



Quick Start Guide

WP-VINX-110P-HDMI-ENC
FP-VINX-110P-HDMI-ENC-MKM, -MKS,
-GES4, -GES9

Introduction

WP-VINX-110P-HDMI-ENC and FP-VINX-110P-HDMI-ENC series encoders are multimedia extenders to extend HDMI video from a local source to a remote sink. The devices can be connected either via a direct CATx cable connection or through a Gigabit Ethernet Switch (L3-switch is necessary) in between. The maximum delivery distance can reach up to 100 m with minimal latency and employ a quality, proprietary wavelet-transform-based image compression. The devices can also be powered over Ethernet (PoE). As a wall plate / floor plate, they save space and blend in more, while still enabling easy signal transmission.

Optionally, USB signal transmission is also available.

i The WP and FP models have the same abilities.

Compatible Devices

The WP-VINX-110P-HDMI-ENC and FP-VINX-110P-HDMI-ENC series are compatible with all previous VINX devices (VINX-120-HDMI-ENC and VINX-110-HDMI-DEC (basic VINX) devices and the VINX AP-series).

Box Contents



Encoder device
(with cover plate)



Safety and Warranty Info,
Quick Start Guide



Phoenix CombiCon 2-pole
Connector



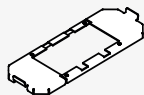
Mounting screws (4 pcs.,
UNC6-32x20mm)¹



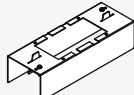
Fixing screws (4 pcs.,
UNC6-32x7mm)¹



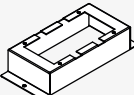
FP-VINX-110P-HDMI-ENC-
GES4 kit²



FP-VINX-110P-HDMI-ENC-
GES9 kit²



FP-VINX-110P-HDMI-ENC-
MKM kit²

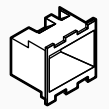


FP-VINX-110P-HDMI-ENC-
MKS kit²

The following accessories can be purchased separately (sales@lightware.com):



12V DC power adaptor with
interchangeable plugs

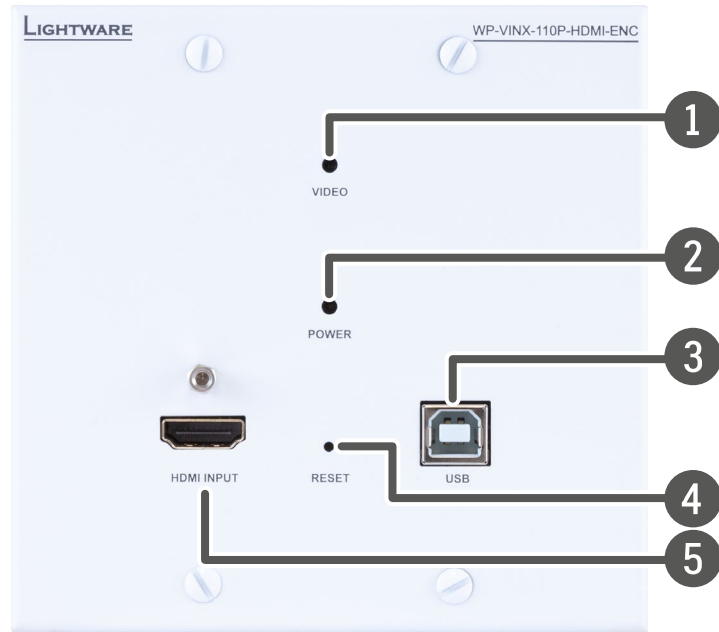


Switch/outlet box (B225R)
for mounting WP version¹

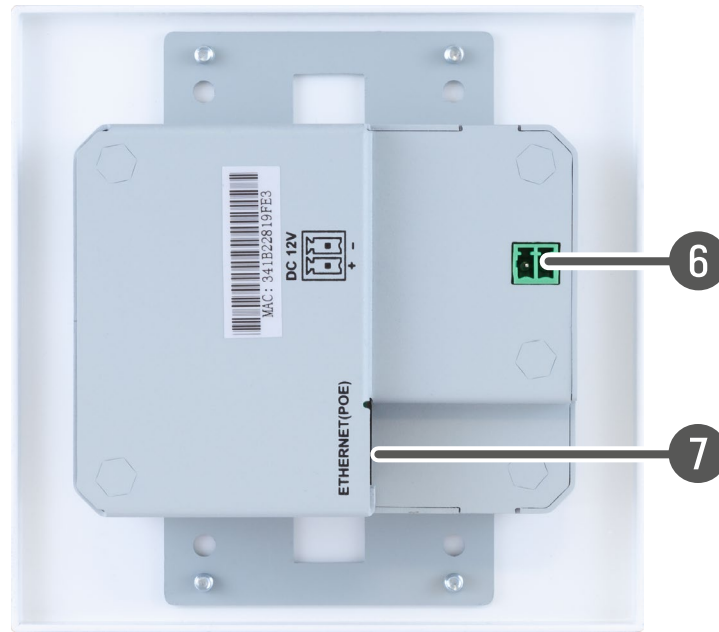
¹ Only for the WP model. The fixing screws (black or white) depend on the model.

