

# ZVconnect<sup>™</sup>

## Wireless Presentation System

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### User Manual

Updated February 15, 2023



## Table of Contents

ZVconnect™	1
Wireless Presentation System	1
System Description	3
Features	4
Receiver Unit	4
Transmitter Unit	5
Operating Guide	6
Receiver Installation	6
Synchronization of Transmitter to a Receiver	7
Screen Mirroring (One source to receiver)	12
Dual Screen Mirroring (Two sources to receiver)	13
Dual Screen Mirroring Details (Long click button for Dual Screen mode)	14
Screen Switching in Dual Screen Mode	15
Dual Screen Mode from 3rd Device	16
Transmitter Factory Reset	18
Battery Status	19
Battery Charging	20
Optional Charging Stand	21
Specifications	22
Transmitters	22
Receiver	23
Certifications and Warranty	23
Part Numbers	24
Frequently Asked Questions	25
Disclaimers	27

# System Description

The ZVconnect provides a simple, robust conference room video solution. The transmitter plugs directly into your laptop's video output, and the receiver into the HDMI video input of your display. No drivers or software to install. No USB limitations. No WiFi network required. Just plug the transmitter into the source and you are ready to go.

## A minimal system consists of:

- Video Source (Up to 1080p)
- ZVconnect transmitter device
- Display with HDMI input
- ZVconnect receiver device



