



ecler ETH232AD TCP-IP Serial Converter User Manual

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ecler ETH232AD TCP-IP Serial Converter



IMPORTANT REMARKS

CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN

WARNING: SHOCK HAZARD – DO NOT OPEN

- The lightning flash with the arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated dangerous voltage within the product enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.
- The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING (If applicable): The terminals marked with symbol of may be of sufficient magnitude to constitute a risk of electric shock. The external wiring connected to the terminals requires installation by an instructed person or the use of ready-made leads or cords.

WARNING: To prevent fire or shock hazard, do not expose this equipment to rain or moisture.

WARNING: An apparatus with Class I construction shall be connected to a mains socket-outlet with a protective earthing connection.

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.

4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at the plugs, convenience receptacles, and at the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the apparatus during lightening sorts or when unused for long periods of time.
13. Refer all servicing to qualified personnel. Servicing is required when the apparatus 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 apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
14. Disconnecting from mains: When switching off the POWER switch, all the functions and light indicators of the unit will be stopped, but fully disconnecting the device from mains is done by unplugging the power cable from the mains input socket. For this reason, it always shall remain easily accessible.
15. Equipment is connected to a socket-outlet with earthing connection by means of a power cord.
16. The marking information is located at the bottom of the unit.
17. The apparatus shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on apparatus.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. 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. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

WARNING: This product must not be discarded, under any circumstance, as unsorted urban waste. Take to the nearest electrical and electronic waste treatment centre.

NEEC AUDIO BARCELONA, S.L. accepts no liability for any damage that may be caused to people, animal or objects due to failure to comply with the warnings above.

IMPORTANT NOTE

Thank you for choosing our Ecler ETH232AD TCP/IP- serial converter! It is VERY IMPORTANT to carefully read this manual and to fully understand its contents before any connection in order to maximize your use and get the best performance from this equipment. To ensure optimal operation of this device, we strongly recommend that its maintenance be carried out by our authorised Technical Services. Ecler ETH232AD comes with a 3-year warranty.

INTRODUCTION

Ecler ETH232AD is a serial interface that allows bidirectional transparent transmission between RS-232/422/485 and Ethernet. It includes a setting webpage for Ethernet and Serial customized settings. Along with ENM software, it represents a very versatile and cost-effective serial interface controlled by customized user panels (UCP).

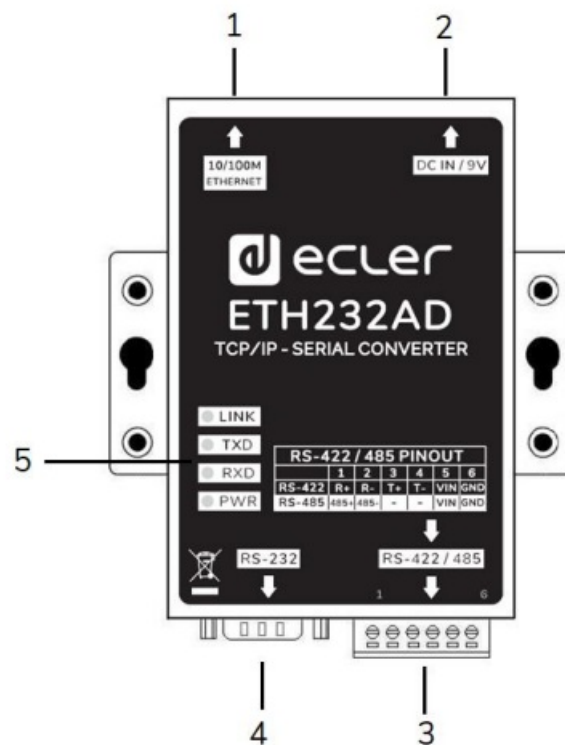
Features:

- 3-in-1 RS-232/422/485 interface with 10/100 Mbps Ethernet port
- Supports 4- and 2-wire RS-422 with built-in terminator
- Supports 9-24 VDC power input
- Euroblock connections for RS-422/485 and DB-9 connections for RS-232
- Supports configuration via web browser
- Supports configuration store and copy for easy deployment
- Supports TCP Server/Client, UDP Server/Client operation modes
- CE, FCC, RoHS certification

PACKAGE CONTENT

- 1 x ETH232AD Serial Interface
- 1 x 9VDC 1A International Power Supply
- 1 x 6 pin Euroblock Connector
- 1 x Quick start and Warranty sheet

PANEL DESCRIPTION



1. **Ethernet Port:** 10/100 Mbps auto negotiating Ethernet port on RJ45 connector
2. **Power Supply IN:** 9VDC input connector for power supply

