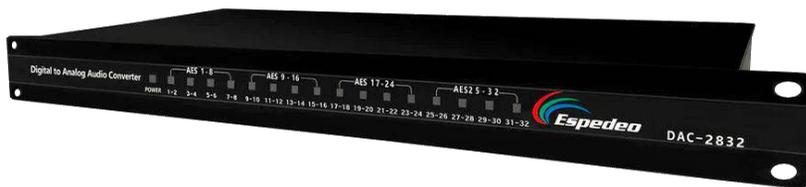




DAC Series

Digital-to-Analog Audio Converter

(Model: DAC-2808 · DAC-2812 · DAC-2816 · DAC-2824 · DAC-2832)



User Manual

Before installing and operating the DAC Series Digital-to-Analog Audio Converter, please read this User Manual thoroughly

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1. Introduction

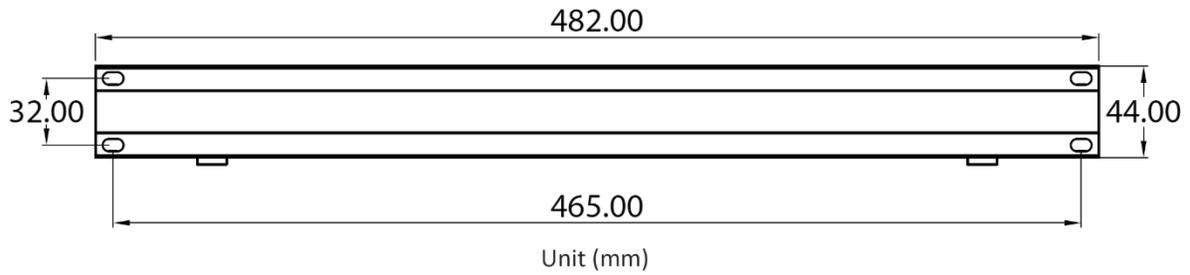
The **Espedeo™ DAC Series** offers five Digital-to-Analog Audio Converters models [DAC-28xx, where 'xx' represents the number of analog output channels, that is 08 /12 /16 /24 /32] designed to interface with the **GDC SR-1000 Integrated Media Block™** and the **Espedeo Supra-5000 RGB+ Laser Phosphor Cinema Projector**. Each model supports the specified number of AES3 digital audio inputs through RJ-45 socket(s) and the outputs are accessible via Phoenix connectors.

The Espedeo DAC Series' front panel LED indicators show signal presence on each AES3 pair, providing an audio interface solution for your entertainment needs.

For details regarding the usage of the DAC Series Digital-to-Analog Audio Converter with the **GDC SR-1000** or the **Espedeo Supra-5000**, please refer to the product documentation on the [GDC](#) or [Espedeo](#) website.