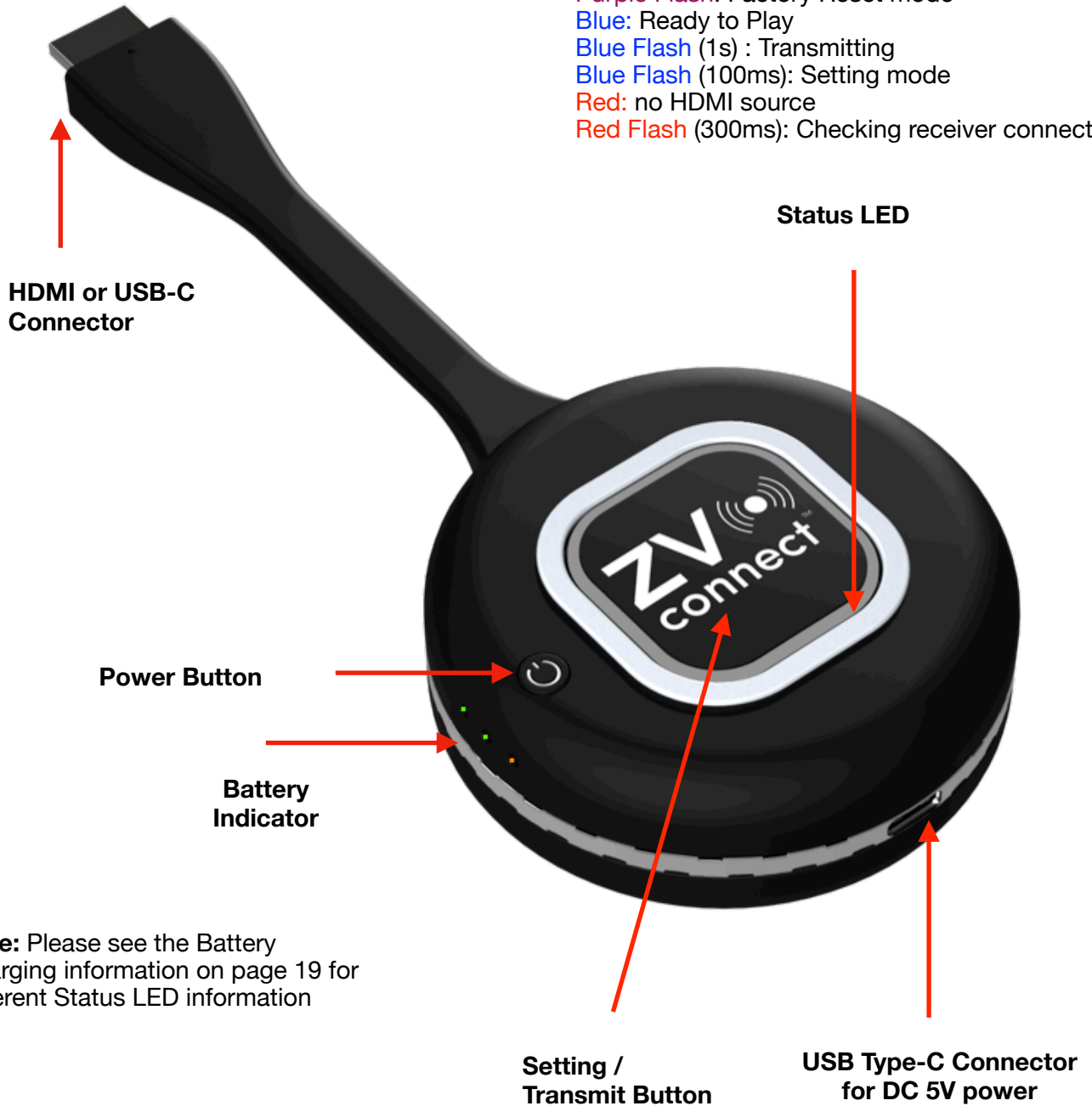
# Features

## Receiver Unit



## Transmitter Unit

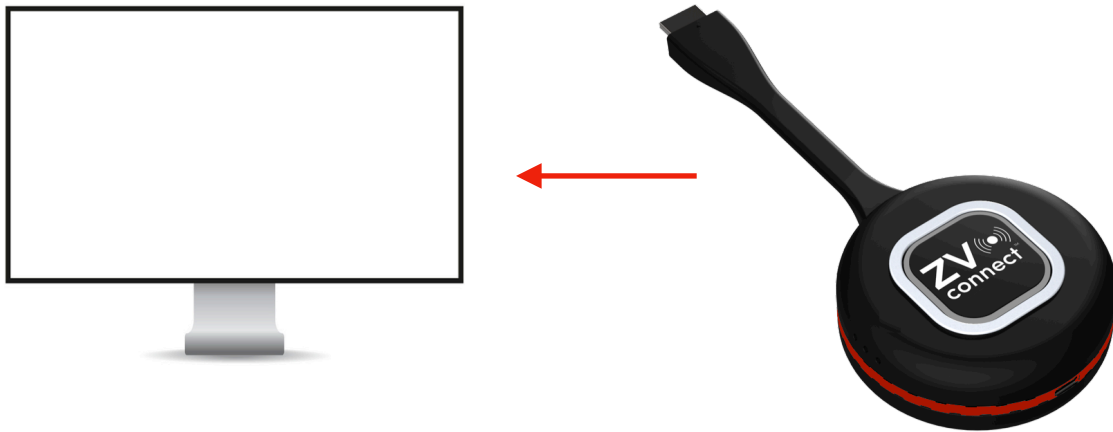
- Purple: Booting
- Purple Flash: Factory Reset mode
- Blue: Ready to Play
- Blue Flash (1s) : Transmitting
- Blue Flash (100ms): Setting mode
- Red: no HDMI source
- Red Flash (300ms): Checking receiver connection



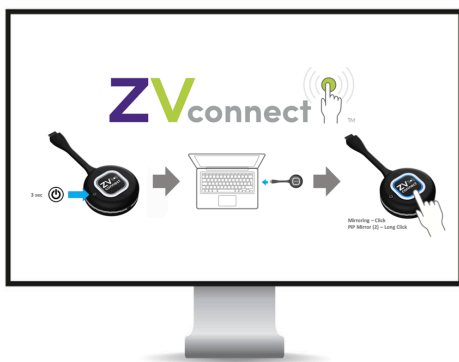
**Note:** Please see the Battery Charging information on page 19 for different Status LED information

## Operating Guide

### Receiver Installation



1. Connect ZVconnect Receiver to HDMI input of display
2. Connect 5V/2A power to ZVconnect receiver
3. Status light will turn blue. Wait for status light to flash. (About 30 seconds)
4. Ready to Play

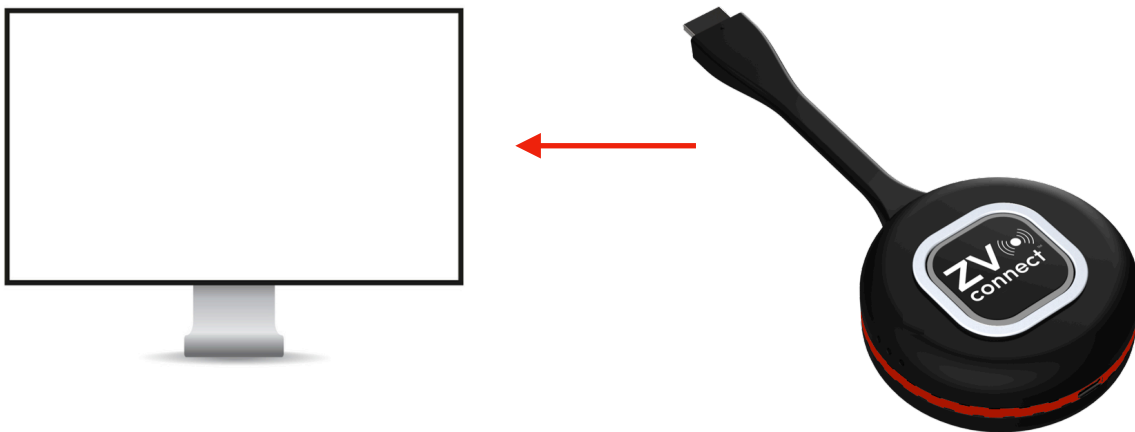


## Synchronization of Transmitter to a Receiver

You will need to Synchronize or “Pair” a Transmitter to a Receiver. This is done by putting the Receiver into Pairing Mode and synchronizing it with desired Transmitters.

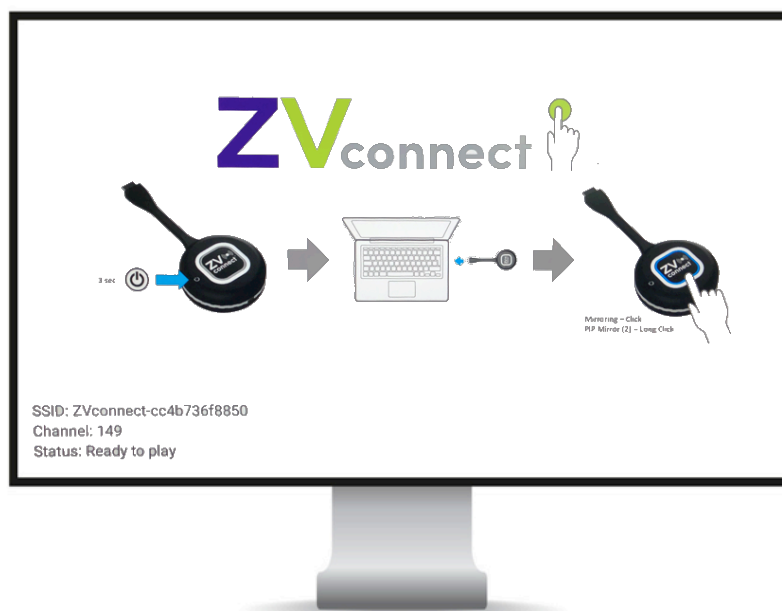
### Step 1:

Connect the Receiver to the display’s HDMI input and then connect power adapter (5V2A) to the USB-C port of the receiver.



