



Zenty | Professional A/V Solution Provider

User Manual ^[V1.0]



IP300 Wall Plate Encoder

ZT-159 | ZT-IP300WE



ZENTY®
9807 EMILY LANE
STAFFORD, TX 77477
(844) 200-1945
SUPPORT@ZENTY.COM

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.

Table of Contents

1. Introduction	4
a. Overview	4
b. Features	4
c. Package Contents	4
d. Specifications	5
e. Panel Description	6
2. Typical Applications	9
3. Hardware Installation	10
4. Signal Switching Modes	10
a. Automatic Signal Switching	10
b. Button Switching	11
5. Device Control	11
6. Firmware Upgrade	11
7. Maintenance	12
8. Warranty	12
9. Mail-In Service	12
10. Limited Warranty Limits and Exclusions	12

1. Introduction

a. Overview

This product is a wall plate encoder of IP300 series dedicated to switch video signal between HDMI and USB-C inputs, and work with IP300 decoders to transmit the 4K@60Hz 4:2:0 HDMI signal via a gigabit Ethernet networks up to 100m/328ft over a single Cat 5e cable or above.

Video, audio, RS232 and USB signals can be routed separately or as a whole throughout the matrix system. USB port supports USB extension for remote KVM control. Integration-friendly control options are offered as well, including Windows PC configurator, and IP controller. This product is a perfect solution for any signal routing applications, like homes, classrooms, conference rooms, broadcasts, etc.

b. Features

- Supports input and output resolutions up to 3840 x 2160@60Hz 4:2:0.
- HDCP 2.2 compliant.
- Supports automatic signal switching between HDMI and USB-C which follows the Last-In-First-Out rule.
- Supports multichannel audio up to PCM 7.1, Dolby Atmos and DTS-X.
- USB IN port supports PD charging up to 60W.
- Equipped with a USB 2.0 compliant USB-C port to be used with the HDMI IN port for USB 2.0 extension.
- Allows video, audio, USB, RS232 and power signals to be delivered up to 100m/328ft over a single Cat 5e cable or above.
- Flexible routing policies, allowing audio, video, RS232 and USB signals to be routed separately or as a whole throughout the matrix system.
- Supports PoE to be remotely powered by compatible power source equipment such as a PoE-enabled Ethernet switch, eliminating the need for a nearby power outlet.
- Provides control options of Windows PC configurator and IP controller.
- 2-Gang wall plate cover included.

c. Package Contents.

- (1) x Wall Plate Encoder
- (1) x 3.5mm 2-Pin Phoenix Male Connector

- (1) x 3.5mm 3-Pin Phoenix Male Connector
- (1) x 2-Gang US Wall Plate Plastic Cover (with 4 x #6-32*7mm Screws)
- (4) x Mount Screws (#6-32*20mm)

