HADA-4B150

NETWORKABLE AMPLIFIERS
Digital Amplifiers

PRODUCT OVERVIEW

HADA-4B150 is a 4x125W digital amplifier that supports low and high impedance loads. The internal DSP, through the DSP Manager software, allows tailoring the input and output signal through parametric EQs, multi-band compressors, limiters, and delays and each configuration can be saved as a preset. In addition to the software option, input levels can be controlled via the front panel potentiometers, via remote controls using the rear panel GPI, or via a TCP/IP from third party control systems. All HADA series amplifiers include efficient thermal protection, DC protection, over current protection, and HF protection for total reliability in any kind of installation.

KEY FEATURES

- 4 x 125W outputs @ 4ohms.
- 2 x 250W @ HiZ (100/70V) in bridge mode.
- 4 analogue inputs on Euroblock connectors.
- 4 GPI for remote volume control.
- 1 External Mute.
- Internal matrix mixer and signal processing.
- HADA DSP Manager software for device configuration and control.
- Third party control via TCP/IP.

APPLICATIONS

- Leisure
- Hospitality
- Education
- Corporate
- Sports & Wellness

TECHNICAL SPECIFICATIONS

HADA-4B150

INPUTS

Number of Inputs	4 analogue input channels
Analogue input connection type	IN1-4: 3-pin Euroblock, balanced, pitch 3,5 mm.
Input configuration	Digital matrix 4 in x 4 amp. out (Settings by HADA DSP Manager)

AMPLIFIED OUTPUTS

Number of amplified outputs	4
Amplified output connection type	2-pin Euroblock.
Output configuration	Lo-Z/Hi-Z, 70V/100V (Bridge mode), 4Ω/8Ω Output mode selection per channel/couple by software (Settings by HADA DSP Manager)

OUTPUT POWER (all channels driven @ 1%THD)

Max output power @ 8Ω	125W
Max output power @ 4Ω	125W
Max output power bridge mode @ 8Ω	250W
Max output power @ 100V	250W (Bridge Mode)
Max output power @ 70V	250W (Bridge Mode)

SIGNAL

Voltage gain	27 to 37 dBV 29,2 to 39,2 dBu
Input sensitivity	-12 to 12 dBV -9,8 to 14,2 dBu 0,25 to 3,98 Vrms @ Nominal power
Input impedance	21k (balanced)
Max input level	22 dBV 24,2 dBu
Frequency response	20Hz-20kHz (-3dB, 1W any load)
THD + Noise	< 0,01 0.015 Typ (@ 1kHz, from 0,1W to Full Power)
Crosstalk	>60 dB (@ 1kHz)

ELECTRICAL

Power supply	Universal, SMPS with PFC
AC mains requirement	100-240 V @ 50-60Hz (±10%)
Power factor correction	> 0,92
AC mains connector	IEC C14 inlet

POWER CONSUMPTION @230VAC

Power Consumption (1/4 POWER, @ 4Ω)	277W (all channels driven)
Power Consumption (1/8 POWER, @ 4Ω)	145W (all channels driven)
Power Consumption (IDLE)	14.5W
Power Consumption (STBY)	8.5W

TECHNOLOGIES

Amplification technology	Class D
Cooling	Fan (Forced air, front to back airflow. Temperature controlled continuously variable speed)

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Maximum fan noise	46 dB (Maximum acoustical noise @1m)

PROTECTIONS

DC protection	Yes (Protects loudspeaker and installation against DC and infrasonic signals at the outputs)
HF protection	Yes (Protects the loudspeakers against non-audible, strong, non-musical high frequency signals)
Short-circuit protection	Yes (Protects the amplifier from overcurrent, short circuit or other stressful events for the output stages with output reduction or MUTE (automatic protection reset))
Thermal protection	Yes (Output power reduction when output stages operating temperature up to 90 °C (194 °F) Mute when output stages operating temperature up to 100 °C (212 °F))

REMOTE CONTROL CONNECTIONS

ON / OFF	No
GPIs	x4 GPIs (0-3.3V) (5-pin Euroblock connector, rear panel)
External MUTE	Yes, dry contact (2 pins Euroblock connector, rear panel. Euroblock pitch 3,5 mm)

