

VIDA-16Q

AMPLIFIERS

Digital Amplifiers



PRODUCT OVERVIEW

VIDA-16Q is a 1600W digital amplifier, with 4 amplified outputs that can be independently configured in high (100/70V) or low (8/4/2ohm) impedance. The VersaPower technology, developed by Ecler, allows an asymmetrical power distribution, and thanks to the Smart VersaPower tool it helps installers by facilitating a smart and fast configuration. In addition, the Class D amplification technology as well as the configurable 4-outputs auto standby and sleep mode functions, both configurable, further improve energy efficiency.

This device offers a wide range of possibilities thanks to its 4 analogue and 4 Dante/ AES67 digital inputs, audio player - with microSD slot for local audio files – as well as signal generator, plus 2 auxiliary line outputs and 4 Dante/ AES67 digital outputs.

All these features are managed from its intuitive web application which, among other functionalities, allows signal routing - matrix -, audio signal processing - such as equalisation or limiters -, priority management, GPIO configuration through events, as well as calendar events, playlist management and SD card content, thus facilitating the start-up of the audio-visual installation, its maintenance and customisation.

Thanks to the Android/iOS/Web application available to the end user, the audio installation can be managed by them in an easy, intuitive, and customised way.

KEY FEATURES

- 4 amplified outputs VersaPower 1600W.
- 4 Dante/ AES67 outputs and 4 Dante/ AES67 inputs.
- 2 auxiliary outputs.
- 4 analogue inputs.
- Audio player. MicroSD card slot.
- Internal matrix and signal processing.
- Web application for device configuration.
- Smart power management Smart VersaPower.
- Control and scheduled events for automation.
- Customize user panels.
- Remote control user application for iOS/Android/Web.
- Ultra-low power consumption mode.
- Compatible with the Remote Monitoring & Control Platform EclerCLOUD.

APPLICATIONS

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

TECHNICAL SPECIFICATIONS

VIDA-16Q

INPUTS	
Number of Inputs	4 analogue input channels 4 DANTE/ AES67 Network Rx channels 1 embedded player, 1 embedded signal generator
Analogue input connection type	IN1-4: 3-pin Euroblock, balanced, pitch 3,5 mm.
Digital input connection type	Ethernet, managed via Dante/ AES67 Controller
Input configuration	Digital matrix 4 in x 6 out (Settings by embedded web application)
AMPLIFIED OUTPUTS	
Number of amplified outputs	4
Amplified output connection type	2-pin Euroblock. Pitch: 7,62 mm Ref: DEGSON 5EDGRC-7.62
Output configuration	Lo-Z/Hi-Z, 70V/100V, 4Ω/8Ω/2Ω Output mode selection per channel Rear panel DIP SWITCH selectors
VERSAPOWER	
SYMMETRICAL - All channels driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	400W
Max output power @ 4Ω	400W
Max output power @ 2Ω	400W
Max output power @ 100V	400W
Max output power @ 70V	400W
ASYMMETRICAL - Single channel driven @1kHz @CF9dB @ 1%THD	
Max output power @ 8Ω	1400W
Max output power @ 4Ω	1600W
Max output power @ 2Ω	1600W
Max output power @ 100V	1600W
Max output power @ 70V	1600W
AUXILIAR OUTPUTS	
Number of auxiliar outputs	2
Auxiliar output connection type	AUX1-2: 3-pin Euroblock, balanced (Euroblock pitch 3,5 mm. Settings by embedded web application)
DIGITAL OUTPUTS	
Number of digital outputs	4
Digital output connection type	Ethernet, managed via Dante/ AES67 Controller