2. Dimensions

Front View



Top View

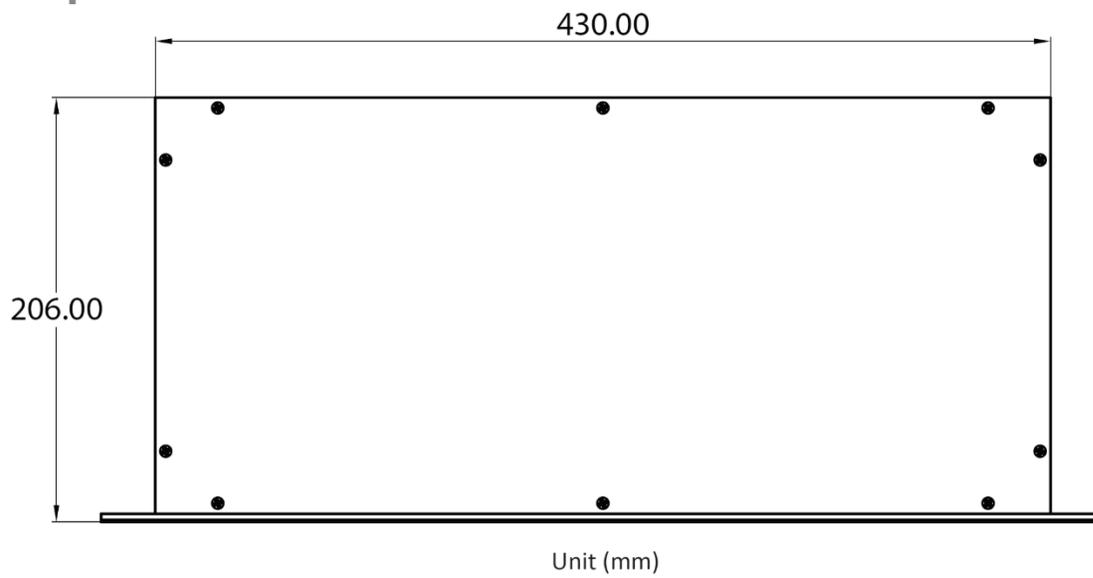


Figure 1: DAC Series Dimensions (in mm)

3. Technical Specifications

Model →	DAC-2808	DAC-2812	DAC-2816	DAC-2824	DAC-2832
Frequency Range	20 Hz – 20,000 Hz				
AES3 Input	1 x RJ-45	2 x RJ-45	2 x RJ-45	3 x RJ-45	4 x RJ-45
Max. AES3 Input Pairs	4	6	8	12	16
Analog Balanced Output	8 x 3 pin Phoenix	12 x 3 pin Phoenix	16 x 3 pin Phoenix	24 x 3 pin Phoenix	32 x 3 pin Phoenix
LED Indicators	AES3 signal presence				
Input Sample Rate	32 – 192KHz				
Power Rating	AC 100V – 240V 1.0A Max. 50/60Hz				
Max. Power Consumption	15W				
Power Cable	1.5m mains cable (EU: Type F – C13 or US: Type B – C13 or UK: Type G – C13 or CN: Type I – C13 or IN: Type M – C13)				
Rack Height	1U				
Product Dimensions (WxHxD)	482 x 44 x 206 mm				
Package Dimensions (WxHxD)	530 x 110 x 330 mm				
Product Weight	2.4kg	2.5kg	2.6kg	2.7kg	2.8kg
Package Weight	3.3kg	3.4kg	3.5kg	3.6kg	3.7kg

Table 1

4. Packing List

The DAC Series Digital-to-Analog Audio Converter package consists of the components listed under **Table 2**.

Sr. No.	Part Description	Quantity	
①	DAC 28xx Digital-to-Analog Audio Converter Unit	1 PCS.	
②	Analog Output Terminal	Model: DAC-2808	8 PCS.
		Model: DAC-2812	12 PCS.
		Model: DAC-2816	16 PCS.
		Model: DAC-2824	24 PCS.
		Model: DAC-2832	32 PCS.
③	Power Cable#	1 PCS.	

The required plug type for the power cord can be specified as per regional requirements.

Table 2

NOTE: Please retain the original packaging of the DAC for RMA shipments. The transport and protective packing have been selected from materials that are environmentally friendly, which can normally be recycled.

5. Safety Instructions

Explanation of Graphical Symbols:



The triangle with the lightning bolt is used to alert the user to the risk of electric shock.



The triangle with the exclamation point is used to alert the user to important operating or maintenance instructions.



The CE-mark indicates compliance with low voltage and electromagnetic compatibility.



Symbol for earth/ground connection.



Symbol indicating that the equipment is for indoor use only.



Symbol for conformity with Directive 2002/96/EC and Directive 2003/108/EC of the European Parliament on waste electrical and electronic equipment (WEEE).



WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT ATTEMPT TO OPEN ANY PART OF THE UNIT. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



TO COMPLETELY DISCONNECT THIS APPARATUS FROM THE AC MAINS, DISCONNECT THE POWER SUPPLY CORD PLUG FROM THE AC RECEPTACLE.



THE MAINS PLUG OF THE POWER SUPPLY CORD MUST REMAIN READILY ACCESSIBLE



DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE, DRIPPING OR SPLASHING LIQUIDS. OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHOULD NOT BE PLACED ON THIS APPARATUS.