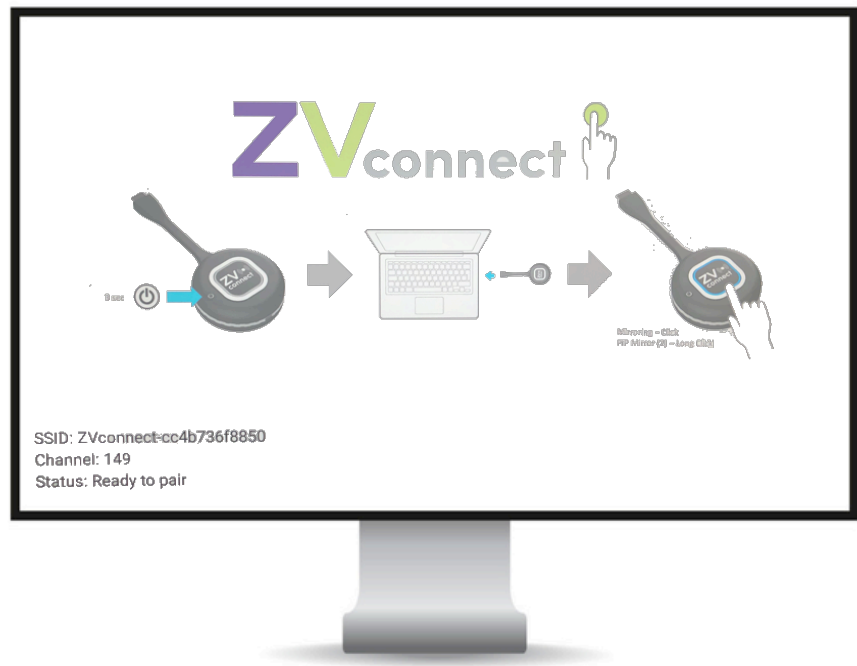
### Step 2:

LED of the Receiver center button will turn **blue** for a few seconds and flash for about 30 seconds. The “Ready to play” message will appear in the bottom left corner of the display.



**Step 3:**

Press Receiver's center button for 3 seconds. After initialization the "Ready to pair" message will be shown on the lower left corner of the display. The Receiver is now in pairing mode.



