User's Manual

In Room Full HD VideoWireless Kit

WHD100

WHD100 Receiver

PC to TV Wireless Receiver

WHD100 Transmitter

PC to TV Wireless Transmitter

Please read the user manual and the quick installation guide so you can enjoy the product to the full extend.

Table of Contents

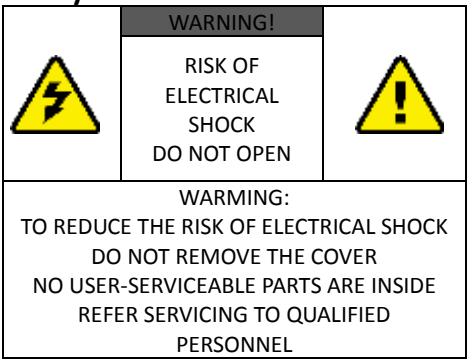
1. Important Information

Please take the time to read this user manual before using the WHD100.
It contains important information about operating your PC to TV wireless kit.

Our company's limited warranty applies when the product is handled properly for intended use, in accordance with its operating instruction. However, the warranty may be void in the following cases:

- Repair, product modification or alteration have been performed by unauthorized service personnel
- Damages caused by accidents, including but not limited to, lightning, water, fire, or moisture
- Use of an AC adapter not compatible with the product and its voltage rating
- The model number on the product has been altered, deleted, removed or made illegible.

Safety Precautions



Danger: Be careful with electricity.

- Power to the units must be switched off before any work is undertaken, such as any AV device connection or TV connection.
- **Power outlet:** To prevent electric shock, make sure to use the appropriate AC adapters as power supply to the transmitter and the receiver.
- **Power cord:** Be sure the power cord is routed so that it will not be stepped on or pinched by heavy items.
- **Power overloading:** Avoid overloading electrical outlets or extension cords which otherwise could result in electric shock or fire.
- **Lightning:** Disconnect the product from the power source if it is left unattended for a long period of time, and to protect the product from lightning.
- Always disconnect the power cord from the power outlet when you are not using your Full HD Video wireless kit. This reduces the risk of electric shocks or fire.

Warning

- This product should not be exposed to dripping or splashing. No object filled with liquids, such as vases, should be placed on the product.
- **Object Entry:** To avoid electric shock, never stick anything in the slots on the case or remove the cover.
- Place receiver/transmitter on a flat, hard and stable surface
- **Ventilation:** Do not block the ventilation slots on the receiver/transmitter or place any heavy object on the top cover.
  Blocking the air flow could damage the receiver. Arrange components so that air can flow freely around the receiver. Ensure that there is adequate ventilation if the receiver is placed in a stand.
  Put the receiver/transmitter in a property ventilated area, away from direct sunlight or any source of heat.
- **Water Exposure:** To reduce the risk of fire or electric shock, do not expose the receiver/transmitter to rain or moisture.
- **This is indoor solution.**
- **Our company has the right to modify this document without any notice.**

DECLARATION OF CONFORMITY

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

EMI (Electro Magnetic Interference)

EN 55022 Information technology equipment----
Radio disturbance characteristics---Limits and methods of measurement
EN 61000-3-2 Electromagnetic compatibility (EMC)---
Part 3-2:Limits---Limits for harmonic current emissions(equipment input current up to and including 16 A per phase)
EN 61000-3-3 Electromagnetic compatibility (EMC)---
Part 3:Limits---Section 3: Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≦16 A per phase and not subject to conditional connection

EN 55024 Information technology equipment----
Equipment---Immunity characteristics---Limits and methods of measurement
EN 301 489-1
Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro Magnetic Compatibility (EMC) standard for radio equipment and services;
Part 1: Common technical requirements

EN 301 489-17
Electromagnetic compatibility and Radio spectrum Matters (ERM); Electro magnetic Compatibility (EMC) standard for radio equipment;
Part 17: Specific conditions for 2,4 GHz wideband transmission systems, 5GHz high performance RLAN equipment and 5,8 GHz Broadband Transmitting Systems
EN 60065 Audio，video and similar electronic apparatus—Safety requirements

TRADEMARK INFORMATION

- HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks of HDMI Licensing LLC.

