 1. MAXX/D² dimensions

Dimensions	W 482.60mm (19") H 87.50mm (2 RU), D 389.29mm		
	32CH	24CH	16CH
Weight	13.4 kg	12.9 kg	11.2 kg
Dimensions Boxed	68 x 53 x 25 cm		
Weight Boxed	16.4 kg	15.9 kg	14.2 kg

