PACKAGE CONTENTS

WARRANTY & ENVIRONMENT

PRECAUTIONS



# WPTI1CG2

H.265 Full HD over IP Video Extenders VIDEO DISTRIBUTION OVER IP



# **USER MANUAL**

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#### 1. PRECAUTIONS

#### 1.1 Important Notice







WARNING: SHOCK HAZARD - DO NOT OPEN AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR



The flashing light with an arrowhead symbol inside an equilateral triangle on it is intended to alert the user of the presence of non-insulated "dangerous voltage" within the enclosure, which might be of sufficient magnitude to pose a risk of electric shock to users.



The exclamation mark within an equilateral triangle is intended to alert the user of the requirement for important operating and maintenance (servicing), for which instructions may be found in the literature accompanying the appliance.

WARNING (If applicable): Terminals marked with symbol "\( \frac{\frac{1}}{2} \)" may be of sufficient magnitude to pose a risk of electric shock. The external wiring connected to terminals requires installation by a technician, or the use of ready-made leads or cords.

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

**WARNING:** A device with Class I manufacturing ought to be connected to a mains socket outlet with a protective earthing connection.



**WARNING:** Ecler products have a long lifetime of more than 10 years. This product must never be discarded as unsorted urban waste, but must be taken to the nearest electrical and electronic waste treatment centre.

## W eccel

#### 1.2 Key Safety Directions

- **1.** Read the following directions.
- 2. Keep the following directions.
- 3. Observe all warnings.
- **4.** Follow all instructions.
- **5.** Do not use this device in proximity to water.
- **6.** Clean only with a 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 devices (including amplifiers) that may release heat.
- 9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, with one being 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, contact a qualified electrician for a 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 of exit from the device.

- **11.** Only use attachments/accessories specified by the manufacturer.
- **12.** Unplug the device during lightning storms or when unused for long periods.
- 13. Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way, such as power supply cord or plug damage, liquid spillage or objects onto the device, the device has been exposed to rain or humidity, 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, therefore, it should always remain easily accessible
- **15.** Equipment is connected to a socketoutlet with an earthing connection by means of a power cord.
- **16.** The marking information is located at the top/rear of the unit.
- 17. The device shall not be exposed to dripping or splashing liquids, and no liquid-filled objects, such as a filled up glass, shall be placed on top of the device.

#### 1.3 Cleaning Directions

Clean the unit with a soft, dry clean cloth or slightly wet with water and neutral liquid soap only, then dry it with a clean cloth. Be careful that water never gets into the unit through any hole. Never use alcohol, benzine, solvents or abrasive substances to clean this unit.

**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.



#### 2. WARRANTY & ENVIRONMENT

# Thank you for choosing our Ecler WPTI1CG2! We greatly value your trust.

It is VERY IMPORTANT to carefully read this manual and to fully understand its contents before any connecting takes place in order to make the best use of this equipment, as well as to get the best performance from it.

To ensure optimal operation of this device, we strongly recommend that its maintenance be carried out by our authorised Technical Services.

All ECLER products are covered by warranty, please refer to <a href="www.ecler.com">www.ecler.com</a> or the warranty card included with this product for the period of validity and conditions.



Ecler is truly committed with the environment and planet sustainability, energy saving and CO<sub>2</sub> emission reduction. Recycling materials and using non-contaminant components are also top priorities in our green crusade.

Ecler has deeply evaluated and analyzed the environmental impacts of all the processes involved in the production of this product, including packaging, and has alleviated, reduced and/or compensated for them.

#### 3. PACKAGE CONTENTS

- 1 x WPTI1CG2
- 1 x 2-pin Euroblock connector
- 1 x Magnet
- 2 x Mounting screw
- 1 x Surface-Mount Box
- First Steps Guide.
- Warranty card.

#### **DESCRIPTION & FEATURES**

WPTI1CG2 transmitter is a professional H.265 / H.264 device designed for HDMI® distribution over 1Gb Ethernet networks, supporting resolutions up to WUXGA and 1080p. It delivers highquality video compression over distances of up to 100 meters using a single Cat 5e or higher cable. Its wallplate design, featuring an HDMI® input, RJ-45 port with PoE, and a reset button, provides an elegant solution for visible installations. Control and configuration are managed via the built-in Web GUI or pairing it with the VEO-XCTRLG2 controller, ensuring an easy setup and reliable performance.

