



# MAXX-SERIES

## DIGITAL POWER AMPLIFIERS

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**MA 16/D<sup>2</sup>**  
**MA 24/D<sup>2</sup>**  
**MA 32/D<sup>2</sup>**

## AUDIO

<b>Output Power</b> (EIAJ Test Standard 1kHz 1% THD)	4Ω	8Ω	8Ω Bridge-Mode	
	280W	140W	500W	
<b>Max output Voltage</b>	52 V <sub>peak</sub>		104 V <sub>peak</sub>	
<b>Max output Current</b>	20 A <sub>peak</sub>		20 A <sub>peak</sub>	
<b>DC Offset</b>	<25mV			
<b>Frequency response</b>	10Hz-20kHz / 4-8Ω: +0.5 -0.5dB			
<b>S/N typ</b>	105dBA			
<b>Analog Gain</b>	Software Adjustable, 0dBFS on any Input Interface ⇒ 20V <sub>p</sub> - 60V <sub>p</sub> (default: 60V <sub>p</sub> )			
<b>THD+N @ 4Ω</b>	1W	10W	280W	300W
	< 0.05%	< 0.05%	1%	2%
<b>SMPTE IMD</b>	< 0.1% @ 1/8 Power 4Ω			
<b>CCIF IMD</b>	< 0.1% @ 1/8 Power 4Ω			
<b>Output impedance</b>	typ 10 mΩ			
<b>Crosstalk</b>	channel enabled		channel disabled	
	typ < 75dB	typ 90dB (distant channels)	typ < 100dB	
<b>Latency @48kHz</b>	1.1ms			
<b>Protection</b>	Overtemperature, DC and Overcurrent			

## DSP

<b>Architecture</b>	FPGA based 32-bit fixed point
<b>Inputs</b>	16 x input matrix
	sine, white- pink- brown-noise
	Mute, Volume, Phase
<b>Filter per channel</b>	32 x EQ / Highpass / Lowpass
<b>Filter types</b>	bell, notch, highshelf, lowshelf
<b>High- Lowpass types</b>	6 - 48dB/Oct, Bessel, Butterworth, Linkwitz/Riley, Variable Q
<b>FIR Filter</b>	2048 Tabs, ASCII file import
<b>Delay</b>	48000 Samples / 330m / 1000ms per channel

<b>CurrentLimiter</b>	Threshold [Ap]
<b>VoltageLimiter</b>	2 x Threshold [Vp], Attack, Release
<b>Powerlimiter</b>	Threshold [W], Attack, Release
<b>SpeakerDetection</b>	20kHz Pilot Tone generating with Volume, Threshold, Debounce

## CONNECTOR

<b>Control input connectors</b>	RJ45 ( 100Mbit/s Ethernet )
<b>Audio signal input connectors</b>	RJ45 ( DANTE ), BNC 75R ( MADI Coax, AES3id ), SC Optic ( MADI Fibre )
<b>Speaker connector</b>	Wuerth Elektronik 691352710002 Phoenix Contact MSTB 2,5/ 2-ST - 1754449
<b>AC mains</b>	C19

## AC MAINS POWER

<b>Power supply</b>	Universal, regulated switch mode with PFC (Power Factor Correction)	
<b>Operating Voltage</b>	90 - 264VAC 50/60Hz	
<b>AC Current typ.</b>	@230V	@110V
	10A	16A
<b>Inrush Current</b>	50A max.	
<b>Suggested circuit breaker</b>	B16	
<b>Earth Leakage Current</b>	<2mA / 240V	

32 CH Version		
<b>Power Factor</b>	@230V	@110V
amps power off	0.46	0.85
idle	0.64	0.95
1/8 power @ 4 Ohm	0.96	0.98
<b>Consumption / current draw</b>	@230V	@110V
amps power off	36W	36W

idle	98W	102W
1/8 power @ 4 Ohm	1514W	1532W

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

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

# THERMAL

<b>Enviromental operating temperature</b>	0 - 40°C	
<b>Thermal dissipation</b>	Fan, variable speed, temperature controlled front to rear airflow	
32 CH Version		
	@230V	@110V
amps power off	31 kcal/h	31 kcal/h
idle	84 kcal/h	88 kcal/h
1/8 power @ 4 Ohm	1302 kcal/h	1318 kcal/h
24 CH Version		
	@230V	@110V
amps power off	31 kcal/h	31 kcal/h
idle	71 kcal/h	72 kcal/h
1/8 power @ 4 Ohm	984 kcal/h	989 kcal/h
16 CH Version		
	@230V	@110V
amps power off	31 kcal/h	31 kcal/h
idle	58 kcal/h	58 kcal/h
1/8 power @ 4 Ohm	667 kcal/h	669 kcal/h