Special Notice

- Never use this product nearby an aircraft or medical facility. It can cause interference or undesirable effect on the operation result.
- Use of this product in the following locations may result in abnormal video and audio output (noise, blocked image... etc,).
  - Product installed in the walls made of concrete.
  - Product situated near the refrigerator or metal fitment.
  - A cluttered room where the wireless signals may be blocked
- This product has been tested and manufactured to comply with each country's safety rules. However, there is no guarantee that interference will not occur in some installation scenario. If the interference happens, increase the distance between the transmitter and receiver.
- WHD100 may interfere 5GHz wireless devices, such as routers or other wireless devices. Therefore, if you have an 802.11n router, configure it to the 2.4 GHz band rather than the 5GHz band.
- Optimal range between WHD100 transmitter and receiver is between 2 and 5 meters within line of sight.

CAUTION: Using the RF module in the US

- Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.
- This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.
- Outdoor operations in the 5150 ~ 5250MHz, 5600~5650MHz band are prohibited.
- This device has no Ad-hoc capability for 5250~5350MHz and 5470~5725MHz.
- Outdoor operations in the 5470~5725MHz band are prohibited. This device could not be used in the 5600~5650MHz.
- The Device not operation in 5600~5650MHz.
- Industry Canada regulatory information Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

- The user is cautioned that this device should be used only as specified within this manual to meet RF exposure requirements. Use of this device in a manner inconsistent with this manual could lead to excessive RF exposure conditions.
- The following statement must be included with all versions of this document supplied to an OEM or integrator, but should not be distributed to the end user.
  - This device is intended for OEM integrators only.
  - Please See the full Grant of Equipment document for other restrictions.
  - This device must be operated and used with a locally approved access point.
- The following regulatory and Safety notices must be published in documentation supplied to the end user of the product or system incorporating an adapter in compliance with local regulations, Host system must be labeled with “Contains FCC ID: XXX-XXXXX”, FCC ID displayed on label.

System Warning

FEDERAL COMMUNICATIONS COMMISSION INTERFERENCE STATEMENT

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.

CAUTION: Using the System in the US

- Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.
- This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.
- Outdoor operations in the 5150~5250MHz, 5600~5650MHz band are prohibited.
- This device has no Ad-hoc capability for 5250~5350MHz and 5470~5725MHz.
- Outdoor operations in the 5470~5725MHz band are prohibited. This device could not be used in the 5600~5650MHz.
- The device not operation in 5600~5650MHz.

CAUTION: Using this System in Canada

- Industry Canada regulatory information Operation is subject to the following two conditions:
  1. This device may not cause interference,
  2. This device must accept any interference, including interference that may cause undesired operation of the device.
- The user is cautioned that this device should be used only as specified within this manual to meet RF exposure requirements. Use of this device in a manner inconsistent with this manual could lead to excessive RF exposure conditions.