WHEN THE UNIT IS INSTALLED IN RACK CABINET OR A SHELF, MAKE SURE THAT IT HAS SUFFICIENT SPACE ON ALL SIDES TO ALLOW FOR PROPER VENTILATION (50 CM FROM THE FRONT AND REAR VENTILATION OPENINGS).



CONNECTIONS TO THE MAINS SHALL BE DONE ONLY BY AN ELECTROTECHNICALLY SKILLED PERSON ACCORDING TO THE NATIONAL REQUIREMENTS OF THE COUNTRIES WHERE THE UNIT IS SOLD.



IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully.
2. Do not use this equipment near water.
3. Clean only with a dry cloth.
4. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
5. Do not use near heat sources such as stoves, heat registers, radiators or other equipment (including amplifiers) that produces heat.
6. Do not use the unit near open fire sources.
7. Connect the unit only to the electric network with grounding. Use only electric plugs that provide grounding.
8. Protect the power cord from being walked on, pinched or otherwise damaged.
9. Use only accessories specified by the manufacturer.
10. Unplug this unit during lightning storms or when unused for long periods.
11. Refer all servicing to qualified service personnel. Servicing is required when the system has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally or has been dropped.
12. **WARNING** - TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS SYSTEM UNIT TO RAIN OR MOISTURE.

THIS UNIT CONTAINS POTENTIALLY LETHAL VOLTAGES. TO PREVENT ELECTRIC SHOCK OR HAZARD, DO NOT REMOVE THE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

INSTALLING OF THIS UNIT MUST BE PERFORMED ONLY BY QUALIFIED TRAINED PERSONNEL FOLLOWING APPLICABLE SAFETY RULES. DO NOT ALLOW INSTALLING OF THIS UNIT IF INSTALLATION HARDWARE IS BROKEN, BENT, PARTS ARE MISSING OR IS OTHERWISE DAMAGED.



6. Regulatory Information

FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

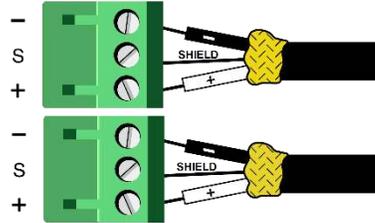
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

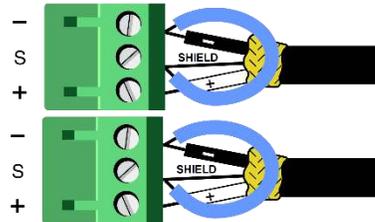
7. AES3 / Analog Output Connection

Analog Outputs

BALANCED LINES



UNBALANCED LINES



AES3 In

1	AES31+	GREEN/WHITE	
2	AES31-	GREEN	
3	AES32+	ORANGE/WHITE	
4	AES33+	BLUE	
5	AES33-	BLUE/WHITE	
6	AES32-	ORANGE	
7	AES34+	BROWN/WHITE	
8	AES34-	BROWN	