d. Specifications

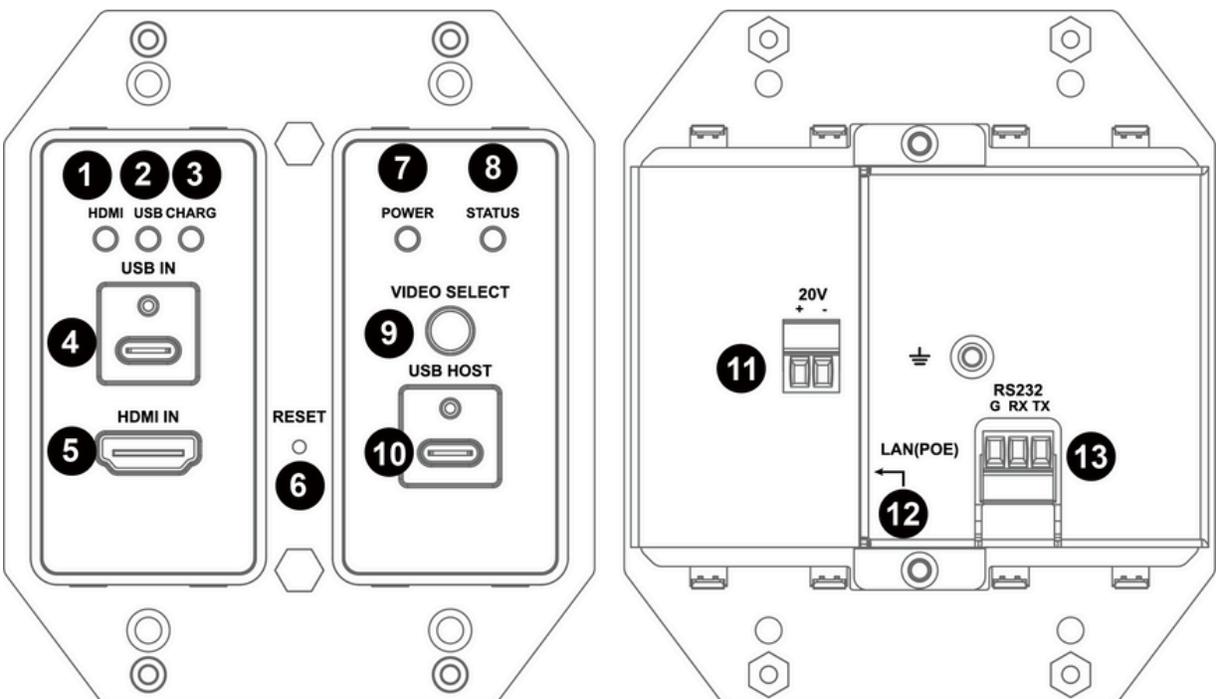
Video	
Input Video Port	1 x HDMI; 1 x USB-C
Input Video Type	HDMI 1.4b, HDCP 2.2
Input Resolutions	640x480 ⁸ , 800x600 ⁸ , 1280x720 ^{6,7,8} , 1280x800 ⁸ , 1280x1024 ⁸ , 1360x768 ⁸ , 1366x768 ⁸ , 1440x900 ⁸ , 1680x1050 ⁸ , 1920x1200 ⁸ , 1920x1080 ^{1,2,3,4,5,6,7,8} , 3840x2160 ^{1,2,3,4,5,6,7,8} 1 = at 23.98 Hz, 2 = at 24 Hz, 3 = at 25 Hz, 4 = at 29.97 Hz, 5 = at 30 Hz, 6 = at 50 Hz, 7 = at 59.94 Hz, 8 = 60 Hz Note: 50Hz, 59.94Hz and 60Hz support 4:2:0 color sub-sampling only.
Output Video Port	1 x female RJ-45
Output Video Type	JPEG video & raw audio IP stream
Output Resolutions	Up to 3840 x 2160p@60Hz 4:2:0
Average Encoding Data Rate	850Mbps (max)
End-to-End Time Latency	1 frame
Input/Output Video	0.5~1.2 V p-p
Signal	
Input/Output DDC Signal	5 V p-p (TTL)
Maximum Pixel Clock	300 MHz

Audio	
Input Audio Port	1 x HDMI, 1 x USB-C
Input Audio Signal	Fully supports audio formats in HDMI 2.0 specification, including PCM 2.0/2.1/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X
Output Audio Port	1 x LAN

Output Audio Signal	Fully supports audio formats in HDMI 2.0 specification, including PCM 2.0/2.1/5.1/7.1, Dolby TrueHD, Dolby Atmos, DTS-HD Master Audio and DTS:X
---------------------	---

General	
Operating Temperature/ Humidity	+32°F ~ +113°F (0°C ~ +45°C) 10% ~ 90%, non-condensing
Storage Temperature/ Humidity	-4°F ~ +158°F (-20°C ~ +70°C) 10% ~ 90%, non-condensing
Power	DC 20V 6A, PoE
Power Consumption	67W (Max)
ESD Protection	Human body model: <ul style="list-style-type: none"> ±8kV (air-gap discharge) ±4kV (contact discharge)
Dimensions (W x H x D)	3.54" x 4.16" x 1.80" (90 mm x 105.6 mm x 45.6 mm)
Net Weight	0.93lbs (0.42kg)