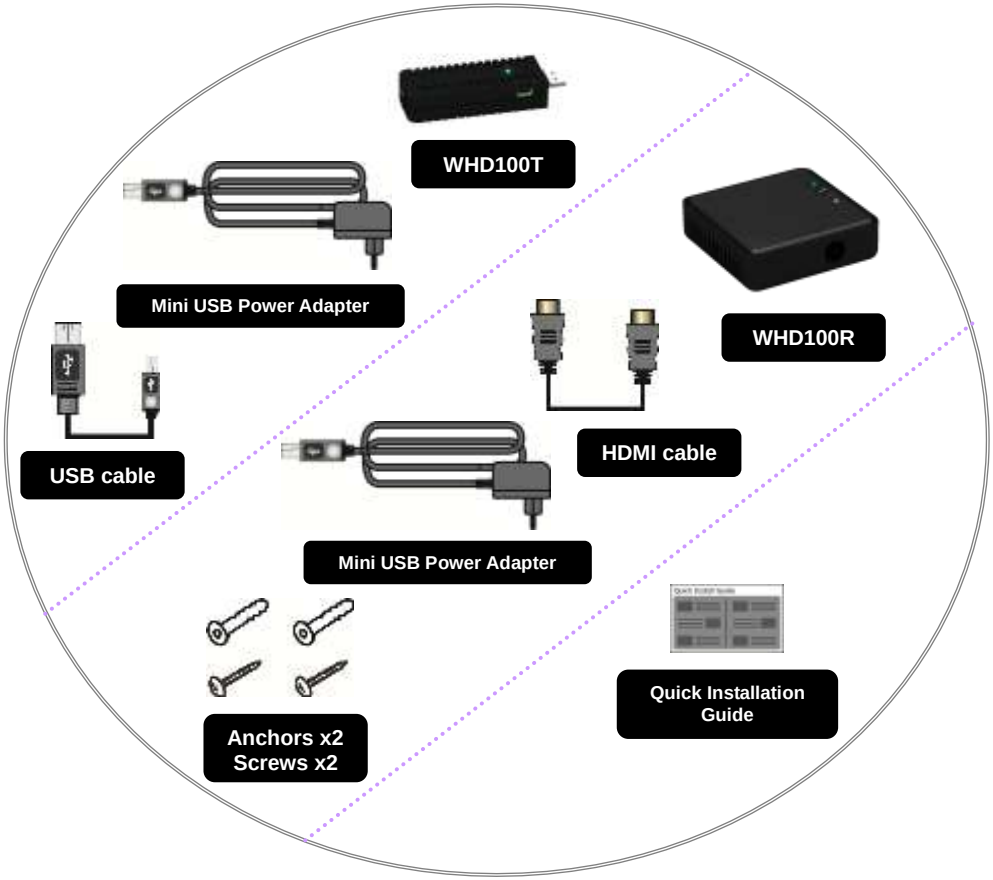
2. Introduction

WHD100 is a Full HD wireless transmission device.

This solution delivers uncompressed 1080p full HD video and audio content to your existing HDTV or HD Projector wirelessly. It operates the transmission in 4.9 GHz~ 5.9 GHz frequencies and it can adjust its communication frequency automatically in case of interference from another RF system. With built-in Omni-directional antennas, it can transmit uncompressed video content up to 20' (7m) in-room with near zero latency.

2.1 Packing Content

Please check whether the following items are present in the package. If any items missed or damaged, please call your dealer.



2.2 Overview

2.2.1 WHD100T (TX): Transmitter

❸ INFO button
The button displayed related information on the screen.

❶ LED Status Indicator
The LED indicator is lit solid blue when the power is on and wireless link

■ **Lateral view**

■ **Top view**

❹USB Power
Connect the transmitter to the desktop or laptop's USB port with the provided USB cable.

❷ HDMI IN
Plug in Transmitter to PC / Notebook or any Source device that have an HDMI port directly.

2.2.2 WHD100R (RX): Receiver

■ **Top view**

❶ Power Button with LED indicator
Press to turn the receiver on and off. The indicator in the power button lights up in blue when the power is on, and turns red in standby mode.

❸ Status LED
Display the video status information.

❷ INFO. Button
Press this button for OSD displayed the information on the HDTV screen.

■ **Rear view**

❷ DC IN
Connect to receiver's power adapter.

❶ HDMI OUT
Connect to HDTV set via an HDMI cable.