#### 4.1 Main Features

- Video over IP Unicast and Multicast distribution over 1Gb managed networks.
- Support for H.264/H.265 video codec with 100ms average latency.
- Support for **HDMI®** 10.2Gbps 1920x1200p@60Hz 4:4:4 as specified in HDMI® 1.4.
- Transmission distance up to 100 meters over Cat 5e or higher cable.
- Support for Main and Sub stream for video preview.

- Support for video wall compositing and management up to 9 x 9 setups (via VEO-XCTRLG2).
- Support for audio formats LPCM 2.0.
- Advanced EDID Management (via VEO-XCTRLG2).
- HDCP 1.4 compliant.
- Control options include TCP/IP set of commands and WebGUI.
- Support for PoE function.
- Compatible with round electrical boxes that are 60mm in diameter.
- Surface mounting box included.



#### 5. INSTALL & CONNECT

#### 5.1 Wall Mounting

This product can be mounted on a wall. The mounting steps are as follows:

- **1. Detach the white metal cover** from the **grey magnetic base**. These parts are held together magnetically.
- **2. Secure the grey base** to the wall-mounted junction box by inserting screws through the available holes.
- **3. Reattach the white metal cover** to the grey magnetic base. The magnetic system will hold it firmly in place.





#### 5.2 Network Requirements and Configuration

WPTI1CG2 is not limited to certain brands of network hardware, but the **network must support** the following network features:

- Layer 3 managed network switch.
- IGMP snooping support.

To prevent malfunctioning, interference or drop in signal performance due to other network products bandwidth requirements or network design. It is highly recommended to check with the chosen network IT staff how to properly set the Multicast products connected to the local network switch.

#### 5.2.1 Setting The IP Address

The default IP address is "auto IP" in the range 169.254.10.x for the transmitters (WPTI1CG2 and VEO-XTI1CG2). It can also be dynamically assigned by the VEO-XCTRLG2 controller in case it is present in the network. For further details please refer to VEO-XCTRLG2 controller module user manual.

To check the assigned IP address of a wall plate WPTI1CG2, use the <u>VEO-1CG2</u> <u>Discovery App</u>. Since these models do not include front buttons, this tool allows to locate all VEO-1CG2 series devices on the network, including VEO-XCTRLG2, VEO-XRI1CG2, VEO-XTI1CG2, and WPTI1CG2. For further details, refer to the VEO1CG2 Discovery section.

The IP address can be changed using the embedded web page of the transmitter. Both the network configuration of PC and VEO devices must be in the same network domain in order to be able to access its web settings page through an internet browser. For further details, refer to Configuration using Web interface section.

When static IP addresses are required, the IP address of each device needs to be set manually.

#### 5.2.2 Video Distribution Quick Start

To begin a video transmission, a matching between a transmitter and a receiver is required. Each WPTI1CG2 or VEO-XTI1CG2 transmitter can stream a video signal over the network using an ID channel number that must be unique in the same network. Each ID channel from 0 to 762 identifies a IP address and every VEO-XRI1CG2 receiver can select one of these channels in order to receive an AV stream.

The ID channel for transmitters is usually set once during the setting up of the system while the receivers ID usually are the ones that are modified in order to show different content on the displays. The destination receiver ID must be set in the same channel as the transmitter broadcasting the desired source audio and video content.

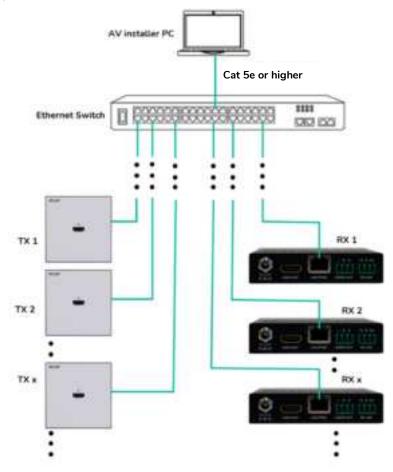
#### The ID channel can be selected in four different ways:

- 1. By using the Web Page configuration on the same device.
- 2. By using the Web Page configuration on VEO-XCTRLG2.
- 3. Via TCP on the same device.
- 4. Via TCP using the VEO-XCTRLG2.