² One of them - according to the model type.

Front View (WP-VINX-110P-HDMI-ENC)



Back View (WP-VINX-110P-HDMI-ENC)



Side View (WP-VINX-110P-HDMI-ENC)



1 Video signal status LED

The LED gives immediate feedback about the current video signal status of the device.



off

There is no network connection.



blinking (green)

The device is connected to a network, but there is no video stream in progress.



on

The device is connected to a network and there is video streaming in progress.

2 Power status LED

The LED gives immediate feedback about the current power status on the device.



off

The device is not powered.



blinking (red)

The device is booting.



on

The device is powered on.

3 USB port

B-Type connector for USB pass-through application (e.g. for connecting the Encoder to a computer).

4 Reset button

Short press (less than 3 sec): reboots the device.

Long press (more than 3 sec): reset to factory default settings. See more details in the *Calling Factory Default Settings* section on the other page.

5 HDMI input port

Port for DVI or HDMI video signal.

6 DC input port

12V DC input connector for local powering.

7 Ethernet port

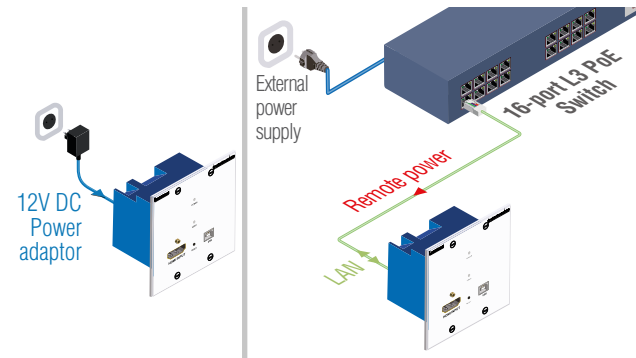
Locking RJ45 connector for Ethernet connection. Can also be used to power the device remotely over Ethernet (PoE).

i If the Video signal status LED and the Power status LED blink **together at once**, it means there is a Video Stream ID clash in the network.

i If the Video signal status LED and the Power status LED blink **together alternately**, it means factory default settings have been called.

Power Supply Options

The encoder can be powered in either one of the following ways:



1. Local adaptor

2. PoE remote powering via Ethernet switch

⚠ Warranty void if damage occurs due to the usage of a different power source.

i Please note that the 12V power adaptor is an optional accessory that can be purchased separately.

Calling Factory Default Settings

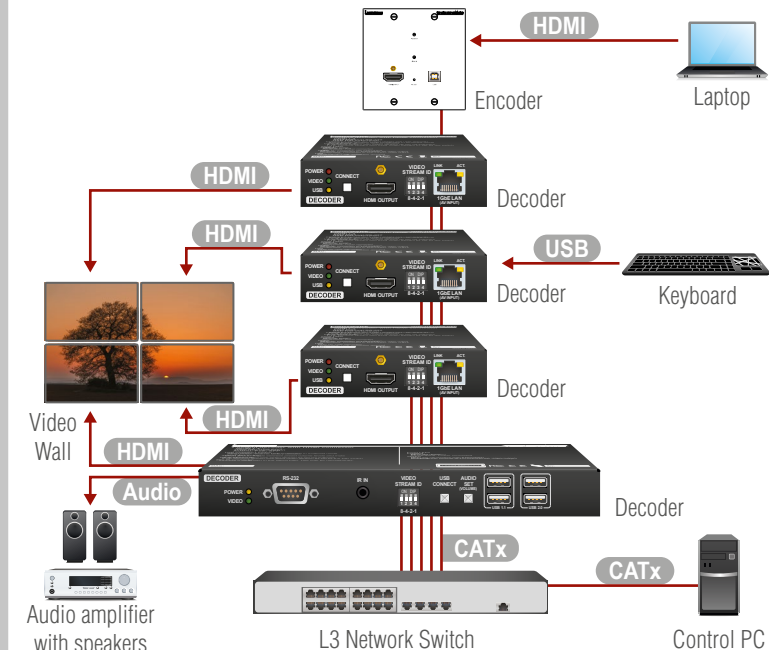
Until firmware version v3.4.0, factory default settings can be recalled by pressing the **Reset button for more than 3 seconds**. From that version on, factory defaults may only be called this way for 90 seconds after booting up, following that they can only be called via software control (LDC and LW3).