8. Routing Diagram

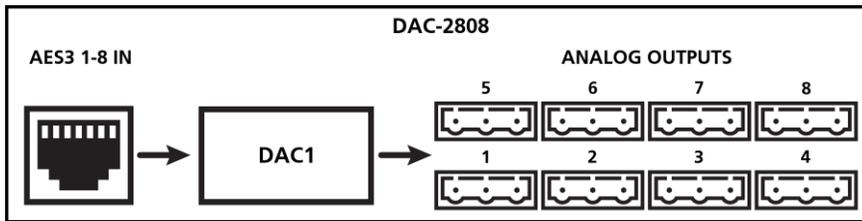


Figure 2: Routing Diagram for DAC-2808

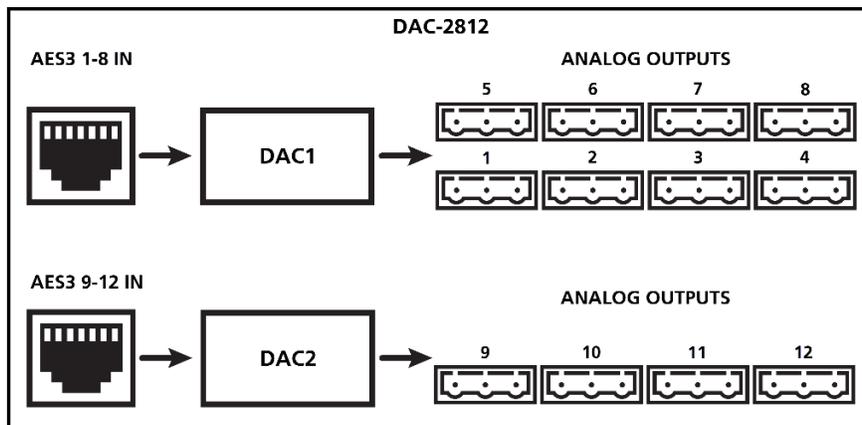


Figure 3: Routing Diagram for DAC-2812

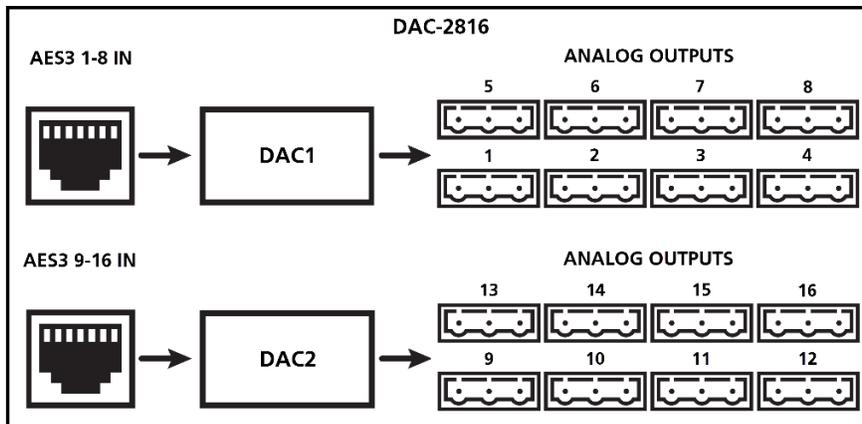


Figure 4: Routing Diagram for DAC-2816

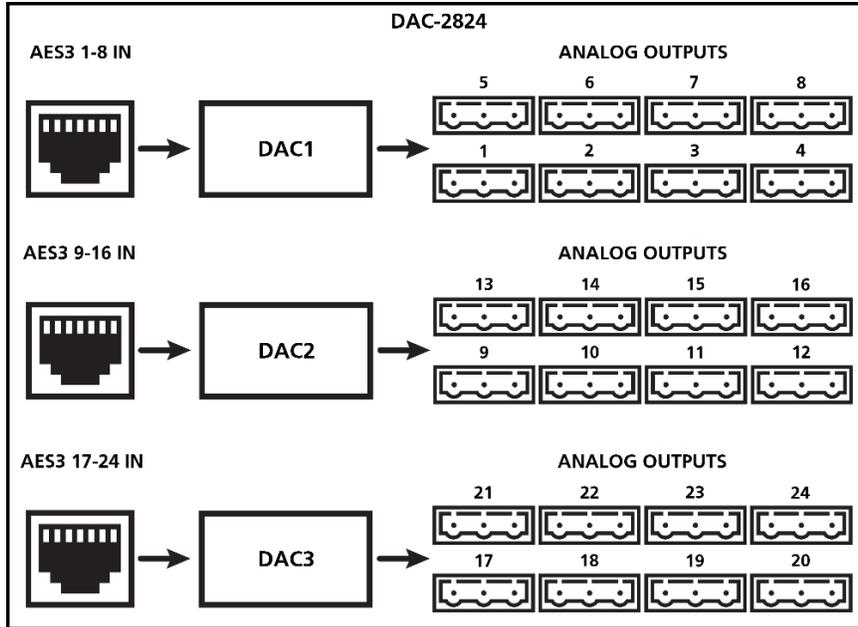


Figure 5 : Routing Diagram for DAC-2824

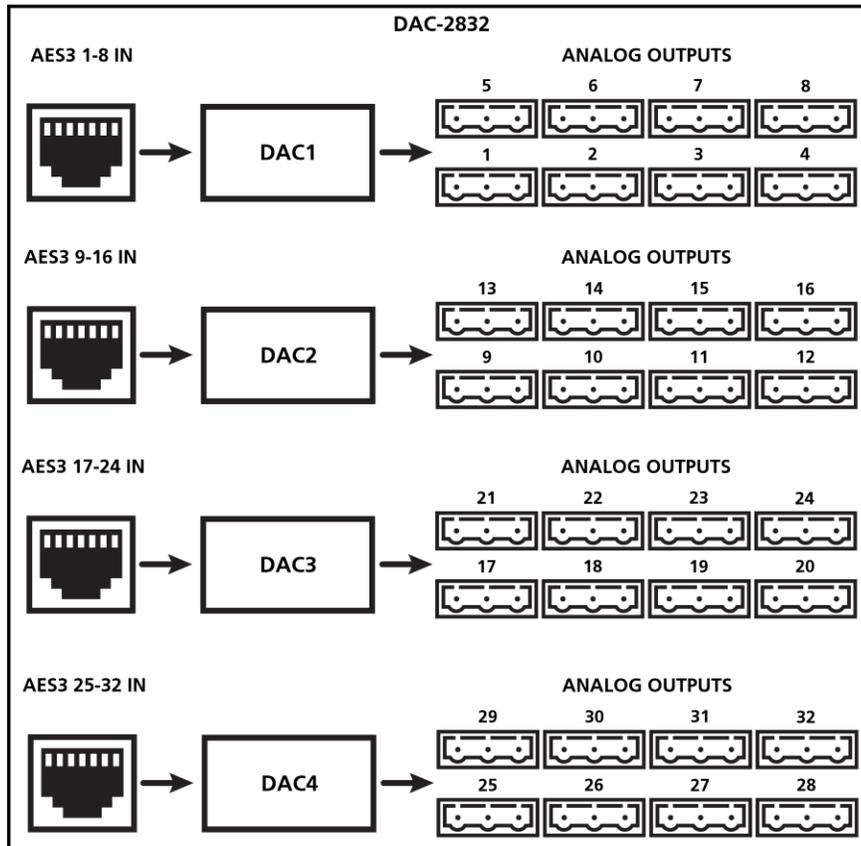


Figure 6: Routing Diagram for DAC-2832

9. Installation and Panel Description

9.1 Installation

The DAC-28xx Digital-to-Analog Audio Converter is a 1U Rack device and can most conveniently be installed in the amplifier rack it connects to.

NOTE: Instead of connecting the DAC-28xx to the power grid directly, it is recommended to plug the device's mains connection to a UPS outlet.

9.2 AC Mains Supply

The AC Main connection is made via the **IEC C13** connector.



Make sure the AC mains voltage used is within the acceptable operating voltage range: 115V-230V \pm 10%.



It is important to connect the ground for safety, do not use adapter that disables the ground connection.



The DC series amplifiers have an automatic power factor correction system - PFC - for a perfect mains network interface. The PFC minimizes the reactive power reflected on the network and reduces the harmonic distortion on voltage/current waveform: in this way the amplifier is seen as a resistive load from the mains network. Furthermore, the system allows performance to be maintained even in case of varying mains voltage.



Connection to the main shall be done only by an electro technically skilled person according to the national requirements of the countries where the unit is sold.