#### 5.2.3 Multicast Mode

When WPTI1CG2 and VEO-XRI1CG2 devices are connected in a point to multipoint or multipoint to multipoint topology, every transmitter and receiver should have a unique IP address. When possible, it is recommended to create an independent IP video network using managed network switches. Use of gigabit switches with an IGMP support will create the most appropriate scenario.



- 1. Set the IP address for each transmitter and receiver.
- 2. Connect the source devices to the HDMI® ports of the WPTI1CG2 transmitters.
- 3. Connect the HDMI® endpoints to the HDMI® ports of the VEO-XRI1CG2 receivers.
- 4. Connect Audio OUT to a sound device and select the required audio mode.



This step is optional and can be skipped if not needed.

- 5. Connect RS-232 cables from the receivers to the ports of the devices to control.
- 6. Connect all VEO devices to the network switch using Cat. 5e-or higher.
- 7. Power WPTI1CG2 transmitter and VEO-XRI1CG2 receiver with the included power adapter and power the switch. In case the switch supports PoE (Power over Ethernet), it will not be necessary to power the VEO devices locally.
- **8.** Choose the desired ID channel for each of the VEO devices in order to establish the required video transmission flows.



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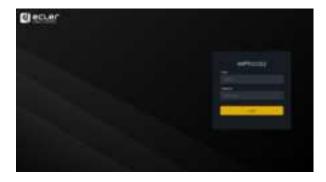
#### 6. START-UP & OPERATION

#### 6.1 Configuration using Web Interface

WPTI1CG2 and VEO-XRI1CG2 devices can be configured through their own built-in web interface by simply typing the IP address of the chosen device into a web browser. Refer to Setting the IP address section for further details on how to find the IP address of a WPTI1CG2 and VEO-XRI1CG2.

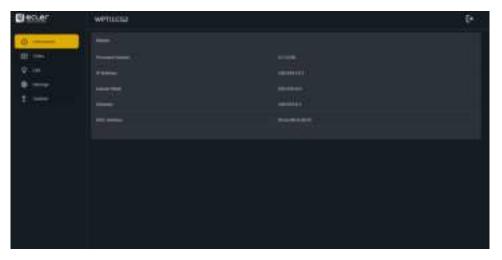
The default credentials to log in are:

User name: adminPassword: admin



Once the login credentials have been filled out correctly, the menus of the web settings page will let the user manage and operate different aspects and functionalities concerning transmitter and receiver operation, as explained in the next chapters.

#### 6.1.1 Information



The Status page provides the following basic information about WPTI1CG2:

- Firmware Version
- IP Address
- Subnet Mask
- Gateway
- MAC Address

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#### 6.1.2 Video Settings

The video settings page will **enable the user to configure the following parameters for WPTI1CG2.** 



#### 1. Main Stream

- **Video Encoding Format**: the user can select H.265 and H.264 video codec for the mainstream.
- Audio Encoding Format: the user can select PCM or AAC audio for the mainstream.
- **Resolution**: it shows the HORITZONAL and VERTICAL resolution for the mainstream. This setting follows the input resolution of the video source.
- **Bitrate**: the user can adjust the video quality choosing the maximum transmitted data for the mainstream.

#### 2. Sub Stream

- **Video Encoding Format**: the user can select H.265 and H.264 video codec for the sub stream.
- **Resolution**: the user can set the HORITZONAL and VERTICAL resolution for the sub stream.
- **Bitrate**: the user can adjust the video quality choosing the maximum transmitted data for the sub stream.

#### 3. EDID Setting

This parameter selects the EDID setting for the WPTI1CG2 transmitter.

EDID ID	EDID Description
00	Video: HDMI® 1080p@60Hz / Audio: Stereo PCM
01	Video: HDMI® 720p@60Hz / Audio: Stereo PCM
02	Video: DVI 1024p@60Hz
03	Video: DVI 1080p@60Hz
04	Video: DVI 1200p@60Hz
05	Video: HDMI <sup>®</sup> 1200p@60Hz / Audio: Stereo PCM
06	Copy from VEO-XRI1CG2 HDMI® output
07	USER 1
08	USER 2

User EDID 1 and User EDID 2 can be uploaded in SELECT USER EDID 1 FILE and SELECT USER EDID2 FILE. (This file can be downloaded from the Download EDID of the Receiver Video page).