3. Installation

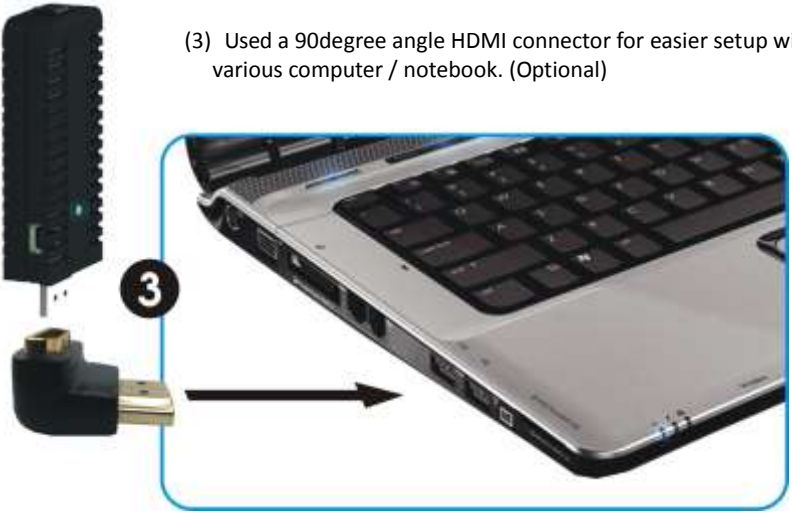
Step 1: Setup the WHD100T transmitter

Connect an HDMI-ready computer to the WHD100T:

(1) Plug the transmitter's HDMI connector to the HDMI-ready computer's "HDMI OUT" or Source player's "HDMI OUT" directly.

(2) Power supplied by USB port of computer through the USB cable (included on package). Or connect the supplied power adapter to the mini USB port of the WHD100T and a wall socket. The LED indicator should lights up in blue when the WHD100T is connected to the computer through USB.

(3) Used a 90degree angle HDMI connector for easier setup with various computer / notebook. (Optional)



Step 2: Setup the WHD100R receiver

HDTV set Connection with WHD100R:

(1) Connect the HDMI cable to the HDMI OUT jack of the receiver and to your HDTV set (or an HD projector).

(2) Connect the supplied power adapter to the USB port of the WHD100R and a wall socket. When it's connected to the mains power, the LED indicator on the POWER button lights up blue.

Step 3: Boot up the WHD100T and WHD100R

(1) **After** the power cord is plugged into the electrical outlet, the WHD100 will automatically turn on and establish a link between the transmitter and receiver.

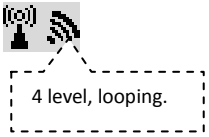
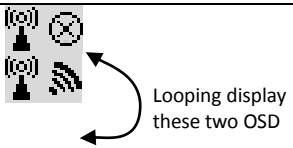
(2) If you unplug the power of WHD100T, the WHD100R will search for a signal (POWER LED will flash blue). If no link is established after 10 minutes, the WHD100R will enter Standby mode (POWER LED of receiver will turn solid red).

(3) **When** WHD100R in Standby mode (Receiver POWER LED is lit in red), plug in the power of WHD100T, the Transmitter will wakes up the Receiver automatically to establish a link.

(4) **During** the warm-up period, the POWER LED will blink in blue until the signal link between the transmitter and the receiver is established. It will spend around **15 ~ 20 seconds** for boot up and link established if the operation is in normal condition.

Ensure your TV set or projector is in “HDMI input” mode, and is already powered on.

(5) **If all** operation is normal, the POWER LED and INFO./CHANNEL LED will glow in solid blue. Please refer to the below form containing detailed LED indicator and OSD description of transmitter / receiver:

Item / Mode	Status Description	Power LED (on RX)	Status LED (on RX)	OSD Display (on RX)
Standby	For power saving mode.	Static Red	off	
Initial Boot up / Warm up	It will spend 15 ~ 20 seconds for system boot up.	Blinking Blue	Blinking	
Searching available channels	Continuing search available channels If system can't establish link over 80s after initialization. (Note A & D)	Blinking Blue	Blinking	
Wireless linked Mode	No input from selected source (Note B)	Static Blue	Blinking (Quickly)	
	Video format not recognized (Note C)	Static Blue	Blinking (Slowly)	
	Video format is recognized	Static Blue	Static Blue	-

Note:

A. If the RF connection over 80sec and still not established, it might be that the link is lost or the transmitter is most likely out of range. You may need to adjust or shorten the distance between your HDTV set with the transmitter and the receiver. The maximum video transmission range for 1080p content is up to 20' (7m) in line of sight (LOS). < The minimum range is 6.5'(2m) >

B. Please make sure the computer has been powered on and that the signal output has been switched to HDMI; also try to re-plug the HDMI cable to make sure the HDMI connector has been properly seated.