9.3 Front Panel of DAC Series

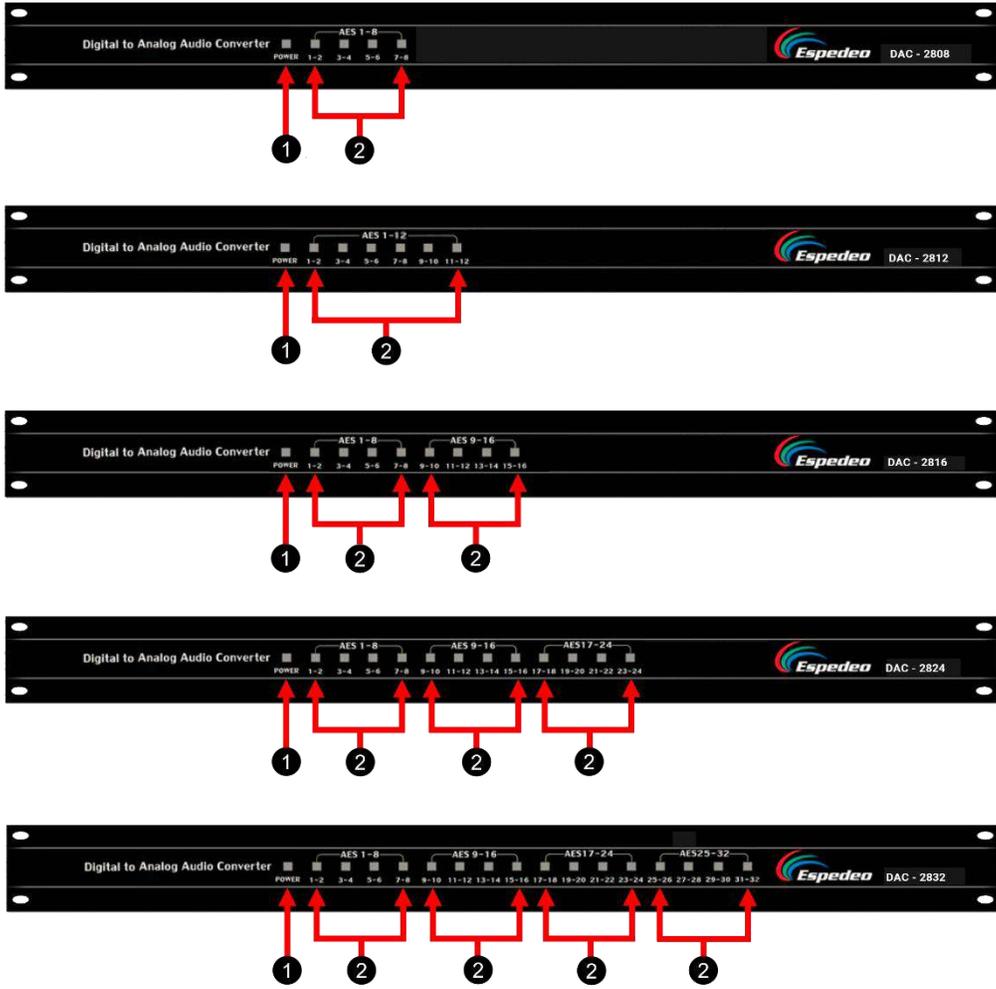


Figure 7: DAC Series Front Panel

① → Power indicator

② → AES3 Input Signal Indicators

9.4 Rear Panel of DAC Series

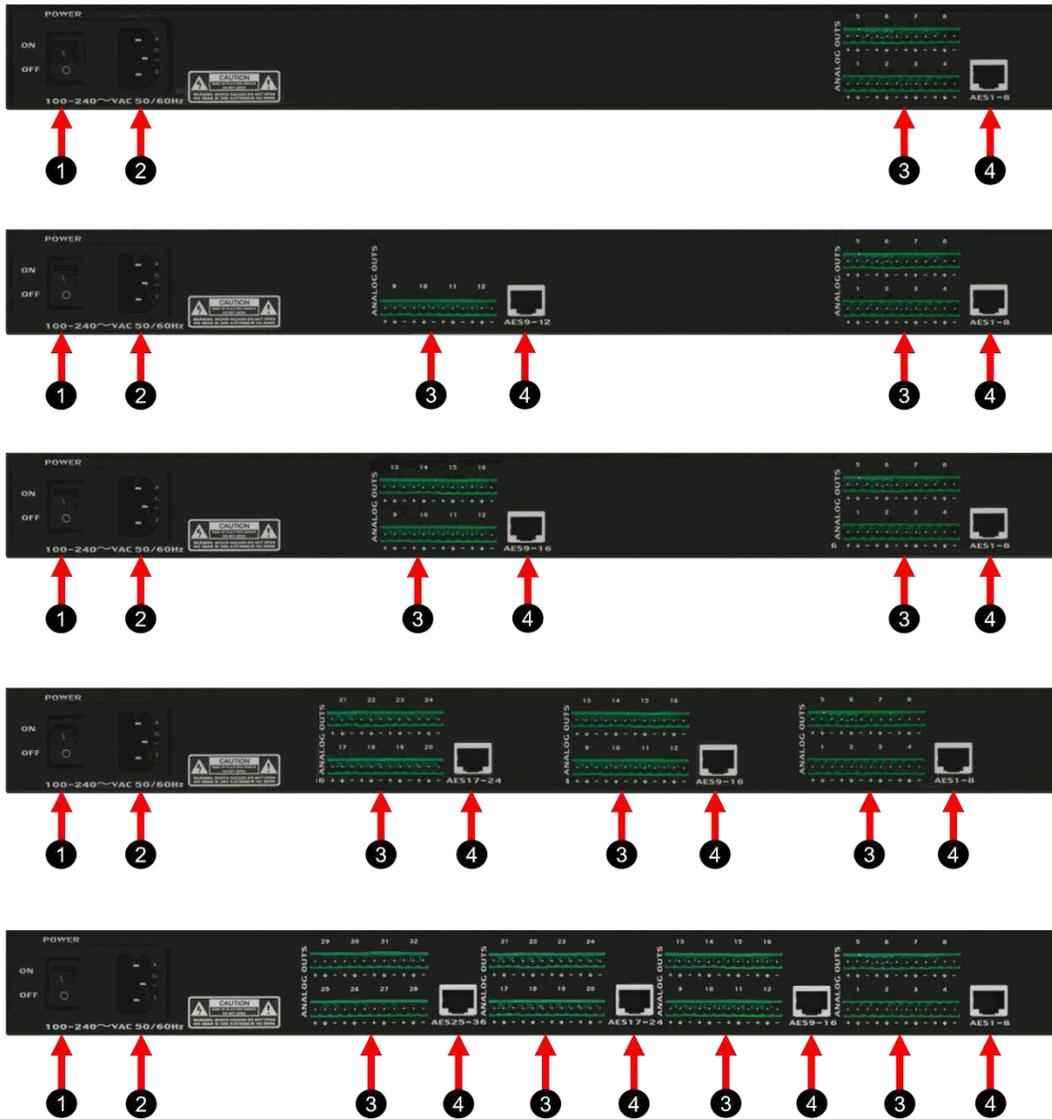


Figure 8: DAC Series Rear Panel

① → Power Switch

② → Equipment Power Supply:

C14 mains socket. AC 100V - 240V 1.0A Max. 50/60Hz.

The following power cord types are supplied with DAC Series unit, depending on the shipment region:

- EU - Type F - C13
- US - Type B - C13
- UK - Type G - C13
- CN - Type I - C13
- IN - Type M - C13

③ → **AES3 Input:**

8-channel AES3 signal input. RJ-45 connector receives the AES3 stream which can be routed to analog output as mentioned below:

DAC-2808/-2812/-2816/-2824/-2832 (wherever applicable):

- AES3 **1-8** IN - Analog Outputs **1-8**
- AES3 **9-12** IN - Analog Outputs **9-12**
- AES3 **9-16** IN - Analog Outputs **9-16**
- AES3 **17-24** IN - Analog Outputs **17-24**
- AES3 **25-32** IN - Analog Outputs **25-32**

④ → **Phoenix Analog Outputs:**

8 x 3 pin Phoenix connectors provide analog output for connection to analog amplifiers.

Espedeo Website



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Technical Support



Worldwide Offices



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