LOCAL CONTROL

Attenuators	Front panel knobs (Defaults: Amplified OUTs attenuators)
Output mode settings	Lo-Z/Hi-Z, 70V/100V, 4Ω/8Ω Output mode selection per couple of channels (Software)
RUN/SLEEP mode	Yes, front panel push-button (Operates when pressed more than 3 seconds)
Power ON/OFF	Yes, back panel switch (Red LED indicator)

CONNECTIVITY

Ethernet	Ethernet Base-Tx 100Mb (CAT5 up to 100m. Settings by embedded web application)
Programming and control	HADA DSP Manager Application

MONITORING

Signal Present	SP LED (White) per channel (trigger @- 40 dBV)
Clipping	CLIP LED (Red) per channel
Limit	LIMIT LED (Red) per channel
Mute	MUTE LED (White) per channel
Prot.	PROT. LED (Red) per unit
Thermal	THERMAL LED (Red) per unit (Temperature limiter)
Ext. Mute	Ext. MUTE LED (White) per unit (OFF NO WIRE, ON when MASTER, BLINK when SLAVE)
Data	DATA LED (White) per unit (ON when DATA)
On	ON LED (White) per unit (ON when RUN, SLOW BLINK when SLEEP by BUTTON, FAST BLINK when SLEEP by AUTOSTBY, VERY FAST BLINK when HW Fault)

DIGITAL ENGINE

Processor	Dual core 64bits

AUDIO CONVERTERS

Sampling rate	96 kHz
Resolution	24 bit

Dynamic range	113 dB

PROCESSING

Digital processing	64 bit
Latency	500uS (Analogue IN to analogue OUT)
Inputs processing	Delay, Parametric EQ, Limiter, Multiband compressor (Settings via HADA DSP Manager)
Outputs processing	Delay, Parametric EQ, Limiter, Multiband compressor (Settings via HADA DSP Manager)
Others	Preset management, 4x4 Matrix Mixer (Settings via HADA DSP Manager)

PHYSICAL

Operating temperature	Min. 0°C; 32°F Max. 40°C; 104°F (performance may be reduced above 40°C)
Operating humidity	5 - 80% RH, non-condensing
Storage temperature	Min. -10°C; 14°F Max. 50°C; 122°F
Storage humidity	5 - 85% RH, non-condensing
Installation options	Rack 19'' installation & desktop
Included accessories	EU Main cord, Euroblock Connectors (inputs /outputs), Desktop feet, rack 19'' installation hardware.
Optional accessories	-
Dimensions (WxHxD)	482.6 x 88 x 281,5 mm / 19 x 3.46 x 11.08 in.
Weight	4.7 Kg / 10.36 lb
Shipping dimensions (WxHxD)	495 x 125 x 560 mm. / 19.48 x 4.92 x 22.05 in.
Shipping weight	6,8 kg / 14.9 lb