SIGNAL		
Voltage gain	28 to 40 dBV	30,2 to 42,2 dBu
Input sensitivity	-6 to +6 dBV	-3,78 to 8,2 dBu
	0,5 to 2 Vrms	(adjusted by means of Smart Versa Power utility)
Input impedance	>24k (balanced)	
Max input level	+18 dBV	+20,2 dBu
	(@ Gain 34 dBV)	
Frequency response	15Hz-25kHz (-3dB, 1W any load)	
THD + Noise	< 0,1 %	
	0,015 Typ	
	(@ 1kHz, from 0,1W to Full Power)	
SNR	95 dBA (40dB Gain, from 20Hz - 20kHz)	
Crosstalk	>80dB (@ 1kHz)	
CMRR	> 65 Typ (from 20Hz-20kHz)	
Damping factor	>500 (@ 8Ω, from 20Hz to 1kHz)	

ELECTRICAL		
Power supply	Universal, regulated SMPS with PFC	
AC mains requirement	100-240 V @ 50-60Hz ((±10%))	
Power factor correction	> 0,96 (Output Power > 500W)	
AC mains connector	IEC C14 inlet (10Amax)	

POWER & HEAT @230VAC

1/4 POWER, @ 4Ω (all channels driven)	
Power	607 W 640 VA
Current Draw	3,8 Arms
Thermal Loss	178,0kcal/h 706,5BTU/h
1/8 POWER, @ 4Ω (all channels driven)	
Power	362 W 414 VA
Current Draw	1,8 Arms
Thermal Loss	139,3kcal/h 552,9BTU/h
IDLE (all channels driven)	
Power	72 W 122 VA
Current Draw	0,52 Arms
Thermal Loss	61,9kcal/h 245,7BTU/h
SLEEP MODE (all channels driven)	
Power	4,1 W 23,8 VA
Current Draw	0,1 Arms
Thermal Loss	3,5kcal/h 14BTU/h

POWER & HEAT @120VAC

1/4 POWER, @ 4Ω (all channels driven)

Power	604 W 611 VA
Current Draw	5,17 Arms
Thermal Loss	175,4kcal/h 696,3BTU/h

1/8 POWER, @ 4Ω (all channels driven)

Power	354 W 362 VA
Current Draw	3,04 Arms
Thermal Loss	132,4kcal/h 525,6BTU/h

IDLE (all channels driven)

Power	68 W 89 VA
Current Draw	0,75 Arms
Thermal Loss	58,5kcal/h 232,1BTU/h

SLEEP MODE (all channels driven)

Power	3,6 W 10,2 VA
Current Draw	0,09 Arms
Thermal Loss	3,1kcal/h 12,3BTU/h

TECHNOLOGIES

Amplification technology	Class D
Energy saving	Auto standby function programmable per channel Sleep Mode function selectable
Efficiency	68% (1/4 POWER, @ 4Ω)
Cooling	Fan (forced air, front to back airflow. Temperature controlled continuously variable speed)
Maximum fan noise	53dB (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)
Clip limiter	Yes (prevents severely clipped waveforms from reaching loudspeakers, while still maintaining full peak power output).
Long term limiter	Yes (protects the loudspeaker and amplifier against steady long term rms signals (sine wave, non-music) reducing maximum output)
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 (0-10V) Function and settings by embedded web application 5-pin Euroblock connector, rear panel. Euroblock pitch 3,5 mm
GPOs	x4 NC / NO contacts 4x 3pins Euroblock connector, rear panel Euroblock pitch 3,5 mm
External MUTE	Yes, contact (2 pins Euroblock connector, rear panel, Euroblock pitch 3,5 mm)
LOCAL CONTROL	
Attenuators	Programmable Front panel knobs (defaults: Amplified OUTs attenuators)
Output mode settings	Lo-Z/Hi-Z, 70V/100V, 4 Ω /8 Ω /2 Ω Output mode selection per channel (Rear panel DIP SWITCH selectors)
RUN/SLEEP mode	Yes, front panel push-button (operate when pressed more than 0,5 seconds)
Power ON/OFF	Yes, back panel switch (red LED indicator)
CONNECTIVITY	
Ethernet	Ethernet Base-Tx 10/100/1000Mb Auto X-Over (CAT5 up to 100m. Settings by embedded web application)
DANTE/ AES67 Protocol	Dante/ AES67 4x Tx / 4x Rx channels (2/2 flows)
Programming and control	Embedded web application
MONITORING	
Signal Present	SP LED (White) per channel (trigger @ - 40 dBV)
Clipping	CLIP LED (Red) per channel (Clip, Versa power limiter, Peak power, Power supply overload)
Protect	PROT LED (Red) per channel (Current overload, Output short circuit, Under voltage, Over Voltage, DC OUT (slow blink), HF protect (fast blink))
Standby / Mute	STBY/MUTE LED (White) per channel (ON when STBY, BLINK when MUTE)
Limit	LIMIT LED (Red) per unit (Power (power supply) overload)
Thermal	THERMAL LED (Red) per unit (Temperature limiter)
Dante/ AES67	DANTE/ AES67 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)