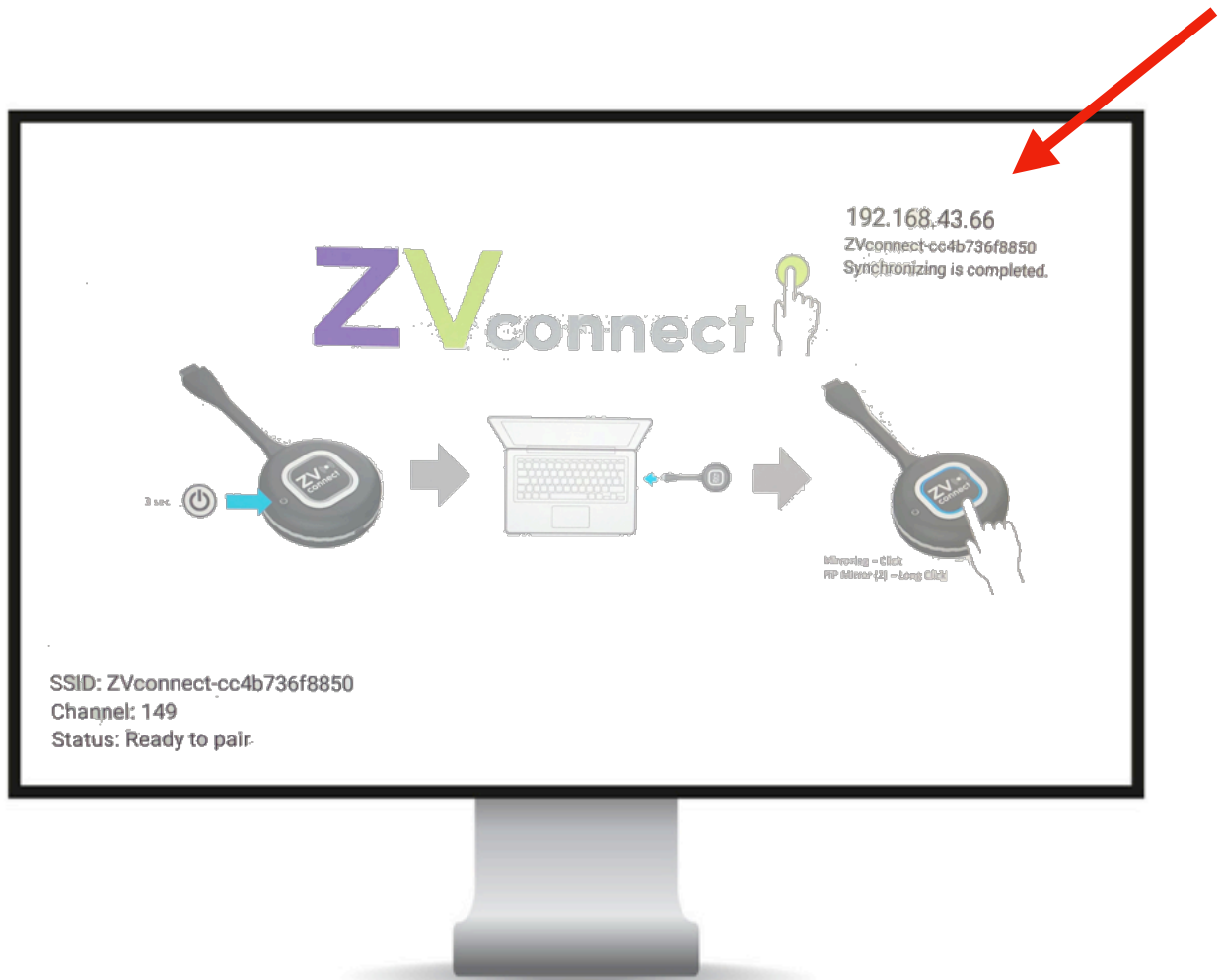


**Step 4:**

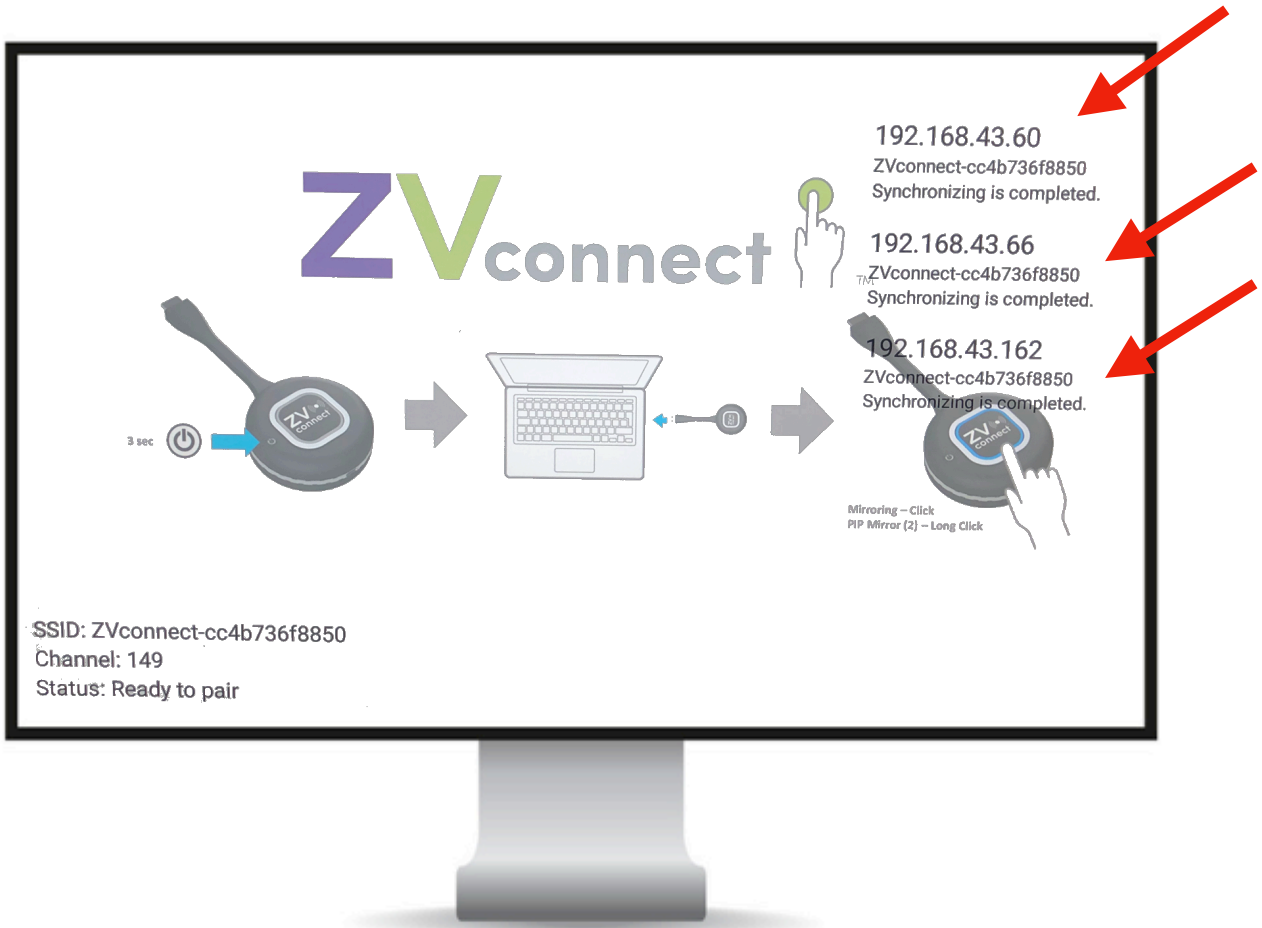
With **no source** connected to the Transmitter; press the Transmitter's power button for 3 seconds to power on Transmitter. LED will turn **purple** while booting.

**Important:** Do not connect a source to the Transmitter during this synchronization procedure.

While LED is still **purple**; press and hold the center button until the LED becomes flashing **blue** and then release it. (LED will flash **red** before it starts flashing **blue**) The Transmitter will now pair with the Receiver. When the pairing is successful, a "Synchronizing is completed" message will appear in the upper right corner of the display. The LED on the Transmitter will turn flashing **red** after this process. Transmitter is now ready, but you must complete step 5 below.



You can synchronize up to 254 transmitters with a single receiver. Example below shows screen after 3 Transmitters have been synchronized consecutively.

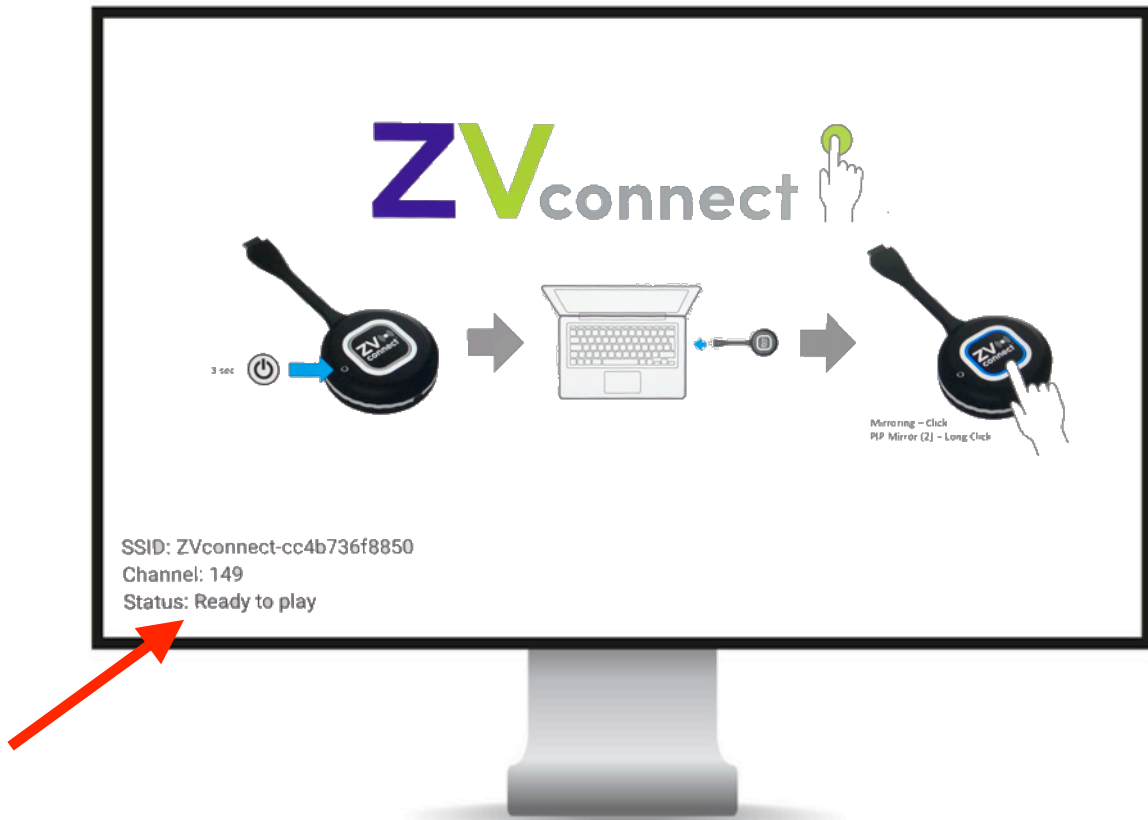


**Note:** The Transmitter will stay synchronized to the specific Receiver after power down. In fact, the Transmitter will stay synchronized to the Receiver until manually paired with another receiver.