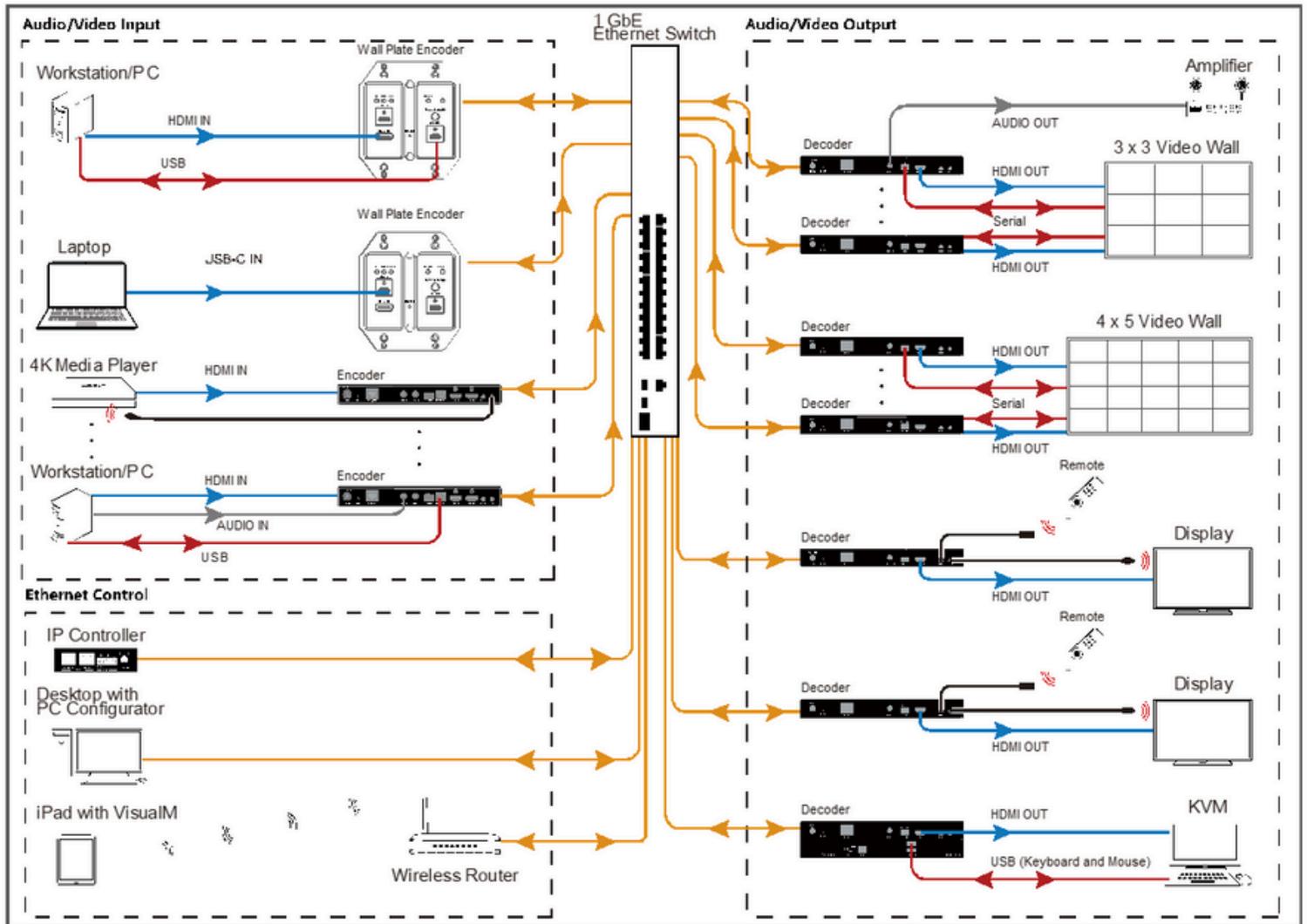
e. Panel Description



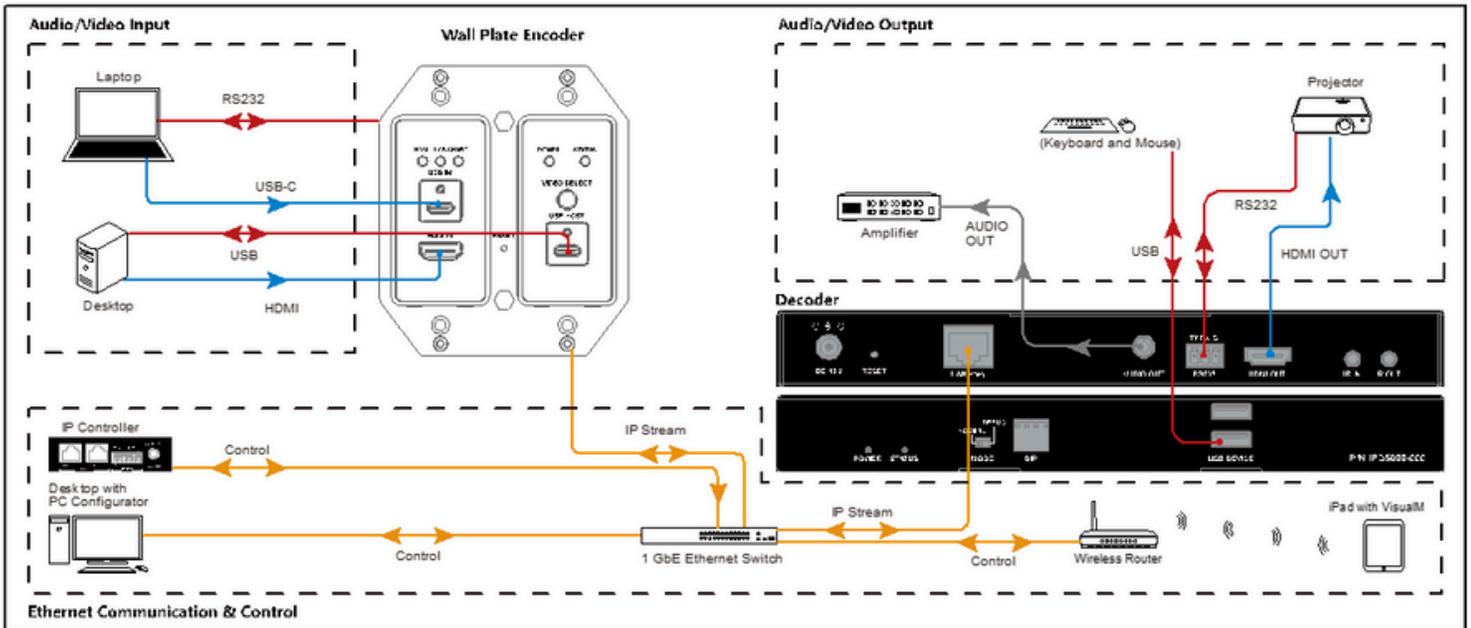
No.	Name	Description
1	HDMI LED	<ul style="list-style-type: none"> • LED On: Valid HDMI input signal is detected and selected. • LED Blinking: The HDMI input signal is selected while invalid. • LED Off: The HDMI input signal is not selected.
2	USB LED	<ul style="list-style-type: none"> • LED On: Valid USB-C input signal is detected and selected. • LED Blinking: The USB-C input signal is selected while invalid. • LED Off: The USB-C input signal is not selected.
3	CHARG LED	<ul style="list-style-type: none"> • LED On: The device is charging a USB-C source through USB-C port. • LED Off: The device doesn't charge any USB-C source.
4	USB IN	Connect this USB-C port to a USB-C source. Note: This port supports PD charging up to 60W if the device is powered by the DC 20V power.
5	HDMI IN	Connect this port to an HDMI source.
6	RESET	When the encoder is powered on, use a pointed stylus to hold down this button for five or more seconds, and then release it, the device will reboot and restore to its factory defaults.
7	POWER LED	<ul style="list-style-type: none"> • On: The device is powered on. • Blinking: The device is booting. • Off: The device is powered off.
8	STATUS LED	<ul style="list-style-type: none"> • On: The device is connected to the network and is transmitting IP stream. • Blinking: The device is connected to the network but doesn't transmit IP stream. • Blinking quickly: A device identification command is sent (Find me). • Blinking slowly: The device is being upgraded. • Off: The device is not connected to the network.
9	VIDEO SELECT	Video source selection button.