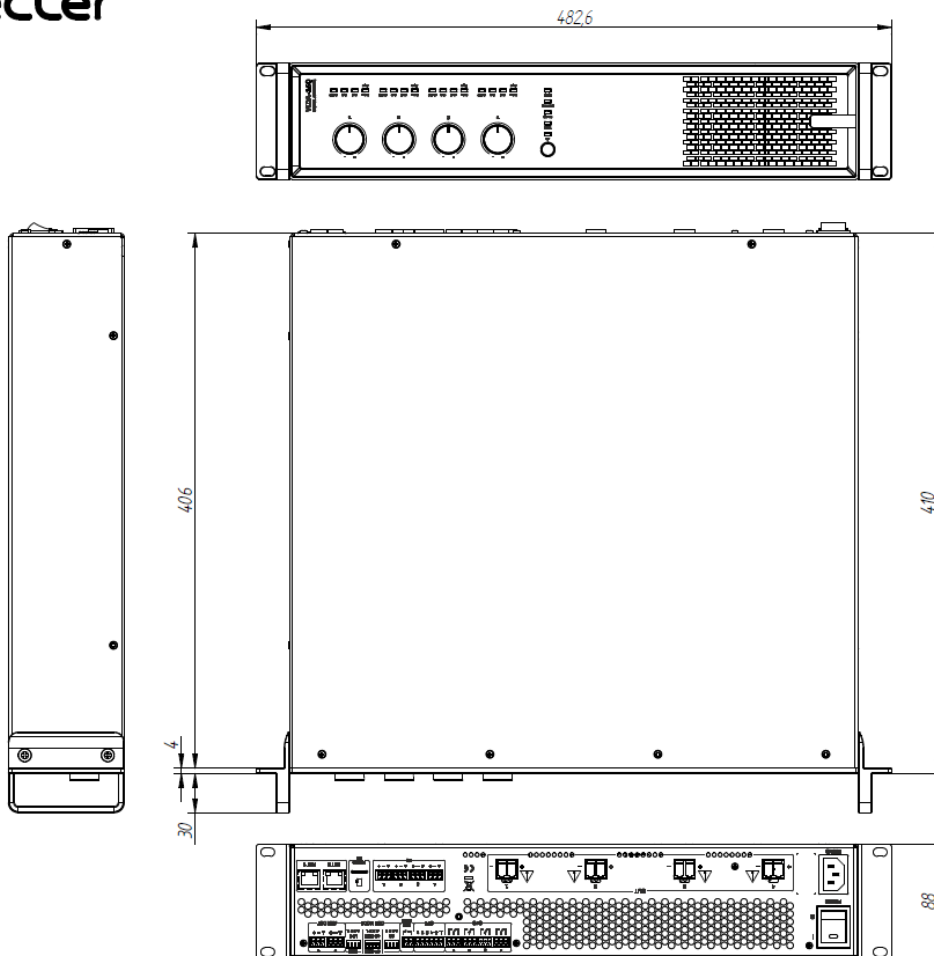
DIGITAL ENGINE		
	Processor	Quad core 64bits 1,5GHz
AUDIO CONVERTERS		
	Sampling rate	48 kHz
	Resolution	24 bit
	Dynamic range	114dB
PROCESSING		
	Digital processing	32/64 bit
	Latency	2,8 ms (Analog IN to analog OUT)
	Inputs processing	Noise gate, HPF, Freq. Shifter, compressor/limiter
	Outputs processing	Delay, Parametric EQ, Graphic EQ independent for every amp out and aux out. Limiters independent for every amp out Smart VersaPower management (Settings by embedded web application)
	Others	Preset management, Internal matrix, priority & backup signals management, local & network groups, events management incl. calendar (Settings by embedded web application)
REAL-TIME CLOCK		
	Retention time	> 5 years
	Accuracy	±1 minute / month
	Battery	VARTA CR2032 3V, 230mAh
LOCAL STORAGE		
	Micro SD	SDXC
	Capacity	Up to 2TB
	File system	FAT16, FAT 32, VFAT (read/write) NTFS (read) Multi-partition up to 1
	Playable audio files	mp3, ogg, WAV, FLAC, AIFF
	Files analysis	65354 playable folders 65354 playable folders within each folder 65354 playable files within each folder
	Folder hierarchy	Up to 8 containing the root directory
	Sorting	UNICODE, in alphabetical order Up to 100 folders / files by folder Folders/files over 100 sorted in the FAT order
PHYSICAL		
	Operating temperature	-10° to 50° C 14° to 122° F (performance may be reduced above 40 °C)
	Operating humidity	5 - 85% RH, non-condensing
	Storage temperature	-10° to 50° C 14° to 122° F