#### 6.1.3 Led

This page allows the user to select the led status for WPTI1CG2.

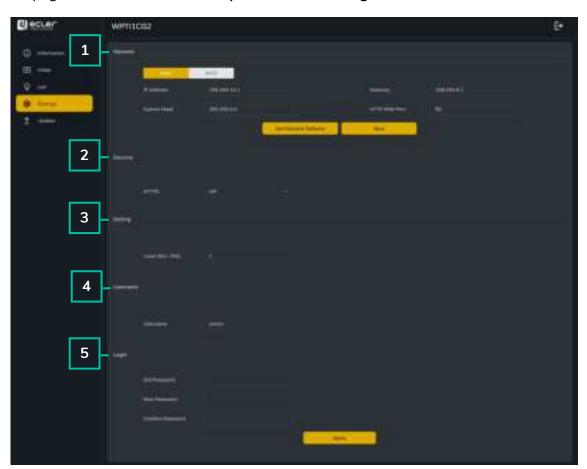


#### • Power LED Flashing:

- o ON: The Power LED remains permanently blinking.
- o **OFF**: The Power LED stays on without blinking.
- o **ON 90s**: The Power LED blinks for 90s and then stops.
- o **ALWAYS OFF**: The Power LED stays off permanently.

#### 6.1.4 Settings

This page allows the user to modify the network configuration of the WPTI1CG2.





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#### 1. Network

- IP address
- Subnet Mask
- Gateway
- HTTP Web Port



- The Network Settings can be set only when the MODE button is set to Static.
- After any changes to the network settings, username or password, the user will have to log in the WebGUI again with the new settings to resume working.

#### 2. Security

This parameter turns on or off HTTPS security protocol.

#### 3. Setting

**Local ID:** this parameter sets the ID Channel for the WPTI1CG2 transmitter from the 1-762 available profiles.

#### 4. Username

This parameter lets the user modify the username assigned to the device.

#### 5. Login

This section allows the user to change the current password to access the web settings page.

#### 6.1.5 Update



#### 1. Firmware Update:

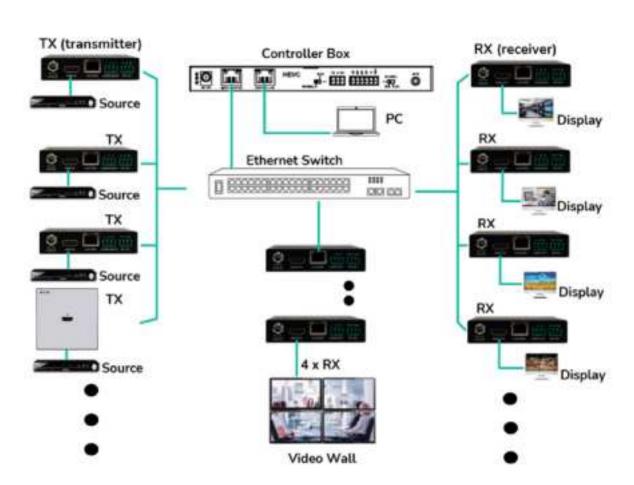
- Browse: This will import the upgrade file.
- **Update**: This will start the upgrade process. When the progress bar reaches 100%, the upgrade is successful, and the device will restart.
- 2. Factory Reset: This will reset the device to the factory default settings.
- 3. Reboot: This will reboot the device.

Selecting Log Out will exit the WebGUI and automatically switch to the login interface.

#### 6.2 Remote Controlling

#### 6.2.1 Advanced Network Management

For larger AV over IP multicast scenarios involving several WPTI1CG2, VEO-XTI1CG2 and VEO-XRI1CG2 devices, it is recommended to add a VEO-XCTRLG2 controller module in the system. This unit will allow the user to manage and operate all the transmitters and receivers from a unique Web interface, including Preview mode, Matrix control, Video Wall management control or even the use of TCP commands to remotely communicate with WPTI1CG2 and VEO-XRI1CG2 units present in the network. For further details on how to set up an advanced networked installation control layout interface, please refer to VEO-XCTRLG2 controller module user manual.