C. If there is no video displayed and OSD displays "Not Supported Format", this is an indication that the video frame rate from the computer is not supported, please refer chapter 5 to switch to a supported video timing.

D. If you have more than one pair of WHD100, each transmitter and receiver should be at least 6.5 feet away from one another. If both the transmitter and the receiver exist in the same room, the suggested the distance between the two is 6.5' (2m) minimum.

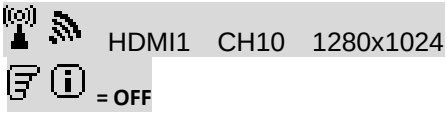
(6) **TRANSMITTER**/RECEIVER Status on OSD vs. buttons:

❶ Press the POWER button on the top of Receiver to enter "Active-Standby mode" from "Active mode".

- The OSD Shows: (Display 3secs and then enter Active-Standby mode.)

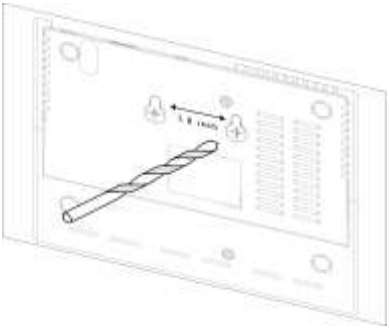
❷ Press the INFO. button on the top of Receiver, the Signal Quality, Source, Channel and resolution will be displayed for user reference. Press INFO. button again for exit.

OSD Displayed :



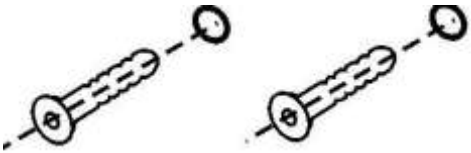
Step 4: Mounting the WHD100R to the Wall

(1) Refer the drawing of the bottom page that have relative position of the key holes and attach this paper on wall.

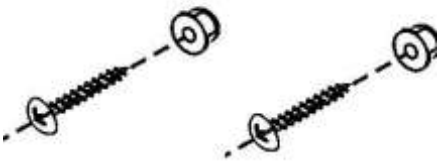


(2) Drill pilot holes.

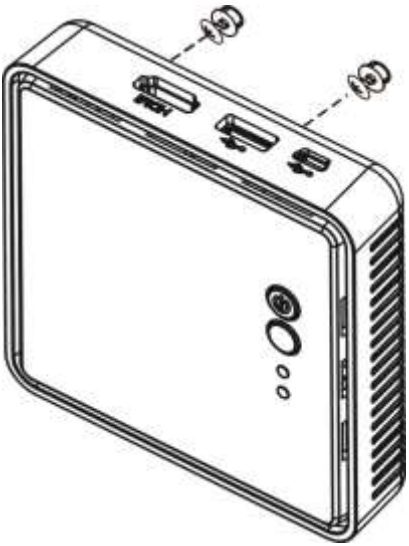
(3) Insert the supplied two Anchors into the wall.



(4) Insert two screws into the anchors. Leave 1⁄8" length for mounting the receiver.



(5) Place WHD100R key holes over the protruding screws and slide down into position.



