



# User Manual

# CPA562 HDMI IN-LINE Controller



**All Rights Reserved**

Version: CPAV.1.0.2

### Important Safety Instructions



**1.** Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.



**6.** Clean this apparatus only with dry cloth.



**2.** Do not install or place this unit in a bookcase, built-in cabinet or in another confined space. Ensure the unit is well ventilated.



**7.** Unplug this apparatus during lightning storms or when unused for long periods of time.



**3.** To prevent risk of electric shock or fire hazard due to overheating, do not obstruct the unit's ventilation openings with newspapers, tablecloths, curtains, and similar items.



**8.** Protect the power cord from being walked on or pinched particularly at plugs.



**4.** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



**9.** Only use attachments / accessories specified by the manufacturer.



**5.** Do not place sources of naked flames, such as lighted candles, on the unit.



**10.** Refer all servicing to qualified service personnel.

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**Warnings of FCC**

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 instructions, 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.

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

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## Introduction

### Overview

Altium CPA562 is a HDMI In-line Controller, with resolutions up to 4K@60Hz (chroma sub-sampling 4:4:4 8-bit only) and HDCP 2.2.

Its digital or analog audio output allows audio to be de-embedded from HDMI input and sent to audio distribution system, such as AVR or Zone Amplifier. Its rotary EDID switch has 15 EDID presets and can help negotiate the HDMI handshake in certain situations, such as an old HDMI display with DDC channel invalid, or DVI display with audio amplified requirement.

By auto-detecting input signal status, it could automatically trigger CEC command to turn on or off TV with CEC support, pre-loaded RS232 commands to power on or standby projector, and relay control to turn on or off projection screen.

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### Key Features

- Support video source up to HDMI 2.0(4K@60Hz 4:4:4 8-bit) and HDCP 2.2
- HDMI audio de-embedded out with Digital Coaxial and Analog Stereo
- Rotary switch for EDID Management with 15 EDID presets
- Built in CEC controller from HDMI out
- Built in RS232 controller, to pre-load and store RS232 command of sink device

### Key Benefits

- Automatic CEC/RS232 command to Power ON/Standby display device, by detecting input signal status
- Built in RELAY control to automatically turn Projector Screen ON/OFF, by detecting input signal status
- Automatic input cable equalization and signal regeneration compensation

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### Package Contents

- 1 x CPA562
- 1x Power Supply (DC 12V 0.5A)
- 3 x Phoenix Male Connector (3.5 mm, 3 pins)

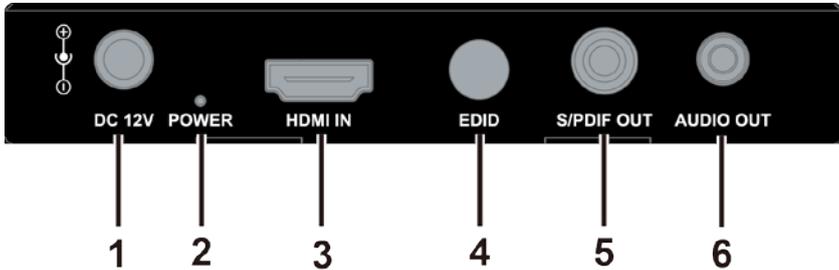
## Specifications

Technical	
Input	1 x HDMI IN
Input Signal Type	HDMI 2.0 with HDCP 2.2
Input Resolution Support	<p>VESA: 800x600@60Hz, 1024x768@60Hz, 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1200@60Hz;</p> <p>SMPTE: 4096x2160@24/25/30/50/60Hz, 3840x2160@24/25/30/50/60Hz, 1080P@24/25/30/50/60Hz, 1080I@50/60Hz, 720P@50/60Hz, 576P@50Hz, 480P@60Hz</p>
Input Video Level	0.5-1.2 V p-p
Input DDC Signal	5V p-p
Maximum Pixel Clock	297MHz
Output	1 x HDMI OUT
Output Signal Type	HDMI 2.0 up to 4K@60Hz(4:2:0 10-bit) and HDCP 2.2.
Output Resolution Support	<p>VESA: 800x600@60Hz, 1024x768@60Hz, 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1200@60Hz;</p>