10	USB Host	Connect to the USB host device. This port is used in conjunction with the HDMI IN port.
11	20V	DC 20V power input port. Connect to a power adapter.
12	LAN (POE)	<p>Connect this port to a gigabit Ethernet switch for IP stream output and device control.</p> <p>Note:</p> <ul style="list-style-type: none"> • The device can be powered by a PoE-enabled switch via the RJ-45 port, eliminating the need for a nearby power outlet. • Powered by the power adapter has higher priority than that by PoE. When the device is connected to both a power adapter and a PoE-enabled switch, it receives power from the power adapter instead of the switch.
13	RS232	Connect to an RS232 device such as a computer to bidirectionally communicate with an RS232 device at the controller or the decoder side.

2. Typical Applications



3. Hardware Installation



Note:

If the switch doesn't support PoE, connect encoders and decoders to their power adapters.

4. Signal Switching Modes

The device supports both automatic and button switching of input signals, allowing users to easily and quickly select the desired source.

a. Automatic Signal Switching

Automatic signal switching follows the Last-In-First-Out rule.

- If an HDMI source or a USB-C source is connected to the device, the device will automatically output this video source.
- If another video source is connected to the device, the device will automatically output this latest input video source.
- If HDMI and USB-C sources are connected to the device, then remove either video source, the device will automatically output the remaining input video source.

b. Button Switching

The VIDEO SELECT button in front panel is designed for users to manually select the desired source. Short press the button, the device will select alternately between HDMI IN and USB-C IN as the input channel; if the selected input channel is connected with an active source, its corresponding LED lights yellow-green, if not, its corresponding LED is off and the display screen at the receiver shows no image.

5. Device Control

The device allows you to use the PC configurator and IP controller to manage and control them. This section briefly introduces how to route the video source to the display using these tools. By default, video, audio, RS232 and USB signals are routed as a whole.

The following tables describes how different signals are routed using specific tools.

Operation Tools	Description
PC Configurator	Route video, audio, USB and RS232 signals as a whole.
IP Controller	Both of the following routing policies are available. <ul style="list-style-type: none">• Route video, audio, USB and RS232 signals as a whole.• Route video, audio, USB and RS232 signals separately via API commands of IP controller.

Note:

When video, audio, USB, RS232 signals are routed separately via API commands, they can be routed as a whole with other operation tools.

6. Firmware Upgrade

You can use MaintainTool to update the devices to their latest versions to obtain new features. For more information, see the user guide of MaintainTool.

7. Maintenance

Clean this unit with a soft, dry cloth. Never use alcohol, paint thinner, or benzine to clean.

8. Warranty

If your product does not work properly because of a defect in materials of workmanship, our company (referred to as “the warrantor”) will, for the length of the period indicated as below, “Parts and Labor (5) Years”, which starts with the date of original purchase (“Limited Warranty period”), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

During the “Labor” limited warranty period, there will be no charge for labor. During the “Parts” warranty period, there will be no charge for parts. You must mail-in your product during the warranty period. This Limited Warranty is extended only to the original purchaser and only covers products purchased as new. A purchase receipt or other proof of original purchase date is required for Limited Warranty service.

9. Mail-In Service

When shipping the unit, carefully pack and send it prepaid, adequately insured, and preferably in the original carton. Include a letter detailing the complaint and provide a daytime phone and/or email address where you can be reached phone and/or email address where you can be reached.

10. Limited Warranty Limits and Exclusions

This Limited Warranty **ONLY COVERS** failures due to defects in material or workmanship and **DOES NOT COVER** normal wear and tear or cosmetic damage. The Limited Warranty **ALSO DOES NOT COVER** damages which occurred in shipment, or failures which are caused by products not supplied by warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, mis-adjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or service by anyone other than a Factory Service center or other Authorized Servicer, or damage that is attributed to acts of God.

There are no express warranties except as listed under “Limited Warranty Coverage”. The warrantor is not liable for incidental or consequential damages resulting from the use of this product or arising out of any breach of this warranty. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, travel to and from the service, loss of or damage to media or images, data or other recorded content. The items listed are not exclusive but are for illustration only). Parts and service, which are not covered by this limited warranty, are your responsibility.



WWW.ZENTY.COM
9807 EMILY LANE
STAFFORD, TX 77477

(844) 200-1945
SUPPORT@ZENTY.COM
SALES@ZENTY.COM