4. Troubleshooting

Problem	Solution
The WHD100 front panel power indicator (red LED) doesn't light up.	• Check if the power plugs of transmitter/receiver are properly inserted into a functioning power outlet. • Make sure both POWER LED of transmitter/receiver are lit in the blue.
There is no video displayed on your TV screen.	• Verify that the proper cables have been selected and installed between the transmitter input and your High-end PC output. • On your TV side (connected to the WHD100R), select the HDMI as input source. • Verify the POWER LED and INFO. LED indicator of receiver. **Power LED Flashing in Blue** **OSD displayed:**  (4 levels looping) * Ensure the transmission range between the transmitter and the receiver is not over 15 feet (LOS-line of sight) transmission distance. Move the transmitter closer to the receiver. **POWER LED in Solid Blue + Slow and Flashing SOURCE LED** **OSD displayed :**  * Ensure your video resolution and frame rate is recognized/ supported and within the transmission range. * Connect the source device to your TV to check and modify the video format compatibility. * Check your video resolution with HDMI input from your device is 1080p, 1080i, 720p, 576p, 480p. Please refer Chapter 5 for the detail supported Resolution. **POWER LED in Solid Blue + STATUS LED Flash Quickly** **OSD displayed :**  * Ensure the proper cables are connected between the transmitter and your PC (or Notebook) devices. * Ensure your PC (or Source device) devices connected to the WHD100 transmitter are powered on. * Ensure the display setting for your PC (or laptop) had been switched to clone mode, Projector out mode or dual display mode to enable external display. (Refer Chapter 4.1 for the detail operation.)

Poor picture quality or intermittent video play.	• Check if your video resolution with HDMI input from your PC device is either 1080p, 1080i, 720p, 576p, or 480p. Please refer to the "Supported Resolution" chapter where the video frame rate from your PC device WHD100 can support is defined. • Ensure the transmission distance is less than 15 feet (LOS).
No audio.	• Check if your TV's volume is properly set and not in "MUTE". • Check if your PC's (or laptops) audio output has been switched to HDMI out. • Check if your PC's (or laptop's) audio volume has been turned up. • Ensure the bit rate of audio from the source device can be supported by WHD100. Please refer to the details in Chapter 6, Audio Bit Rate Support.
If no audio / video when resume from PC's sleep mode.	• Please try to re-plug the HDMI cable of TX for re-detect the external HDMI device • Please try to reboot WHD100 for re-synchronize the display setting. • Please try to reboot your PC (or laptop)

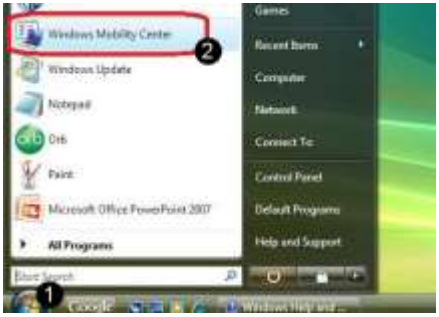
4.1 Windows OS Display setting of Laptop for enables external display

- **On Windows7 OS :**
  1. Press  key + **P** key
  2. There is a Pop icon displayed on the screen, likes below :

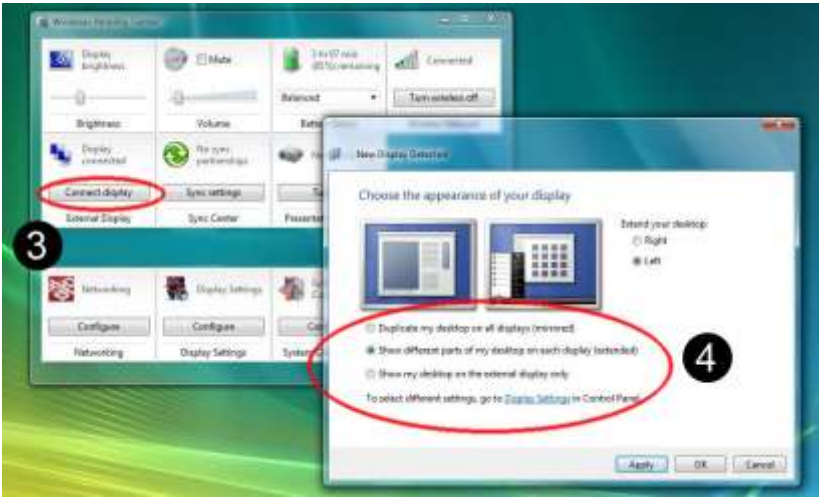
  3. Select Clone mode or Extend Display or Project out only to enable external display.