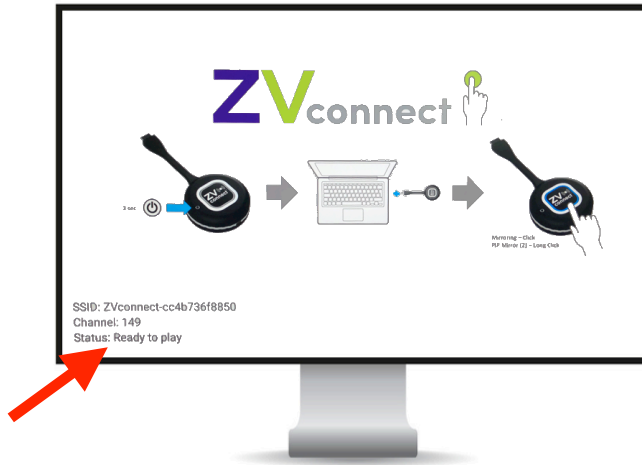
**Step 5:**

Once pairing is completed, press and hold the Receiver's center button until you see "Initializing" in the status field to exit pairing mode. After a few moments of "Channel scanning" this will return to "Ready to play".

**Important:** You will not be able to transmit video from a Transmitter to Receiver until the Receiver is taken out of pairing mode. It must be "Ready to play".



## Screen Mirroring (One source to receiver)



Once the receiver has completed the boot process the screen shown to the left will appear on the display. The status should be "Ready to play"

Connect either an HDMI or USB-C transmitter to a source.

Power on the transmitter

Wait for the status LED to turn blue

Press the settings/transmit button once.

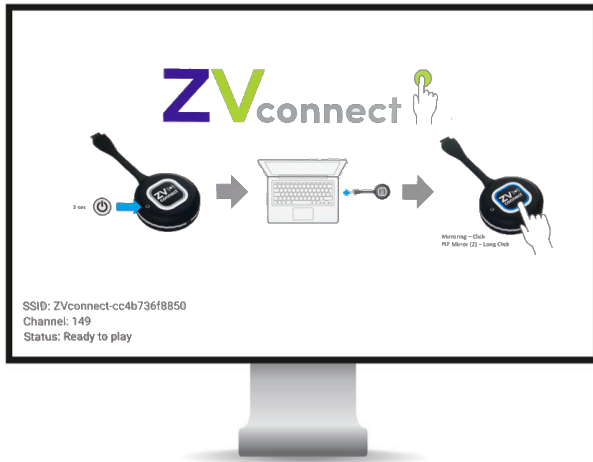
The display will indicate that the transmitter is connecting.

Transmitter status button will flash blue to indicate it is actively transmitting to receiver.

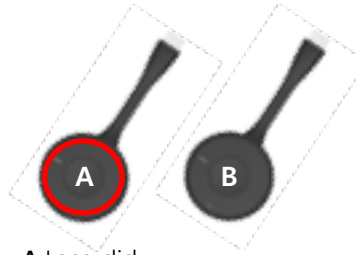
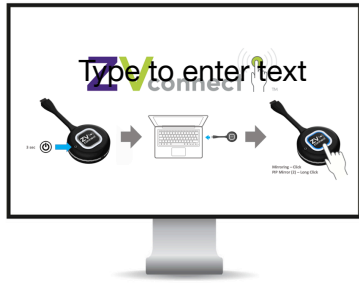


## Dual Screen Mirroring (Two sources to receiver)

It is possible to connect two transmitters to a single receiver simultaneously and display the images side by side on the display. This process requires at least two transmitters that are synced to the same receiver.



## Dual Screen Mirroring Details (Long click button for Dual Screen mode)



A Long click

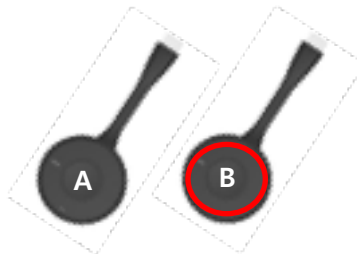
Device **A** enters Dual Screen mode



Color rainbow screen is normal

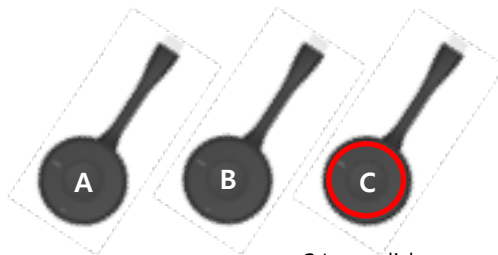
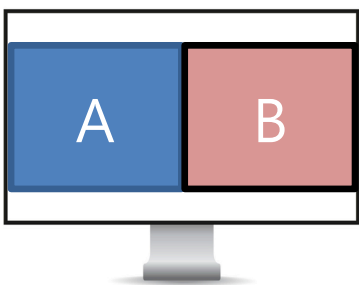
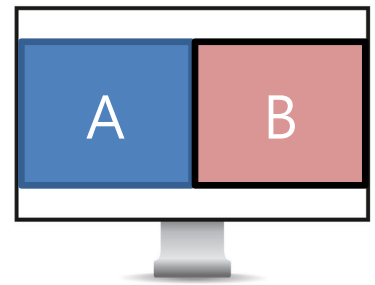