Storage humidity	5 - 85% RH, non-condensing
Installation options	Rack 19" installation & desktop
Included accessories	EU power cord, Multiplugs, Euroblock Connectors (inputs /outputs), Desktop feet, rack 19" installation hardware
Optional accessories	-
Dimensions (WxHxD)	482.6 x 88 x 410 mm. / 19 x 3.46 x 16.14 inches
Weight	9.3 kg / 20.5 lb
Shipping dimensions (WxHxD)	650 x 125 x 600 mm. / 25.59 x 4.92 x 23.62 inches
Shipping weight	12.3 kg / 27.1 lb

MECHANICAL DIAGRAM



Ecler VIDA-16Q Mechanical Diagram



61-1108-0200

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 independently configured in high (100/70V) or low (8/4/2ohm) impedance with a total output power of 1600 Watt. The power distribution shall be asymmetrical using VersaPower technology. It shall support 4 analogue inputs, 4 digital Dante / AES67 inputs and 4 digital Dante/ AES67 outputs formatted networked audio, as well as an audio player - with microSD slot for local audio files playback, a signal generator, plus 2 auxiliary line outputs.

The amp stage construction must be transformerless using Class-D amplifier technology and powered by a switching 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. An automatic signal detection circuit shall be implemented, switching the amplifier to standby or sleep mode function when no audio input signal is detected. The sleep mode mains consumption shall be less than 4.2 Watt.

The amplifier should be managed from its web application, allowing signal routing and mixing - matrix -, audio signal processing - such as equalisation and limiters -, priority management, GPIO configuration through events, as well as calendar events, playlist management and SD card contents, thus facilitating the start-up of the audio-visual installation, its maintenance and customisation. The amplifier should be remotely controlled by the users, with a mobile application, compatible with Android and iOS.

The front panel shall contain an ON switch accompanied by a white power LED indicator, white DATA LED indicator, white DANTE LED indicator and a red THERMAL LED indicator. A white signal LED, per channel, indicates the presence of an input signal, a red clip LED indicating the output operation at maximum level and a protection LED indicating any fault detected 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 audio signal input connections shall be balanced and performed using Euroblock connectors. The amplified audio output connections must be fitted with terminal block connectors. The amplifier must have 4 GPI and 4 GPO general purpose controls (Euroblock connector).

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 410 mm and the weight shall not exceed 9.3 Kg.

The amplifier shall be the ECLER VIDA-16Q.