3. **RS-422/485 Port:** Serial Port and Power Supply Euroblock connector (see table)
4. **RS-232 Port:** Serial Port on DB-9 Male connector
5. LED indicators:
 - **Link:** 10/100Base-TX Link & Activity Indicator
 - **TXD:** Data Transmitting from Ethernet to Serial Indicator
 - **RXD:** Data Receiving from Serial to Ethernet Indicator
 - **PWR:** Power ON Indicator

Pin out and connections

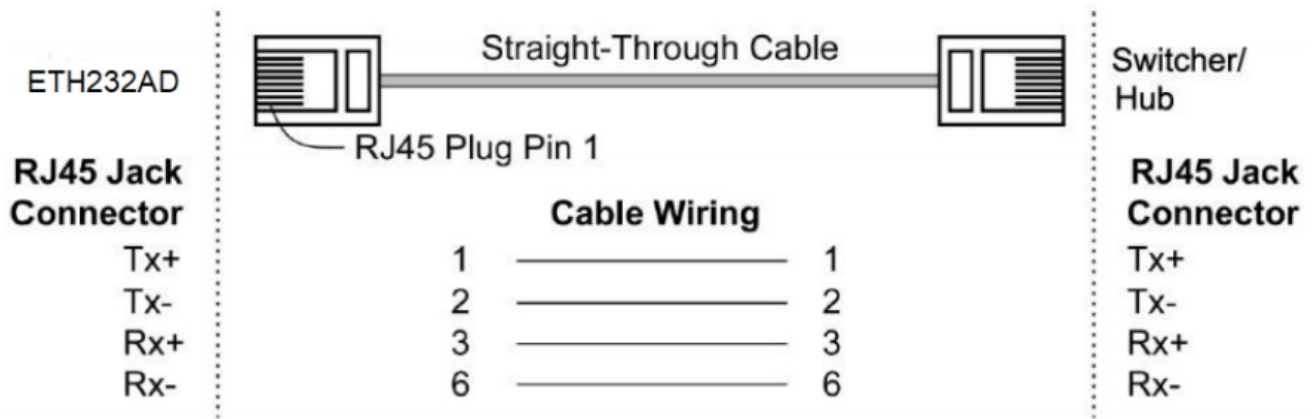
RS-232 Pin Out (DB-9 Male Connector)

(DB9Male)	Signal	I/O
PIN2	RXD	IN
PIN3	TXD	OUT
PIN5	GND	-
PIN7	RTS	OUT
PIN8	CTS	IN

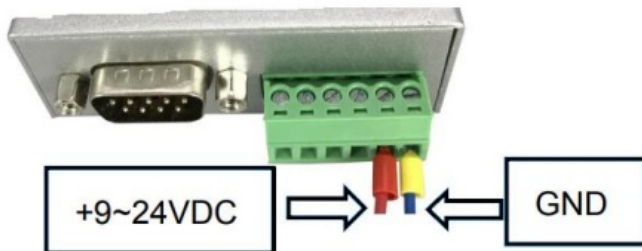
RS-422/485 Pin out (Euroblock Connector)

Terminal No	1	2	3	4	5	6
RS-422	R+	R-	T+	T-	VIN	GND
RS-485	485+	485-	-	-	VIN	GND

Ethernet Connection (RJ45 Connector)



Power Supply Connection (Alternative option on Euroblock)



CONFIGURATION AND OPERATION

In order to enter in the web configuration page, set up your computer network card with a static IP address in the same range of the ETH232AD interface that comes from factory with default IP address: 192.168.0.232 or 192.168.1.100. Open your web browser and type <http://192.168.0.232> or <http://192.168.1.100> in the browser address box.

The screenshot shows the web configuration page for the **ETH232AD: TCP/IP – SERIAL CONVERTER**. The page has a teal header with the **ecler** logo and the text **ETH232AD: TCP/IP – SERIAL CONVERTER** and **FW: v01.00.r0**. Below the header, there is a **Login** section with two input fields: **Username** and **Password**. A **Login** button is located below the password field.