#### 6.3 Ecler VEO1CG2 Discovery App

<u>Ecler VEO1CG2 Discovery App is a downloadable software tool available from the official Ecler website.</u> It runs as a standalone executable and is used to automatically detect all VEO-1CG2 series devices connected to the same local network.



#### The interface includes the following functions:

- A. Ethernet/IP Selection: Located at the top-right corner, this dropdown allows the user to select the appropriate network interface of the PC to enable communication with connected devices.
- **B.** Active devices: The software shows a summary of how many units of each model type have been detected (e.g., transmitters, receivers, wall-plate units), allowing a quick check of the system status.
- C. Search: Performs a new scan and refreshes the list to include any newly detected devices.
- **D.** Save: Exports the list of devices and their data to a local .txt file.
- **E.** Clear: Clears the current list from the display.

#### The table provides the following information for each device:

- 1. ID: Unique identifier assigned to the device.
- **2. Type**: Device model:
  - TX: VEO-XTI1CG2 transmitter box
  - WTX: WPTI1CG2 wall-plate transmitter
  - RX: VEO-XRI1CG2 receiver box



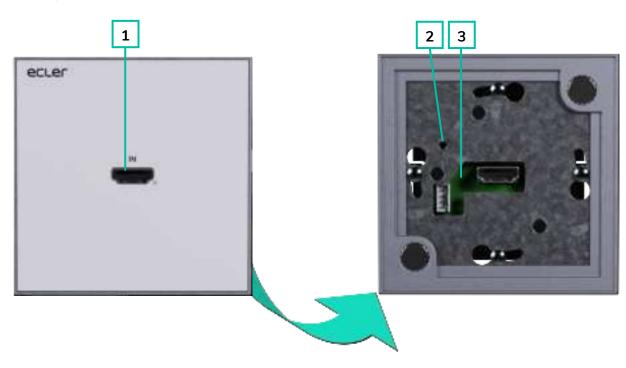
- 3. Name: Custom device name, configured via the WebGUI (see previous chapter).
- 4. MAC Address: Physical MAC address of the device.
- **5. IP Address**: Device IP address. Clicking the blue link opens the device's WebSettings page in the default browser.
- **6. Netmask**: Device subnet mask.
- 7. Gateway: Device gateway address.
- **8. Firmware**: Firmware version currently installed on the device.





#### 7. PANEL FUNCTIONS

#### 7.1 Front Panel



- 1. HDMI IN: HDMI® input port.
- 2. RESET: System reset button.

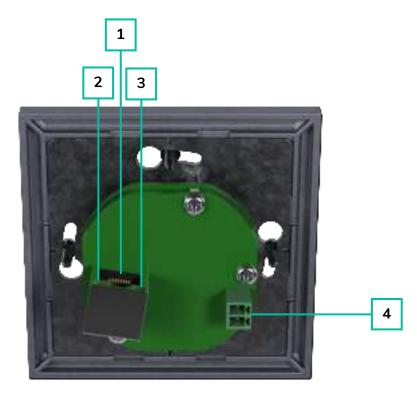
  Pressing and holding for 5 seconds

  will restart and restore factory

  settings on the device.
- 3. POWER LED: The LED flashes when the device is power supplied and stays lid (RED) after the start up is complete.
  - Light on (green): Network connection is stable and there is a compatible video signal.
  - Light off: No network connection.
  - Light flashing (red): Network connection is stable but there is no video signal.
  - Light flashing (fast): Network connection is stable but there is no compatible video signal (resolution or frame rate are greater than native).



#### 7.2 Rear Panel



- LAN (PoE) CONNECTOR: Connect the 1Gb network port to an Ethernet switch to begin data transmission. When PoE on the Ethernet switch is available, the device will not need to be locally powered.
- 2. LINK LED indicator (Green):
  - Light ON: The network cable is correctly connected.
  - Light OFF: No Network connection.

- 3. DATA LED Indicator (Yellow):
  - o Flashing: Data transmission
  - Light OFF: No Data transmission
- **4. DC 5V**: Connect this port to the 5VDC included power supply.