- **On Windows Vista OS:**

1. Click to open **Windows Mobility Center** ❷ from **Start** ❶



2. On the **External Display** title, click **Connect display**❸ to open **New display Detected**
3. Choose **Mirrored** or **Extended** mode to enable external display.



- **On Windows XP OS:**
  1. Click the right key of the mouse on the desktop
  2. Click **Graphic Option** / **Output to**
  3. Click **Clone** mode or **extended display**

Note: For more information, please type “change display settings” on Windows Help and Support.

4.2 MAC OS Display setting of Laptop for enables external display

- MAC OS will detect external display equipment automatically and switch to a better video resolution when user plugs in the display cable to Apple Mac series.

- If MAC OS do not detect external display automatically, please check below :
  1. Click to open **Displays** form **/ System Performance**
  2. Click **Detect Displays** for re-detect the external display

4.3 Windows OS Audio setting of Laptop for switch to HDMI output

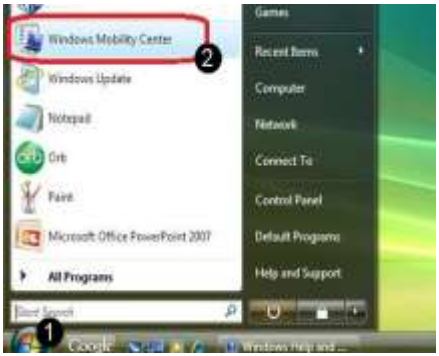
- **On Windows7 OS :**

  1. Click to open Audio setting from Control panel

  2. Select **HDMI Output❶** and Press **OK❷**

- **On Vista OS :**

  1. Click to open **Windows Mobility Center ❷** from **Start ❶**



2. On the **Volume❸** title, click the **Change Audio setting❹** icon to open **Sound** page
3. Select **HDMI output❺** and press **OK❻**

- **On Windows XP OS :**
  1. Click to open Audio setting from Control panel
  2. Select **HDMI Output** and Press **OK**

Note: For more information, please type “change audio settings” on “Windows Help and Support”.

5. Supported Resolution

If the SOURCE LED continues to blink in blue (slower than “no signal” mode); OSD display: “  “, and there is no video displayed or the video quality suffers, it indicates that the video frame rate from your A/V source device is not supported. Ensure that the consumer timing of your HD device is compliant with the standard listed below:

Video Format Timings	Resolution	Supported
Primary CEA Video Timing		
640x480p @ 59.94 / 60Hz	480p	YES
720x480p @ 59.94Hz		YES
720x480p @ 60Hz		YES
_720x576p @ 50Hz	576p	YES
1280x720p @ 50Hz	720p	YES
1280x720p @ 59.94 / 60Hz		YES
1920x1080i @ 50Hz	1080i	YES
1920x1080i @ 59.94 / 60Hz		YES
1920x1080p @ 50Hz	1080p / 60	YES
1920x1080p @ 59.94 / 60Hz		YES
Secondary CEA Video Timing		
1920x1080p @ 23.98 / 24Hz	1080p / 24	YES
1920x1080p @ 25Hz		YES
1920x1080p @ 29.97 / 30Hz		YES
VESA Timing (DVI only)		
640x480 @ 59.94 / 72.809Hz	VGA	YES
800x600 @ 60.317 / 72.188Hz	SVGA	YES
1024x768 @ 60 / 70.069Hz	XGA	YES
1280x768 @ 60 Hz	WXGA	YES
1280x1024 @ 60 Hz	SXGA	YES
1600x1200 @ 60Hz	UXGA	YES