The default login credentials are:

- **Username:** admin
- **Password:** admin
- **Note:** If the device belongs to batch nº G1005 the IP address will be 192.168.1.100



Basic Setup

Serial Settings

Basic	Advance	Security
Serial Settings		
Device Name	<input type="text" value="ETH232AD"/>	
Data Baud Rate	<input type="text" value="115200"/>	
Data Bits	<input type="text" value="8"/>	
Data Parity	<input type="text" value="None"/>	
Stop Bits	<input type="text" value="1"/>	
Flow Control	<input type="text" value="None"/>	
Serial Type	<input type="text" value="RS232"/>	

- **Device Name:** ETH232AD (default) User can modify the device name with a maximum number of 15 characters.
- **Data Baud Rate:** default 115200. RS-232 range from 1200 to 115200 bps. RS-422/485 range from 1200 to 921600bps.
- **Data Parity:** None (default), even, odd
- **Data Bits:** 5, 6, 7, 8 (default)
- **Stop Bits:** 1 (default), 1.5 or 2
- **Flow Control:** None (default), CTS/RTS (or Hardware)
- **Serial Type:** RS-232 (default), RS485, RS422(Master), RS422 (Slave)

Network Settings

Network Settings

DHCP Client	Disable ▼
Static IP Address	192.168.0.232
Static Subnet Mask	255.255.255.0
Static Default Gateway	192.168.0.1
Static DNS Server	192.168.0.1
Connection Type	TCP ▼
TCP Keep Alive	ON ▼
Transmit Timer	10
	Please enter an integer between 10~65535 ms
Server/Client Mode	Server ▼
Server Listening Port	5000
	Please enter an integer between 1~65535
Client Destination Host Name/IP	192.168.0.200
	Please enter host name or IP address
Client Destination Port	5000
	Please enter an integer between 1~65535

- **DHCP Client:** Disable(default) or Enable it a DHCP Server is active in your network, in order to obtain a dynamic IP address. If disabled, the ETH232AD will submit static IP mode.
 - **IP Address:** default 192.168.0.232 ***
 - **Subnet mask:** default 255.255.255.0
 - **Gateway:** default 192.168.0.1
 - **DNS Server:** default 192.168.0.1
 - **Connection Type:** TCP(Default) or UDP
 - **TCP Keep Alive:** Keep the TCP connection opened (Default ON).
 - **Transmit Timer:** 10-65535ms (Default 10ms). User's should enter an integer between 10~65535 ms
 - **Server/Client Mode:** Server/Client (Default Server)
 - **Server Listening Port:** Default 5000. Enter an integer between 1024~65535
 - **Client Destination Host Name/IP:** 192.168.0.200 Default. Enter Host name or IP address.
- Note:** If the device belongs to batch n° G1005 the IP address will be 192.168.1.100

Advanced Settings

The screenshot shows the 'Firmware Upgrade Settings' page of the Ecler ETH232AD web interface. The page has a teal header with the Ecler logo, the device name 'ETH232AD: TCP/IP - SERIAL CONVERTER', and the firmware version 'FW: v01.00.r0'. A 'Logout' link is in the top right. Below the header are three tabs: 'Basic', 'Advance', and 'Security'. The 'Advance' tab is selected. The 'Firmware Upgrade Settings' section contains two input fields: 'TFTP Server IP' with the value '192.168.1.99' and 'File Name' with the value 'ax.bin'. At the bottom are three buttons: 'Apply', 'Cancel', and 'FirmwareUpgrade'.

The advanced settings allow to execute the firmware upgrade of the device using a TFTP server utility installed on your PC.

- **TFTP Server IP:** Address of the PC where the TFTP server utility is installed.
- **File Name:** Name of the firmware file with .bin extension.

For more information about firmware upgrade, please contact Ecler Service Support.

Security Settings

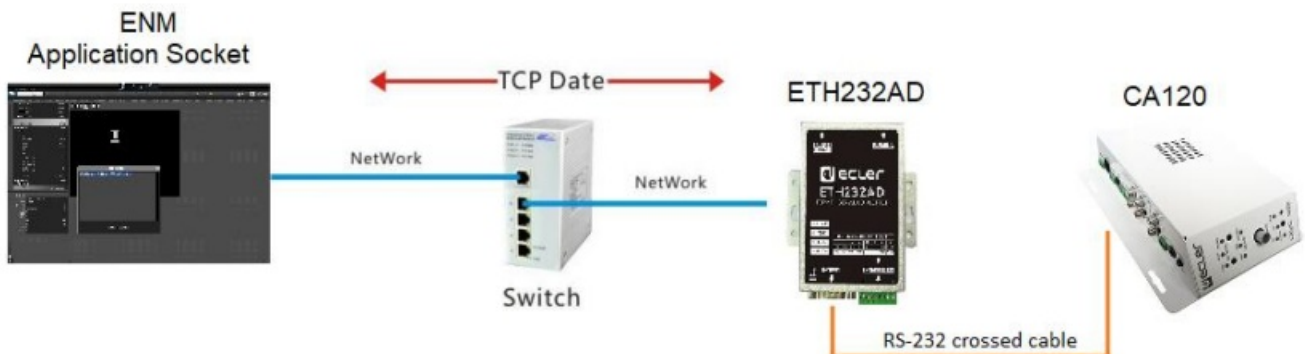
The screenshot shows the 'Security Settings' page of the Ecler ETH232AD web interface. The page has the same teal header as the previous screenshot. Below the header are three tabs: 'Basic', 'Advance', and 'Security'. The 'Security' tab is selected. The 'Change Username Setting' section has a 'New Username' input field and 'Apply' and 'Cancel' buttons. The 'Change Password Setting' section has 'Old Password', 'New Password', and 'Confirm Password' input fields, and 'Apply' and 'Cancel' buttons. The 'Accessible IP Setting' section has four 'IP #1' through 'IP #4' input fields, each with the value '0.0.0.0', and a 'Control' dropdown menu set to 'Disable'. Below these is an 'Attention' note: 'When you change the accessible IP successful, you must reboot device to take it effect. please confirm settings before reboot device.' At the bottom are 'Apply' and 'Cancel' buttons.