# OF STATEMS

#### 8. TECHNICAL DATA

#### 8.1 Technical Specifications

#### WPTI1CG2

Video performances	
Video Input Connectors	1 x HDMI® Type A Female, 1.4, 10.2 Gbps
Video Input Resolutions	480i, 480p, 720i, 720p, 1080i, 1080p, 1920 x 1200 up to 60H
Video Output Resolutions	1920 x 1200 up to 60Hz
Video Codec	H.265 / H.264
Transmission Latency	<100ms
Chroma Subsampling	4:4:4, 4:2:2, 4:2:0
Colour Depth	8-bit, 10-bit, 12-bit (1080p 60Hz)
Colour Space	RGB, YCbCr, YUV
HDCP	1.4
Video Composing Capabilities	Videowalll up to 9x9 (via VEO-XCTRLG2)
Scaling Features	Up to 1920 x 1200 60Hz
HDMI® Distance	Up to 1920 x 1200/60Hz: 10m with IN/OUT HDMI® Cable
Audio performances	
Audio Formats	LPCM 2.0
Sample Rate	32Khz, 44.1KHz, 48KHz
Bit Depth	Up to 24-bit
Frequency Response	20Hz-20KHz
ARC/eARC	No
Device control	
Control Connectors	1x RJ-45
Control Protocols	Web, Telnet, RS-232, IR
Control Buttons	1 x Reset button, 2 x Input selection
EDID Management	EDID Settings
Status Indicators	Power LED
Network	
Network Connectors	RJ-45
Network Requirements	IGMP Snooping
Average Streaming Bitrate	1-20 Mbps (configurable via WebGUI)
Transmission Distance	100m via Ethernet
Electrical	
Power supply	PoE; External: Input 100-240 VAC @ 50/60Hz, Output: 5VDC-2
AC mains connector	100-240VAC 50-60Hz with EU, UK, US, AU blades
DC mains connector	2-pin Euroblock connector
Power consumption	3W
Physical	
Operating temperature	Min: -10°C; 14°F
	Max: 45°C; 113°F
Operating humidity	20% - 90% RH, no condensing
Installation options	Double Gang EU Format Surface Box, In-wall
Included accessories	1 x 2-pin Euroblock connector, 1 x Magnet, 2x Mounting screv 1x Surface mount-box
Optional accessories	VEO-XCTRLG2
Dimensions (WxHxD)	86 x 86 x 40 mm / 3.39 x 3.39 x 1.57 in.
Difficusions (VVXLIXD)	



Shipping dimensions (WxHxD)

 $120 \times 210 \times 80 \text{ mm} / 4.72 \times 8.27 \times 3.15 \text{ in}.$ 

Shipping weight

0.29 Kg / 0.64 lb

Chassis material

Metal White (RAL 9003) Finished colour

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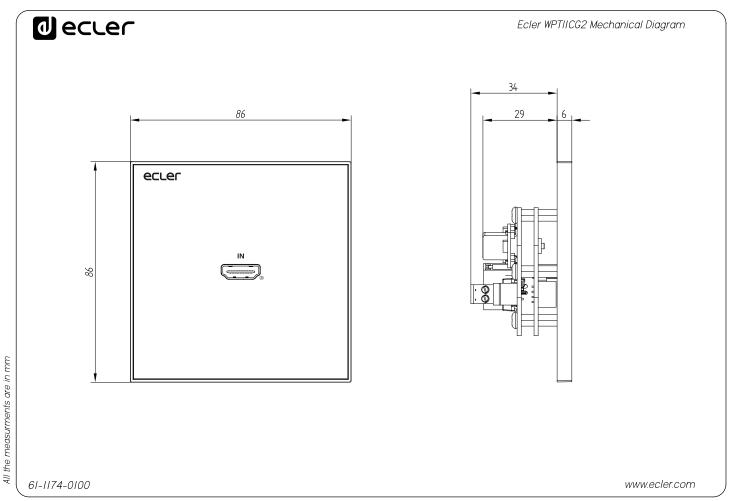
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#### 8.2 Mechanical Diagram

All measurements are in mm.







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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, distributor or complete the contact form on our website, in <u>Support / Technical requests.</u>

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