	<p>SMPTE:</p> <p>4096x2160@24/25/30/50/60Hz,  3840x2160@24/25/30/50/60Hz,  1080P@24/25/30/50/60Hz, 1080I@50/60Hz,  720P@50/60Hz, 576P@50Hz, 480P@60Hz</p>
Video Impedance	100 Ω
<b>General</b>	
Operating Temperature	0°C to 45°C (32°F to 113°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Humidity	10% to 90%, non-condensing
ESD Protection	<p>Human-body Model:</p> <p>±8kV(Air-gap discharge)/  ±4kV(Contact discharge)</p>
Surge Protection	<p>Voltage: ±1 kV</p> <p>(Ten times respectively for the positive and negative voltage)</p>
Electrical Fast Transient/Burst	<p>Data communication cord: 1 kV</p> <p>Power cord : 2 kV</p>
Power Supply	DC 12V 0.5A
Power Consumption (Maximum)	≤2 W
Device Dimension (W x H x D)	<p>120mm x 20mm x 80mm /</p> <p>4.72" x 0.79" x 3.15"</p>
Product Weight	0.23kg
Certification	CE, FCC

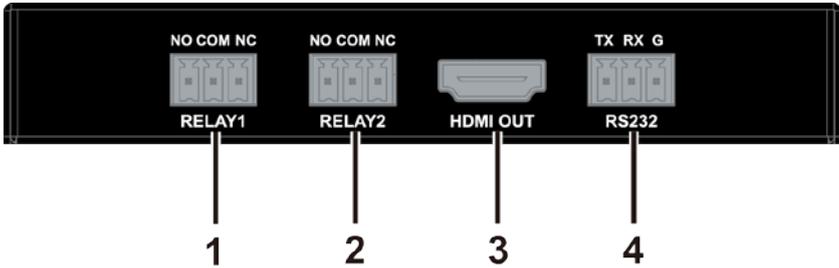
## Panel Layout

Front Panel



No.	Name	Description
1	DC 12V	12V DC power input, threaded port for standard or locking connection
2	POWER LED	<b>ON:</b> The transmitter is powered on. <b>OFF:</b> The transmitter is powered off.
3	HDMI IN	Connects to an HDMI source
4	EDID	Switch for EDID Management with 15 EDID presets
5	S/PDIF OUT	HDMI audio de-embedded out with Digital Coaxial, connects to the amplifier
6	AUDIO OUT	HDMI audio de-embedded out with Analog Stereo, connects to the amplifier

Rear Panel



No.	Name	Description
1	RELAY1	Turn on projection screen automatically
2	RELAY2	Turn off projection screen automatically
3	HDMI OUT	Connects to an HDMI display
4	RS232	Pre-load and store RS232 command of sink device

EDID Presets



Switch for EDID Management with 15 presets as follows:

0	Copy EDID from HDMI Output	A	1400x1050@60Hz 2CH
1	3840x2160P@60Hz 2CH	B	1360x768@60Hz 2CH
2	3840x2160P@30Hz 2CH	C	1280x1024@60Hz 2CH
3	1920x1080P@60Hz 2CH	D	1280x960@60Hz 2CH
4	1280x720P@60Hz 2CH	E	1280x768@60Hz 2CH
5	1920x1200@60Hz 2CH	F	1024x768@60Hz 2CH
6	1680x1050@60Hz 2CH		
7	1600x1200@60Hz 2CH		
8	1600x900@60Hz 2CH		
9	1440x900@60Hz 2CH		

Note: After changing the EDID, please unplug and plug to take effect.

### RS232 Control Tool

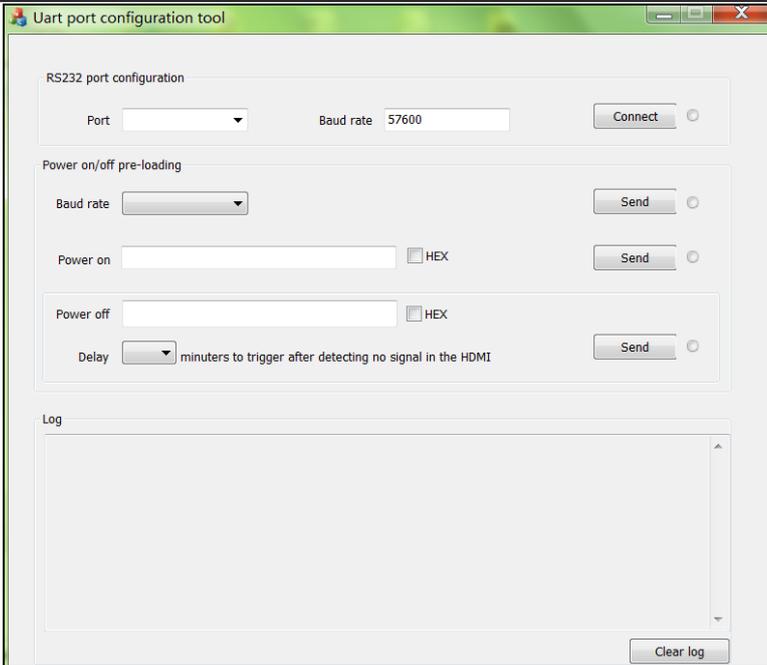
RS232 port configuration tool is one control tool running on PC to pro-loading the RS232 commands for N562 to control the sink device. Connect a PC to N562 via a (RS232 3pins)UART-to-USB cable, running the configuration tool to set the connection parameters correctly before send the pro-loading commands to CPA562. The baud rate for CPA562 is 57600.