These settings allow replacing the default Username and Password for user login. It is also possible to reduce the

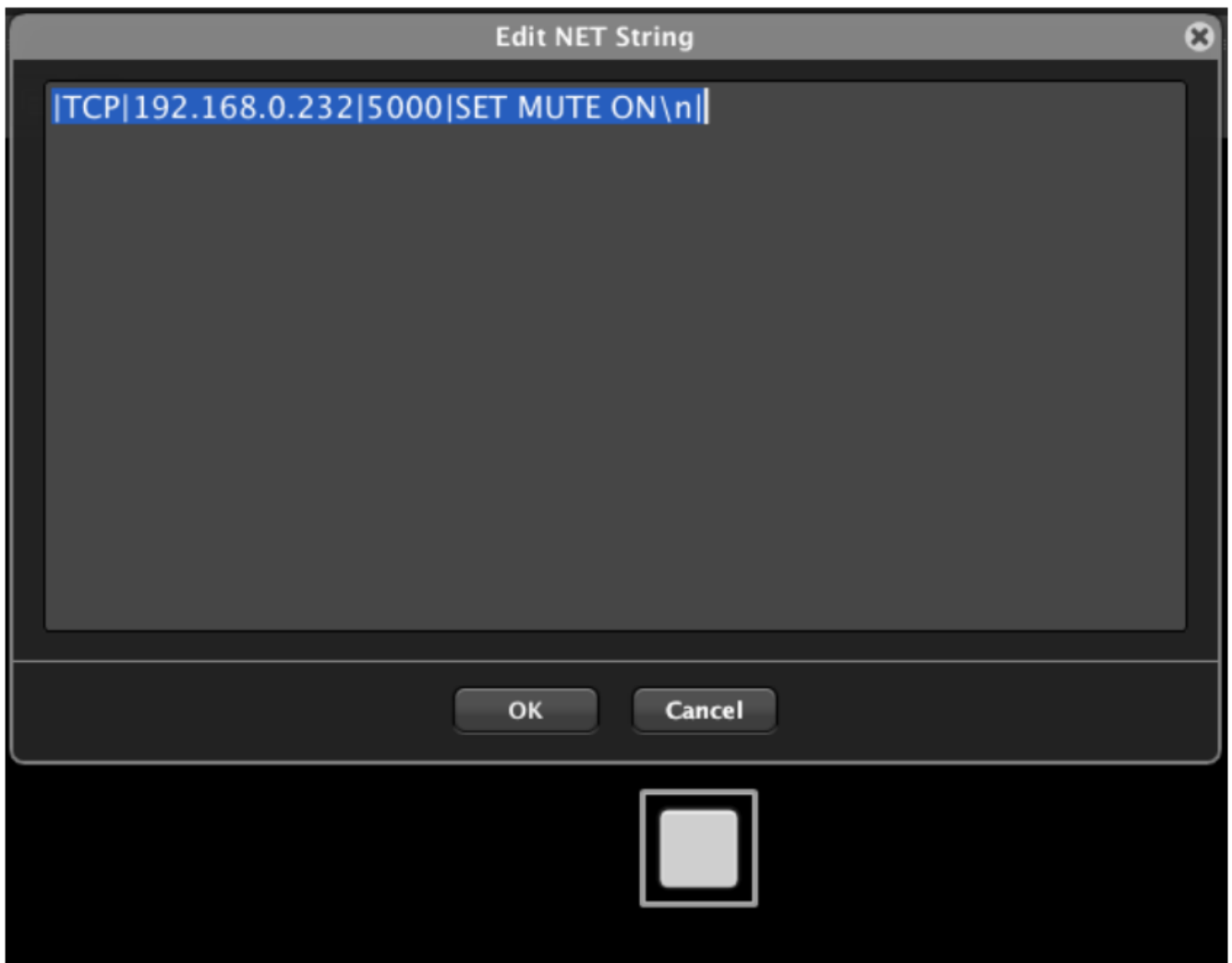
access to the configuration webpage to a limited number of 4 IP addresses.