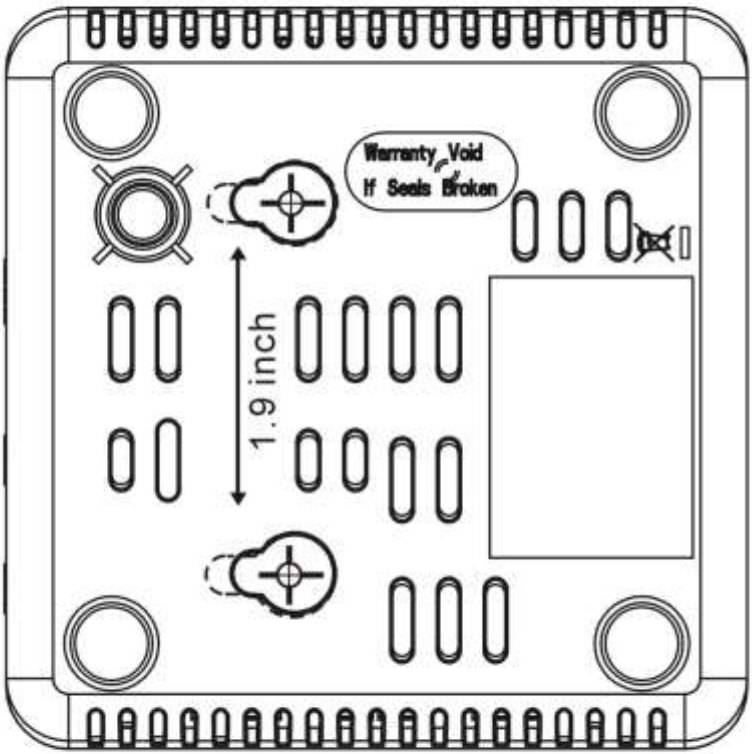
6. Audio Bit Rate Support

- Digital Audio from HDMI inputs: Up to 6Mbit/s bit-rate support.
- Support AC3 and DTS.
  - ☐ 2-channel PCM audio : 16~24 bits audio sample with 32~48KHz sampling rate

2channel PCM	32KHz	44.1KHz	48KHz	96KHz
16 bits	YES	YES	YES	YES
24 bits	YES	YES	YES	YES

7. Product Specification

General Specifications			
Supported Video Resolutions	HDMI Input	1080p, 1080i, 720p, 576p, 480p	
Supported Audio Formats	Digital Audio	up to 6 Mbps AC3 and DTS	
Transmission Distance		The maximum transmission range is 20’ (7m) The optimum performance range is 15’ (5m) The minimum range is 6.5’ (2m) line of sight (LOS) scenarios	
System Latency		Ultra-low latency (<1ms)	
Antenna		High Performance Internal Antennas	
Operating Frequencies		4.9~ 5.9GHz (Include non-DFS and DFS Frequency Bands)	
Power Supply		100~ 240V AC in, 5V DC out Power Adaptor	
Operating Temperature		0~40°C	
Interfaces		WHD100T	WHD100R
A/V Interfaces	HDMI Input	One (Type A, Male)	-
	HDMI Output	-	One (Type A, Female)
Power Interface	Power Input	USB cable or 5V DC Jack	5V DC Jack
Switches	Power Switch	-	YES (One Tack Switch)
	INFO. Switch	YES (One Tack Switch)	YES (One Tack Switch)
LEDs	Power LED	-	1 x LED (Two Tone: Blue / Red)
	Status LED	1 x Blue LED	1 x Blue LED
	Signal Quality Status	-	OSD Displayed
Dimensions		30(W) x 82.2(L) x 17.5(H) mm	194.8(W) x 146.8(L) x 31(H) mm


Warranty Void
If Seals Broken
1.9 inch

IB04360099 Rev.0