**Baud rate:** Choose the correct baud rate according to the sink device.

**Power on:** Pro-loading the command for power on the sink device.

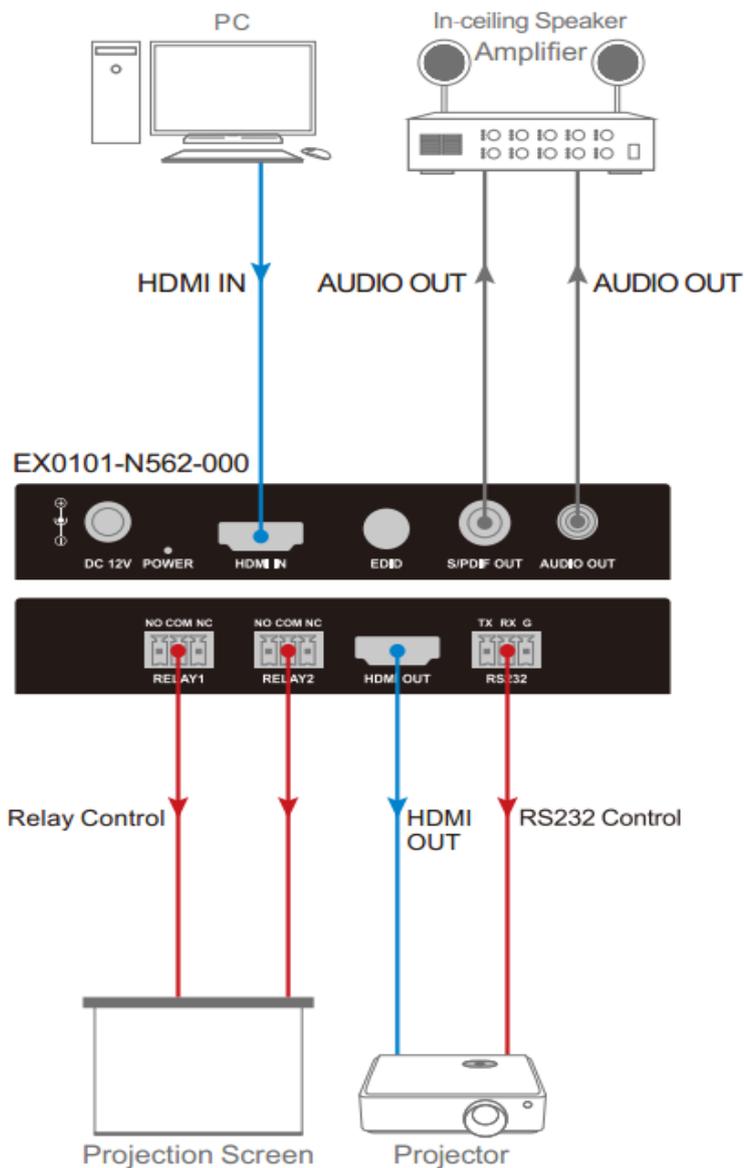
**Power off:** Pro-loading the command for power off the sink device.

See below picture:



### Initial Installation

1. Using quality HDMI cables, connect an HDMI source (such as PC, Blu-ray, games console, satellite/cable TV, media server etc.) to HDMI IN of the CPA562.
2. Connect the HDMI display device (Such as projector ) to the HDMI OUT of CPA562.
3. Connect audio system to the S/PDIF OUT and AUDIO OUT port of CPA562.
4. Connect RS232 to the projector for pass-through the commands to control the projector.
5. Connect RELAY1 and RELAY2 to the projection screen for control the projection screen ON/OFF.
6. Connect the included 12v power supply to the CPA562. Power on the devices.



## **Warranty Terms and Conditions**

For the following cases Altimum shall charge for the service(s) claimed for the products if the product is still remediable and the warranty card becomes unenforceable or inapplicable.

1. The original serial number (specified by Altimum) labeled on the product has been removed, erased, replaced, defaced or is illegible.
2. The warranty has expired.
3. The defects are caused by the fact that the product is repaired, dismantled or altered by anyone that is not from a Altimum authorized service partner. The defects are caused by the fact that the product is used or handled improperly, roughly or not as instructed in the applicable User Guide.
4. The defects are caused by any force majeure including but not limited to accidents, fire, earthquake, lightning, tsunami and war.
5. The service, configuration and gifts promised by salesman only but not covered by normal contract.
6. Altimum preserves the right for interpretation of these cases above and to make changes to them at any time without notice.



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