Color rainbow screen is normal



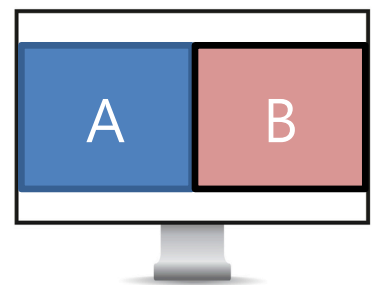
B Long click

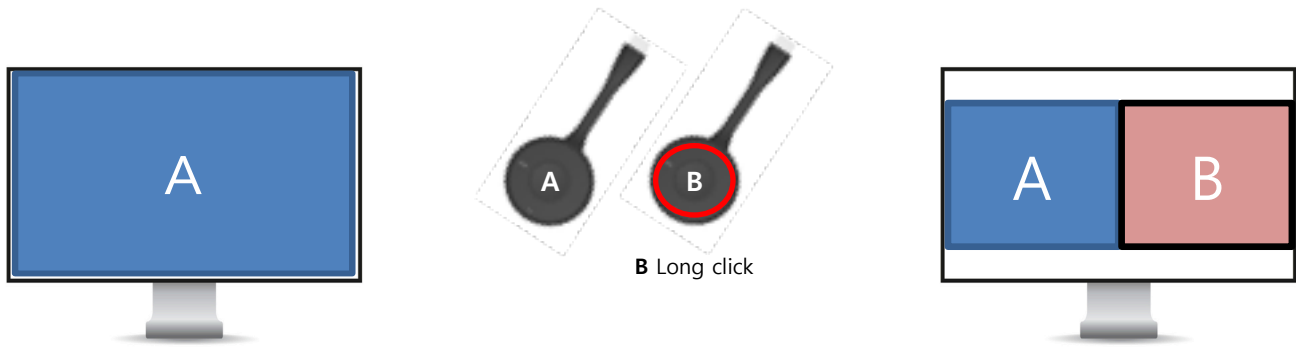
Device **B** enters Dual Screen mode  
-> Screen **B** appears on the **right side of screen A**



C Long click

Device **C** does not enter Dual Screen mode.  
Only 2 devices are available.





**Device A is full screen, and long click Device B**  
-> Both devices enter Dual Screen mode.

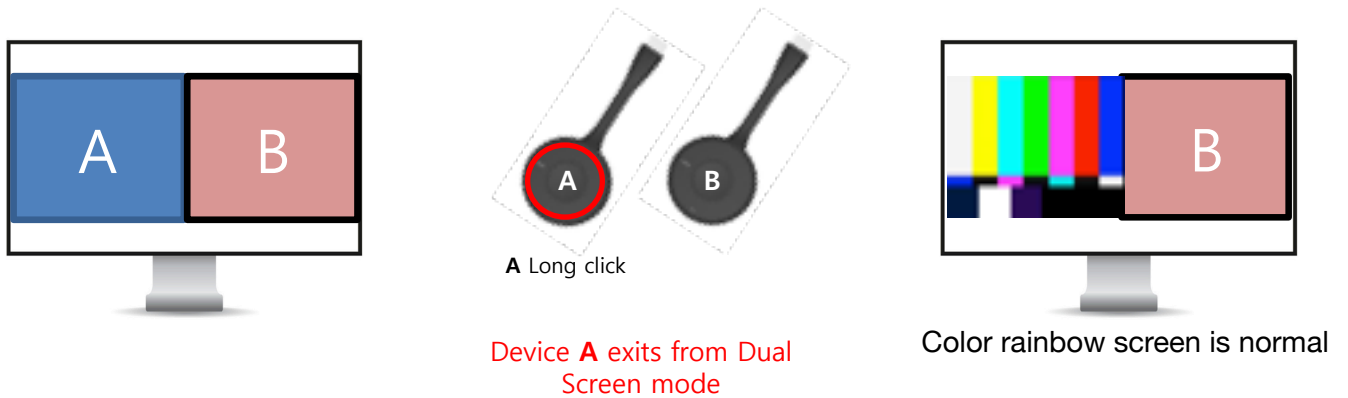
Device **A** on the left side, and Device **B** on the right side.

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### Screen Switching in Dual Screen Mode

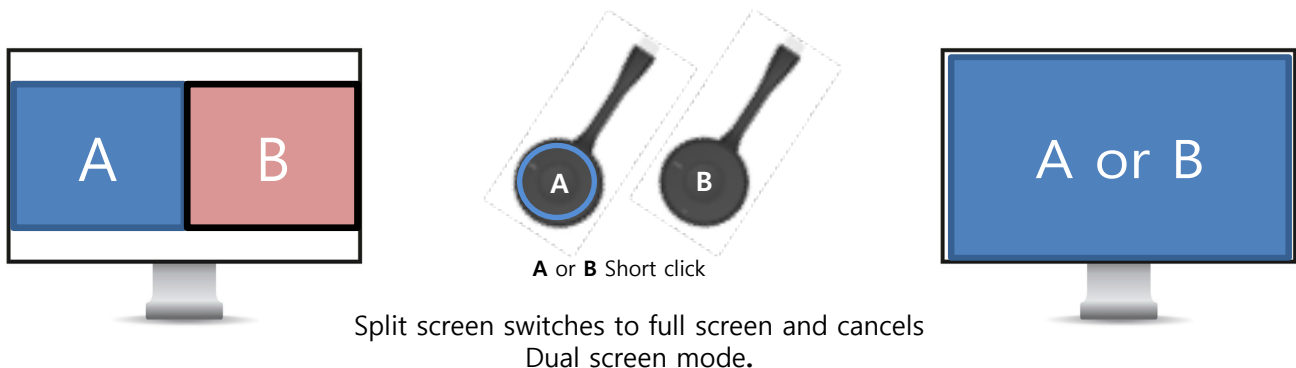
Long Click -> Device Exits Dual Screen

Short Click -> Device turns to full screen mode

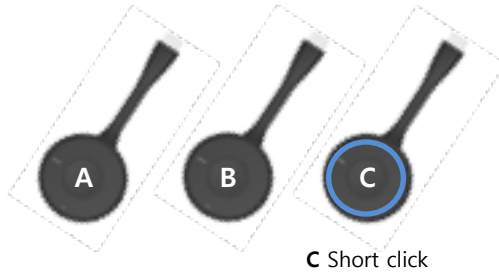
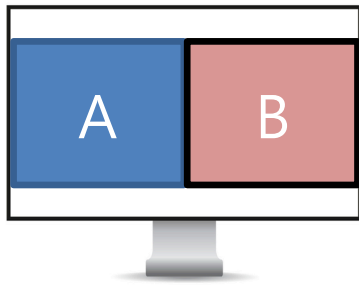


Device **A** exits from Dual Screen mode

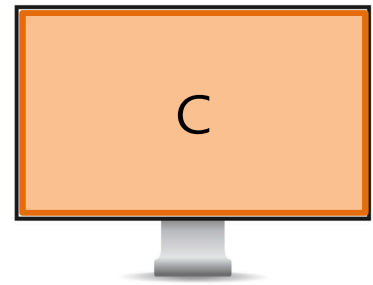
Color rainbow screen is normal



Split screen switches to full screen and cancels Dual screen mode.