From firmware version v3.5.1, when factory default settings are called, the Video and Power LEDs will blink alternately.

Factory Default Settings

IP address	Dynamic (DHCP is enabled)
Crosspoint setting	input 1 on all outputs
Video stream ID	1
HDCP mode	Auto
Output video mode	Graphics mode
Color space / color range	Auto / Auto
HDMI mode	Auto
Emulated EDID	F47 - (Universal HDMI EDID)
User EDID memory	Empty (cleared)
Connecting method	Multicast mode
Available video walls	Empty (cleared)
Audio source	embedded audio

Connecting Steps (Multicast)



⚠ First of all, please set the parameters of the L3 Switch to meet the requirements; see the list in the 'Preparing the Network' section.

CATx	Connect CATx cables between the Extender devices and the L3 Switch.
HDMI	Connect an HDMI source device (e.g. a laptop) to the HDMI input port of the Encoder. Connect HDMI sink devices to the HDMI output port of the Decoder devices.
USB	Optionally for USB extension: connect USB devices to the USB ports of the Decoders. Connect the desired host device (e.g. Computer) to the Encoder via the USB mini-B type port. Please pay attention to the indicated port types (USB 1.1 and USB 2.0 support).
Audio	Optionally for Audio extension: connect an audio amplifier to the Analog audio output port of the Decoder.
Power	Connect the power cord of the supplied adaptor to the DC input first, then to the AC power socket.
CATx	Connect a control PC to the L3 switch for fine tuning of the VINX devices.

Important Safety Instructions

Please read the supplied safety instruction document before using the product, and keep it available for future reference.

The User's Manual is also available via the QR code below:



Lightware Visual Engineering PLC.

Budapest, Hungary

✉ sales@lightware.com ☎ +36 1 255 3800

✉ support@lightware.com ☎ +36 1 255 3810

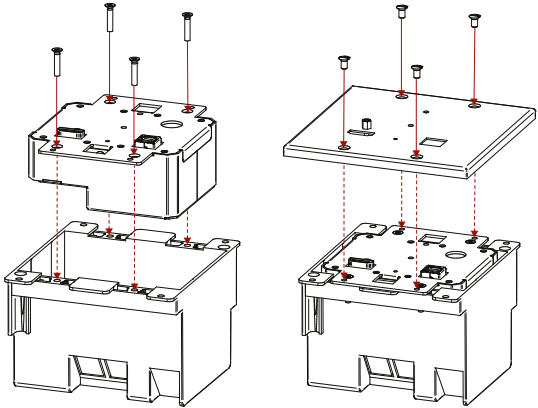
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Further information on the device is available at www.lightware.com.

Mounting Steps (WP-VINX-110P-HDMI-ENC)

Thanks to the design of Lightware devices, WP-VINX-110P-HDMI-ENC wall plate encoder can be mounted easily into an industrial standard box as the figures below show. B225R switch/outlet box is not supplied with the product, it can be purchased separately.

- 1
- Insert the extender into the B225R outlet box and position it to get the holes aligned, then fasten the front side of the extender by fitting the four flat-headed mounting screws.
- 2
- Place the cover on the front side of the extender and position it to get the holes aligned, then fasten it by fitting the four round-headed fixing screws.



Installation Checkpoints

The following help to have a successful install: check the settings listed below.

Network and Switch-related Settings

- Check the settings as described in the **Preparing the Network** section.

Connecting the Devices

- Use CAT7 SFTP AWG23 cables; the maximum allowed cable length is 100m.
- Supply the devices by local adaptors or by PoE; the feature is enabled on the RJ45 ports by default.

Powering Options

- Power on the devices as the final step of the cabling:
 1. Power on the L3 switch first. Wait a few minutes for the device be ready.
 2. Power on the VINX devices.