# USER INTERFACES

<b>Hardware</b>	Multicolor LED, LCD Display with 6 navigation Keys
<b>Software</b>	Webpage, RESTful-API

# DIMENSIONS / WEIGHT

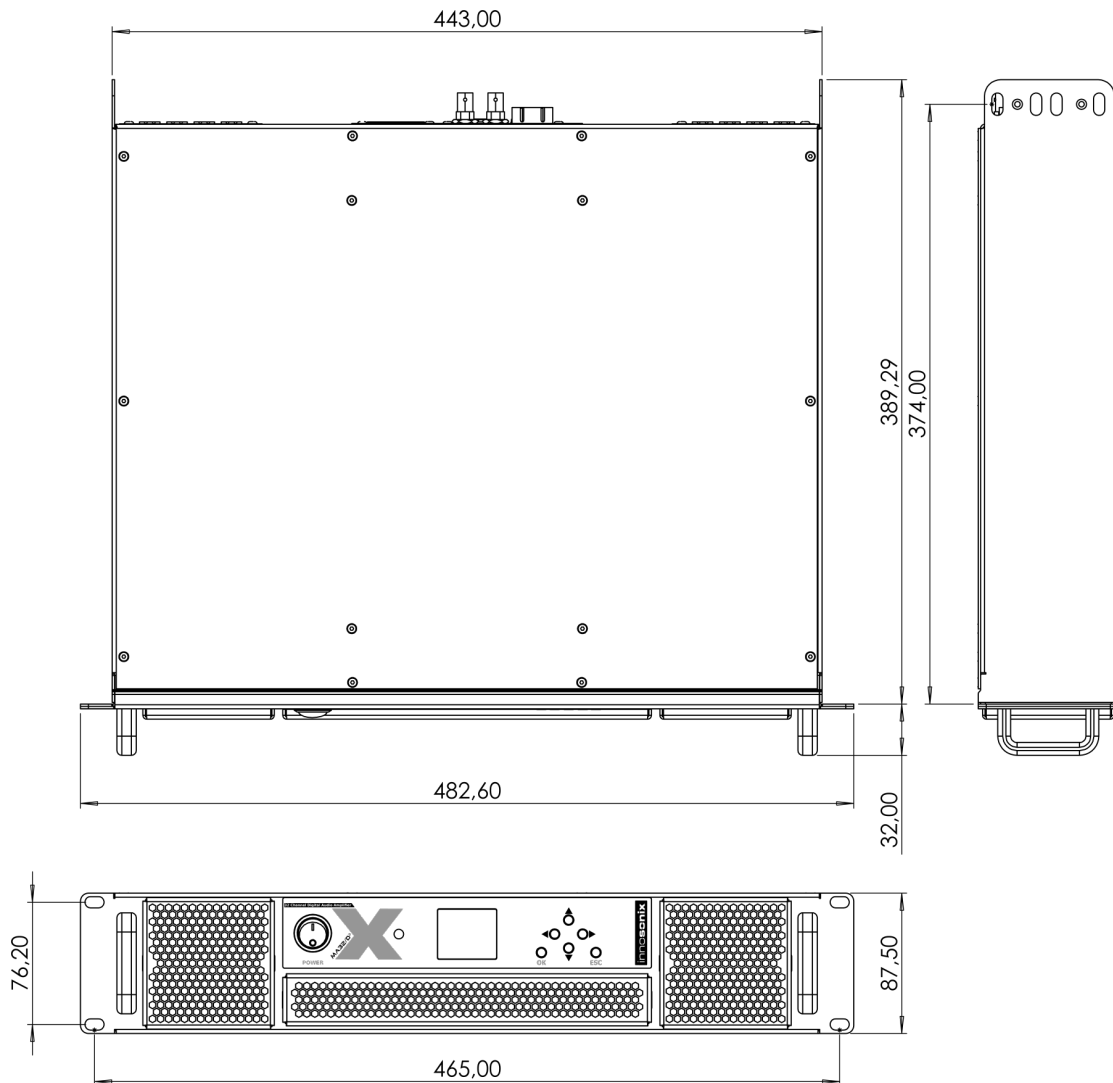


Figure 1. MAXX/D<sup>2</sup> dimensions

Dimensions	W 482.60mm (19") H 87.50mm (1 RU), D 389.29mm		
	32CH	24CH	16CH
Weight	15.0 kg	14.3 kg	13.0 kg



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