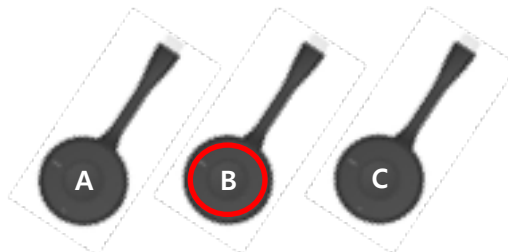
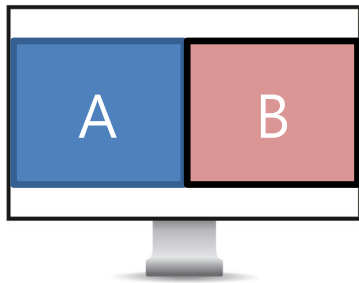
C Short click



Switch to full screen of Device **C**.  
Dual Screen mode for Device **A**  
and Device **B** is cancelled.

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### Dual Screen Mode from 3rd Device

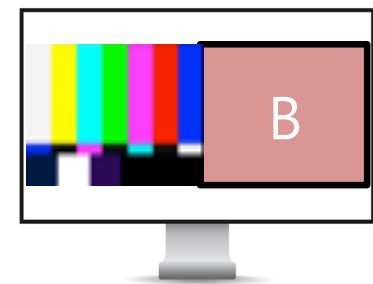


A or B Long click

Choose Device **A** or Device **B** and end  
Dual Screen mode



Color rainbow screen is normal

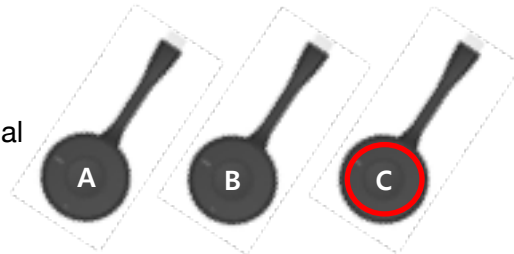
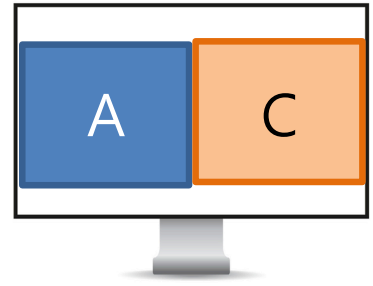


Color rainbow screen is normal

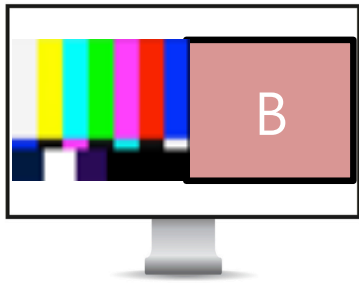




Color rainbow screen is normal

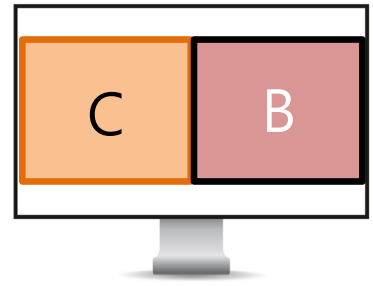


C Long click



Color rainbow screen is normal

Device C enters Dual Screen mode



## Transmitter Factory Reset

To factory reset the transmitter, please follow these steps.

1. Ensure Transmitter is not connected to a Source.
2. Power on the Transmitter. LED will cycle from solid **purple** while booting to flashing **red**.
3. Press and hold the center button until the LED flashes **blue**. (About 2-3 seconds)
4. Now press and hold the center button until the LED turns off. Unit powers itself off.
5. Power on the Transmitter. LED will cycle from solid **purple** to slow flashing **purple**.
6. Unit is now reset and in standby mode.

If there is an active Receiver unit in range, the Transmitter will now automatically pair/sync to that Receiver. Flashing **purple** will turn to solid **red** when this procedure completes.

If there is no active Receiver unit in range, the Transmitter will continue to slowly flash **purple** until it eventually self powers off. The next time a Receiver unit is in range, it will automatically pair/sync to that unit.

## Battery Status

The transmitter units have an integrated rechargeable battery. The status of the battery is indicated by a series of LED lights on the side of the unit.



### Battery Status Lights

Two green plus One orange = Battery Charge 80% - 100%

One green plus One orange = Battery Charge 20% - 80%

One orange = Battery Charge less than 20%

**Note:** Battery status lights are not illuminated when the transmitter is turned off.

## Battery Charging

To charge transmitter units follow the procedure below:

1. Power off the transmitter
2. Plug the USB-C charging cable into the transmitter
3. Connect other end of charging cable to appropriate USB charging block and power
4. The Status LED will turn Red while the transmitter is charging
5. The Status LED will turn off when the transmitter is fully charged



**Charging**



**Fully Charged**

## Optional Charging Stand

There is an optional charging stand available for the transmitter devices (Part # ZVCCHARGE) that can hold and charge up to 4 ZVconnect transmitters at one time.

Note that the ZVconnect transmitter LED will remain **red** while the unit is actively charging and will turn off when the unit is fully charged. The Charging Stand also has indicator lights. **Purple** to indicate the ZVconnect transmitter is charging and **Blue** to indicate the ZVconnect transmitter is fully charged.