Port Settings

- Check if the desired input port is selected to transmit.
- Make sure that each Encoder has a unique video stream ID. **Set the same ID** in the desired Decoders and Encoder.
- Pair the devices via the built-in website or via LDC and define the Video Wall.
- Select the desired Decoder for USB transmission (see the **Device Concept** section).

EDID

- Universal EDID is emulated on the input ports which supports many common resolutions. If necessary, emulate a specific resolution by selecting a factory pre-programmed EDID.

How to Connect to a VINX Device to Control?

When the VINX device and a control device (PC, laptop, mobile device) are connected to the same network, the VINX can be configured via a web browser (Google Chrome and Mozilla Firefox are recommended) or by running Lightware Device Controller (LDC).

Step 1 – Make the VINX and the control devices meet

The following cases may occur in case of a factory default device:

- There is a DHCP server** in the network: the VINX device got an IP address from the DHCP server. Make sure the control PC is connected to the same network.
- There is no DHCP server** in the network: the VINX device generates an IP address in the 169.254.x.x range (AutoIP). Set the IP address of the control PC to match with this range (with subnet mask 255.255.0.0).

Step 2 – Establish the connection

Connect to the VINX via any of the following ways:

- Connecting via the Lightware Device Controller Software
Download the software from www.lightware.com, install and launch it. The Device Discovery screen will appear and list all the available devices.
- Connecting via the Built-in Web Page
If you do not have the chance to install a software or you would access the built-in webpage from a mobile device, type the IP address of the desired device to the address line of the browser.



Preparing the Network – The Requirements of the Switch

The recommended type of network device: 1GbE network with Layer 2.5 or 3 switch, Gigabit Ethernet. In TCP/IP terminology, Layer 2 is the data link layer that is responsible for splitting up the information coming from higher layers in the TCP/IP stack into Ethernet frames. An Ethernet frame contains labeling information with source and destination physical addresses (called source and destination MAC address). These physical addresses uniquely identify the source and destination physical devices (e.g. a VINX encoder and a VINX decoder). Ethernet frames provide error resilience by incorporating a redundancy check field through which transmission errors can easily be detected. The device that only uses the physical address information found in the Ethernet frame to root the packet from one of its input ports to one or more of its output ports is an unmanaged switch.

A managed switch, on the other hand, can handle the traffic and forward input packets to output packets by utilizing information from higher layers. This gives the managed switch more flexibility and also allows for more sophisticated functions like multicast forwarding. Since even a simple VINX network, where one VINX encoder supplies more VINX decoders, relies on multicasting, a multicast capable switch (i.e. a managed one) is a must. The managed switch shall offer the following capabilities:

- IGMPv2
- IGMP snooping, IGMP fast leave, IGMP querier
- Multicast filtering
- Jumbo frames

For more information about the requirements and technologies, please see the [Application Note](#) on our website.

Mounting steps (FP-VINX-110P-ENC-GES4, -GES9)

- 1
- Place the two half of the brackets of GES-4 / GES-9 into the floorbox. **Hook up** the upper ears of the brackets to the **top** mounting slot.
- 2
- Place the encoder into the brackets.
- 3
- Fasten the all four **M3x6 PH fixing screws** to fix the device to the brackets.
- GES4
- GES9
-

Mounting steps (FP-VINX-110P-ENC-MKS)

- 1
- Place the MKS bracket into the floorbox so that the screw holes are able to fit. Fasten the bracket with both supplied **DIN 7981 3,5x19 PZ2 self tapping screws**.
- 2
- Place the encoder into the bracket.
- 3
- Fasten the all four **M3x6 PH fixing screws** to fix the device to the bracket.
-

Mounting steps (FP-VINX-110P-ENC-MKM)

- 1
- Assembling of the bracket:** insert both handle tab parts into the bracket and fix them with the two supplied **M3x6 PH** fixing screws. **Do not tighten** the screws yet, the tabs must stay movable.
- 2
- Insert the bracket into the frame.
- 3
- Move the **handles** towards the frame. Align the **tab** on the assembly with the **top** slot in the frame.
- 4
- Fasten the **fixing screws** to fix the device into the floorbox frame.
- 5
- Place the encoder into the bracket.
- 6
- Fasten the all four **M3x6 PH fixing screws** to fix the device to the bracket.
- Tab
- Fixing screw
- Handle
- FP-VINX-110P-HDMI-ENC encoder
- FP-VINX-MKM bracket
- 53.4
- 77
- 217
-