MECHANICAL DIAGRAM

Ecler HADA-4B150 Mechanical Diagram

482,6

281,5

286,5

30,4

88
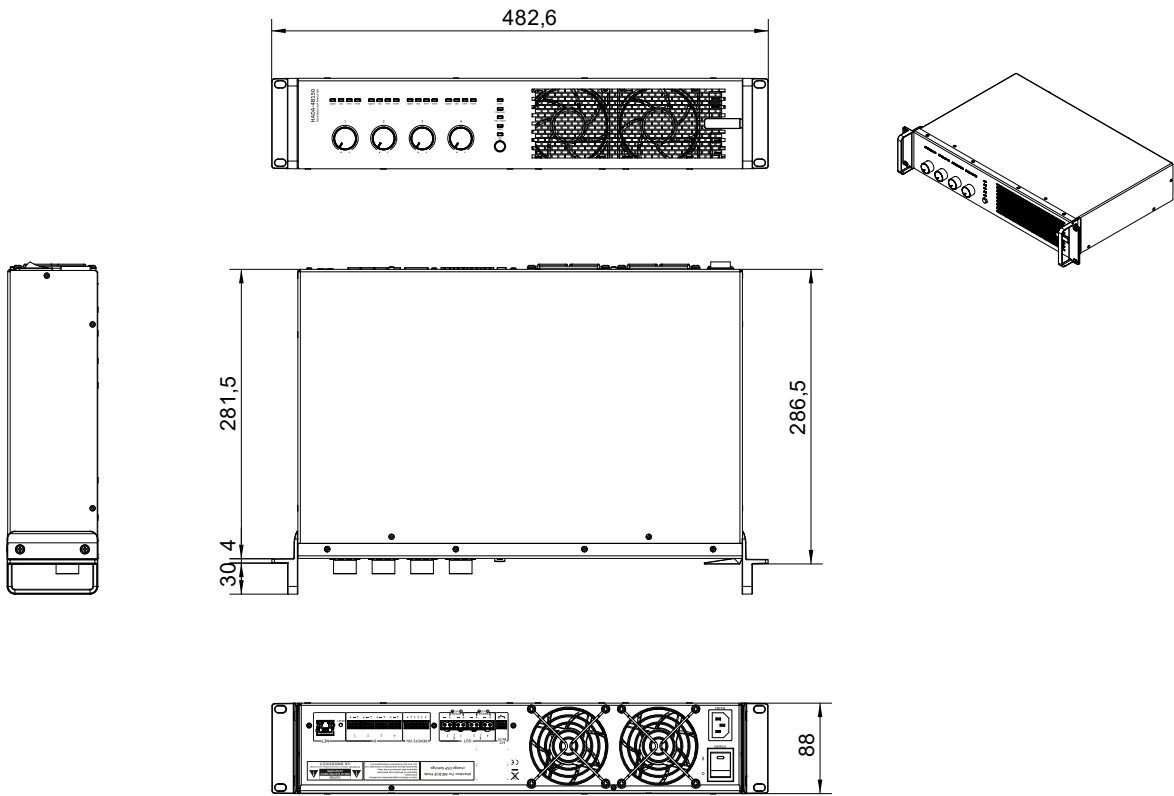
All the measurments are in mm

61-1116-0100

www.ecler.com

A&E SPECIFICATIONS

The amplifier must be an energy efficient four outputs Class-D power digital amplifier, containing 4 amplified outputs that can be configured per couple of channels in high impedance (100/70V) as 2x 250W or low impedance as 4x 125W (8/4ohm) or 2x250W (8ohm) in bridge mode. It shall support 4 analogue inputs.

The construction must be transformerless using Class-D amplifier technology and powered by an universal, regulated SMPS with PFC power supply . Each amplified output shall have integrated circuitry to protect against short-circuits or mismatched loads and over-heating. The amplifier must be Forced air cooled, front to back airflow, so that maintenance can be kept to a strict minimum.

The amplifier should be managed from its Windows application, including an internal matrix mixer and allow tailoring the input and output signal through parametric EQs, multi-band compressors, limiters, and delays. Each configuration shall be saved as a preset. The amplifier shall allow a 3rd party control system to query and modify various internal parameters via TCP/IP protocol.

The front panel shall contain an ON button accompanied by a white power indicator LED, white DATA indicator LED, white EXT MUTE indicator LED, a red PROT indicator LED and a red THERMAL indicator LED. A white SP LED's indicates the presence of an input signal, a red clip LED indicating the output operation at maximum level, a limit LED and mute LED shall be provided for each channel. The level controls shall be located on the front panel.

All connections shall be made on the rear panel of the unit. The signal input connections shall be balanced and performed using euroblock connectors. The output connections must be fitted with terminal block connectors. The amplifier should provide four remote control ports (GPI) compatible with devices such as the WPa series wall panels or common 10 Kohm linear potentiometers. The amplifier must have an external mute port which allows the activation / deactivation of the mute of audio outputs (zones) of the unit.

The amplifier shall operate on a 100-240V AC - 50/60 Hz mains network and shall be equipped with a removable power cord having a standard shuko (CEE 7/7) AC plug. The connector on the amplifier chassis shall be a fused IEC C14 type. The amplifier chassis shall be a 2UR steel constructed 19'' housing. Depth from mounting surface to rear supports shall be 281,5 mm and the weight shall not exceed 4,7 Kg.

The amplifier shall be the ECLER HADA-4B150.