ZVconnect is charging



ZVconnect is fully charged



# Specifications

## Transmitters

Model Number	ZVCTXHDMI	ZVCTXUSBC
<b>Description/Interface</b>	Wireless transmitter with HDMI interface	Wireless transmitter with USB-C interface
<b>In the box</b>	Transmitter, USB cable, 2A USB power block	Transmitter, USB cable, 2A USB power block
<b>Video Codec</b>	H.265	H.265
<b>Resolution Support</b>	Up to 1920 x 1080 @60Hz input*	Up to 1920 x1080 @60Hz input*
<b>WLAN</b>	IEEE802.11a/b/g/n/ac 5 Ghz (5.150 ~ 5.850 Ghz)	IEEE802.11a/b/g/n/ac 5 Ghz (5.150 ~ 5.850 Ghz)
<b>Security</b>	WPA2 AES-CCMP	WPA2-AES-CCMP
<b>Audio</b>	2-channel stereo	2-channel stereo
<b>Power</b>	Battery or DC Adapter 5V/1A	Battery or DC Adapter 5V/1A
<b>Latency</b>	< 200ms	< 200ms
<b>Transmission Distance</b>	40+ feet	40+ feet
<b>Battery life</b>	6 hours	6 hours
<b>Battery charging time</b>	4 hours	4 hours
<b>Dimensions</b>	6.7in x 2.8in x 1.2in	6.7in x 2.8in x 1.2in
<b>Weight</b>	0.27 lbs	0.26 lbs

\*Input Resolution reduced to 30Hz for transmission. Scaled back to 60Hz at Receiver

## Receiver

<b>Model Number</b>	<b>ZVCRXHDMI</b>
<b>Description/Interface</b>	Wireless receiver with HDMI interface
<b>In the box</b>	Receiver, USB cable, 2A USB power block
<b>Video Codec</b>	H.265
<b>Resolution</b>	3840 x 2160 @30/60Hz*, 1920 x 1080 @60Hz*
<b>WLAN</b>	IEEE802.11a/b/g/n/ac 5 Ghz (5.150 ~ 5.850 Ghz)
<b>Security</b>	WPA2 AES-CCMP
<b>Audio</b>	2-channel stereo
<b>Power</b>	DC Adapter 5V/2A
<b>Latency</b>	< 200ms
<b>Dimensions</b>	6.7in x 2.8in x 1.2in
<b>Weight</b>	0.13 lbs

\*Input Resolution reduced to 30Hz for transmission. Scaled back to 60Hz at Receiver.

## Certifications and Warranty

<b>Standard</b>	<b>CE</b>	Yes
	<b>RoHS</b>	Yes
	<b>FCC</b>	Yes
<b>Warranty</b>	1 year	

## Part Numbers

Part Number	Short Description	Long Description
ZVCCHARGE	ZVconnect charging stand/ cradle for up to 4 ZVconnect transmitters	Charging cradle unit to simultaneously charge up to 4 ZVconnect transmitter units. Includes cradle and power supply/cable.
ZVCKITH	ZVconnect wireless system room kit with HDMI transmitters	ZVconnect wireless room kit with HDMI transmitters. Includes 1 receiver unit and 2 transmitter units with HDMI inputs. Also includes 3 USB cables, 3 2A USB power blocks
ZVCKITM	ZVconnect wireless system room kit with HDMI and USB-C transmitter	ZVconnect wireless room kit with HDMI transmitters. Includes 1 receiver unit, 1 transmitter unit with USB- C input and 1 transmitter unit with HDMI input. Also includes 3 USB cables, 3 2A USB power blocks.
ZVCKITU	ZVconnect wireless system room kit with USB-C transmitters	ZVconnect wireless room kit with HDMI transmitters. Includes 1 receiver unit and 2 transmitter units with USB-C inputs. Also includes 3 USB cables, 3 2A USB power blocks.

**Note:** Part numbers can be followed by region codes. -EU = European Union, -UK = United Kingdom. Examples: ZVCKITM-EU and ZVCKITM-UK

EU units contain EU style USB power blocks

UK units contain UK style USB power blocks

No region code indicates US style USB power blocks



## Frequently Asked Questions

**Question:** Can I just leave the Transmitter connected to USB power and transmit indefinitely?

**Answer:** Yes you can

**Question:** Does the ZVconnect support playing HDCP content?

**Answer:** Yes it does.

Rx: HDCP 2.2

Tx HDMI: HDCP 1.4

Tx USB-C: HDCP 1.3

When HDCP 2.2 content is connected to the Tx, it will convert it to 1.4 and 1.3

**Question:** Does the dual mirroring mode support audio?

**Answer:** No, dual mirroring mode only supports video.

**Question:** What frequency range is used by ZVconnect?

**Answer:** ZVconnect uses a 5GHz frequency. (Between 5.2 GHz and 5.8 GHz)

**Question:** How many available channels are available in this 5.2 GHz to 5.8 GHz range for the ZVconnect receiver to use?

**Answer:** There are 7 available channels: Channels 36, 44, 48, 149, 153, 157 and 161.

**Question:** What compression does the ZVconnect use?

**Answer:** The ZVconnect uses H.265 compression.

**Question:** What is the battery life of the Transmitter?

**Answer:** 6+ hours of continuous transmitting.

**Question:** What is the transmission range?

**Answer:** 40+ feet.

**Question:** How many transmitters can sync to a receiver at one time?

**Answer:** Up to 254. (Only a max of 2 can display at any given time)

**Question:** What is the latency of the transmission?

**Answer:** Average latency is between 150ms and 200ms.

**Question:** Can a transmitter sync to more than one receiver at a time?

**Answer:** No, the transmitters can only sync to one receiver at a time.

**Question:** What devices is the transmitter compatible with?

**Answer:** ZeeVee has tested a wide range of devices including the following: MacBook's, Windows PC's, Lenovo Thinkpads, Dell Chromebook, Google Pixelbooks, Android Phones and Tablets, Samsung Galaxy S9/S10, Microsoft Xbox One X, Sony Blu-Ray players, Apple TV.

**Question:** What brands of displays has the receiver been tested with?

**Answer:** ZeeVee has tested with displays from the following manufacturers: Benq, Dell, Haier, Hannspree, Insignia, LG, Monoprice, Optoma, Philips, Samsung, Sharp, Sony, ViewSonic and Visio.

## Disclaimers

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