APPLICATION EXAMPLE WITH ECLER NET MANAGER

In this example it will be explained how to control the MUTE function of Ecler CA series amplifiers via Ecler Net Manager using an ETH232AD and a TCP connection.



- **Step 1:** Connect a PC with Ecler Net Manager in the same network of the ETH232AD and enter to the device configuration webpage.
- **Step 2:** Login in the ETH232AD configuration web page and set the serial parameters as follows:
 - **Data Baud Rate:** 9600
 - **Data Parity:** None Data Bits: 8
 - **Stop Bits:** 1
 - **Flow Control:** None **Serial Type:** RS-232
- **Step 3:** Ensure that the Network settings are the following:
 - **Connection Type:** TCP
 - **TCP Keep Alive:** ON
 - **Transmit Timer:** 10
 - **Server/Client Mode:** Server
 - **Server Listening Port:** 5000
- **Step 4:** Open Ecler Net Manager and create a UCP panel. Add a new control page and add a new control button (Net String) as follow:



Write the following command:

`TCP|192.168.0.232|5000|SET MUTE ON\n|` *** Or `|TCP|192.168.0.232|5000|SET MUTE OFF\n|` *** This command will send the CA-NET command "SET MUTE ON" to the ETH232AD interface (with 192.168.0.232 IP address and listening port 5000). The ETH232AD interface will "translate" the TCP command as a RS-232 serial command, allowing enabling or disabling the mute function on the amplifier. The red LED on the CA amplifier will switch ON or OFF offering a rapid response about the correct communication. With the same philosophy it will be possible to control any other RS-232 third party device.

Note: If the device belongs to batch nº G1005 the IP address will be 192.168.1.100

TECHNICAL SPECIFICATIONS


Serial		
	Interface Type	RS-232 RS-485/422
	Data Rate	RS-232: 1200 - 115200 Kbps RS-485/422: 1200 - 921600 Kbps
	Data Length	5,6,7,8 bits
	Parity	Odd, Even, None
	Stop Bits	1-2bits
	Flow Control	None Software: Xon/Xoff, Hardware: RTS/CTS
	Connectors	RS-232 DB-9 Male RS-485 6-pin Euroblock
Network Interface		
	Interface type	Ethernet 10/100Mbps (Auto-Sensing)
	Connector	8-pin RJ-45
System		
	CPU	Embedding RISC CPU 100Mhz
	Memory	32KB SRAM.512KB Flash memory
Software		
	Network Protocols	TCP, UDP, DHCP Client, HTTP Server, DNS Client, Telnet
	Configure Options	Web page
LED Indicators		
	Link	10/100Base-TX Link & Activity Indicator
	TXD	Data Transmitting from Eth to Serial Indicator
	RXD	Data Receiving from Serial to Eth indicator
	PWR	Power ON Indicator
Supply		
	DC Supply	9-24VDC
	Power Supply	9VDC 1A
	Mains (using supplied DC adapter)	100-240AC 50-60Hz

Environmental	
Operating Temperature	-25 ~ 70°C (-13 ~ 158°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Ambient Humidity	5% to 95%(non-condensing)
Mechanical	
Dimensions (WxHxD)	Without ears: 100 × 67 × 26mm (3.94" × 2.64" × 1.02") With ears: 100 × 86 × 26 mm (3.94" × 3.39" × 1.02")
Weight	0.5kg / 1.10 lb.

All product characteristics are subject to variation due to production tolerances. NEEC AUDIO BARCELONA S.L. reserves the right to make changes or improvements in the design or manufacturing that may affect these product specifications. For technical queries contact your supplier, or distributor or complete the contact form on our website, in Support / Technical requests. Motors, 166-168 08038 Barcelona - Spain3.

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Documents / Resources

	<p>ecler ETH232AD TCP-IP Serial Converter [pdf] User Manual ETH232AD TCP-IP Serial Converter, ETH232AD, TCP-IP Serial Converter, Converter</p>
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References

- [Ecler pro AV Solutions | Shaping Sound for Life Spaces](#)
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- [Ecler Support & Community: expert assistance, FAQs, news and more](#)