

User Manual

English

Uldra-U3M
"UNICORN"



USB 3.1

Ultra-low latency
Video capture box

with Audio mixer

Important Safety instructions

1. Read these instructions.
2. Follow these instructions.
3. Do not use this device in a wet environment or near water.
4. Do not use this device near heat source.
5. Use in a well-ventilated environment. Do not block any ventilation openings.
6. Use this device within ambient temperatures.
7. Only use included power adapter and power cable.
8. Only use included accessories.
9. Do not modify or disassemble this device in any way.
10. Unplug this device before cleaning. Clean only with dry cloth.
11. Unplug this device during lightning or when unused for prolonged period.

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Picture shown may vary from actual product.

Specifications are subject to change without notice. Please refer to our website for the latest details.



Headset Commentary



Console Party Chat

USB 3.1

Gen 1 - 5Gbps

4K60

Pass-Through

1080P60

Uncompressed Video



Game Capture





Audio Mixer



GPU
Acceleration



 Live Streaming function need to be used with third-party software such as OBS.

 Product with S/N format: PRU3M2020xxxxx does not support HDR.
Product with S/N format: PRU3MHDRxxxxxxxxx supports HDR.



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Package contents

- ▶ Uldra-U3M "Unicorn"
- ▶ USB 3.1 Micro-B to Type-A cable
- ▶ 3.5mm 4-pin audio cable
- ▶ PC microphone conversion cable
- ▶ Power adapter, Plug & Power cable
- ▶ Software disc
- ▶ Quick start guide

Hardware Specifications

- ▶ Interface: USB 3.1 (Gen 1) Type-A connection
- ▶ Standard plug & play UVC driver
- ▶ Input: HDMI (video & audio), Audio line-in, Mic-in
- ▶ Output: HDMI (video & audio), Audio line-in bypass, Mic-in bypass
- ▶ HDMI pass-through resolution: same as input, up to 2160p60 (supports HDR10)
- ▶ Supported input resolution:
4K 2160p24/30/50/60, 1080p24/50/60, 1080i50/60,
720p50/60, 576p50, 480p60 (4K signal supports HDR10)
- ▶ Audio mixer with volume control
- ▶ Supports YUY2 / MJPEG video format
- ▶ Capture / live streaming resolution: up to 1920 x 1080@60fps (supports HDR10)

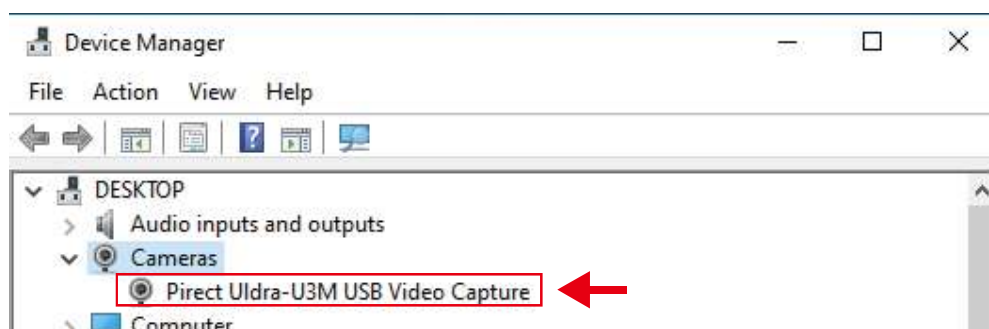
! Notice

- ▶ 4K24/30/50/60 input signal will be converted to 1080p 24/30/50/60 signal
- ▶ 4K HDR signal will be converted to 1080p HDR signal
- ▶ 1080i50/60 input signal will be converted to 1080p25/30 signal
- ▶ 480p60 supports 720x480 resolution only
- ▶ USB 2.0 is not supported

OS driver

This device use standard plug & play UVC driver which supports Windows 8.1/10 & macOS 10.14 or later. No need driver installation.

Device will be enabled in Windows device manager after Uldra-U3M is connected.



- ! Please do not delete Uldra-U3M device manually from Windows device manager, it will cause abnormal during Capture X3 software running.

Pirect Capture X3 software

- ▶ Supports Windows 10 (64 bit)
- ▶ GPU acceleration (Intel / nVidia / AMD GPU supported)
- ▶ Supports YUY2 video format
- ▶ Resolution selection: 1920x1080 (16:9), 1280x720 (16:9), 854x480 (16:9), 640x480 (4:3), 640x360 (16:9), 480x360 (4:3)
- ▶ Video bitrate selection: 1, 2, 4, 8, 12, 16, 24Mbps
- ▶ Video frame rate selection: 30, 60 fps (when input is 30/60fps)
25, 50 fps (when input is 25/50fps)
24 fps (when input is 24fps)
- ▶ Audio bitrate selection: 96, 128, 192, 256kbps
- ▶ Audio sampling rate: 48Khz
- ▶ Recording duration selection: unlimited, by duration
- ▶ Recording format: MPEG 4 (h.264 + AAC)
- ▶ Software auto update function

For installation, please find the software in software disc or download from www.pirect.com/downloads/.



Scan for user guide / software download

IMPORTANT

Uldra-U3M does not support viewing/recording/streaming of HDCP protected signals.
HDCP protected signals will turn to **Pure Green** screen on software preview.

Suggested system requirement (For 1080p60 recording / streaming)

Desktop:

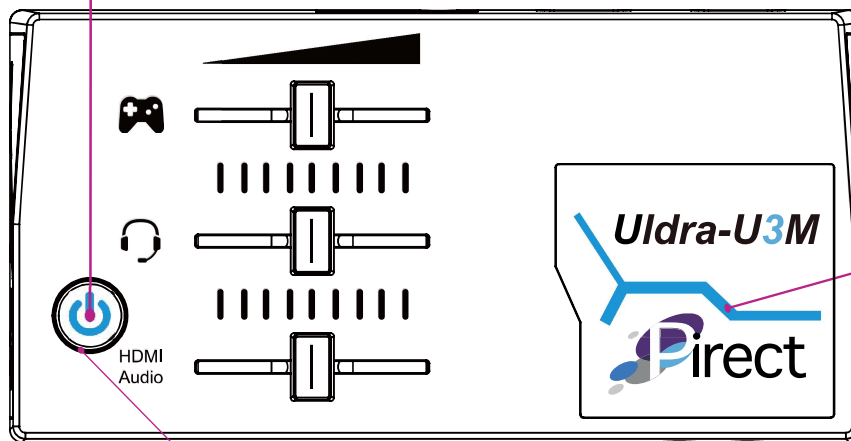
- ▶ Intel® Core™ i5-7600 3.50 GHz or above
- ▶ 8 GB memory recommended
- ▶ NVIDIA® GT 1030 or above

Laptop:

- ▶ Intel® Core™ i5-8365U 1.60 GHz or above
- ▶ 8 GB memory recommended
- ▶ NVIDIA® MX250 or above

Power button / LED indicator

LED indicator
(Power button)



LED indicator
(Logo)

Power button

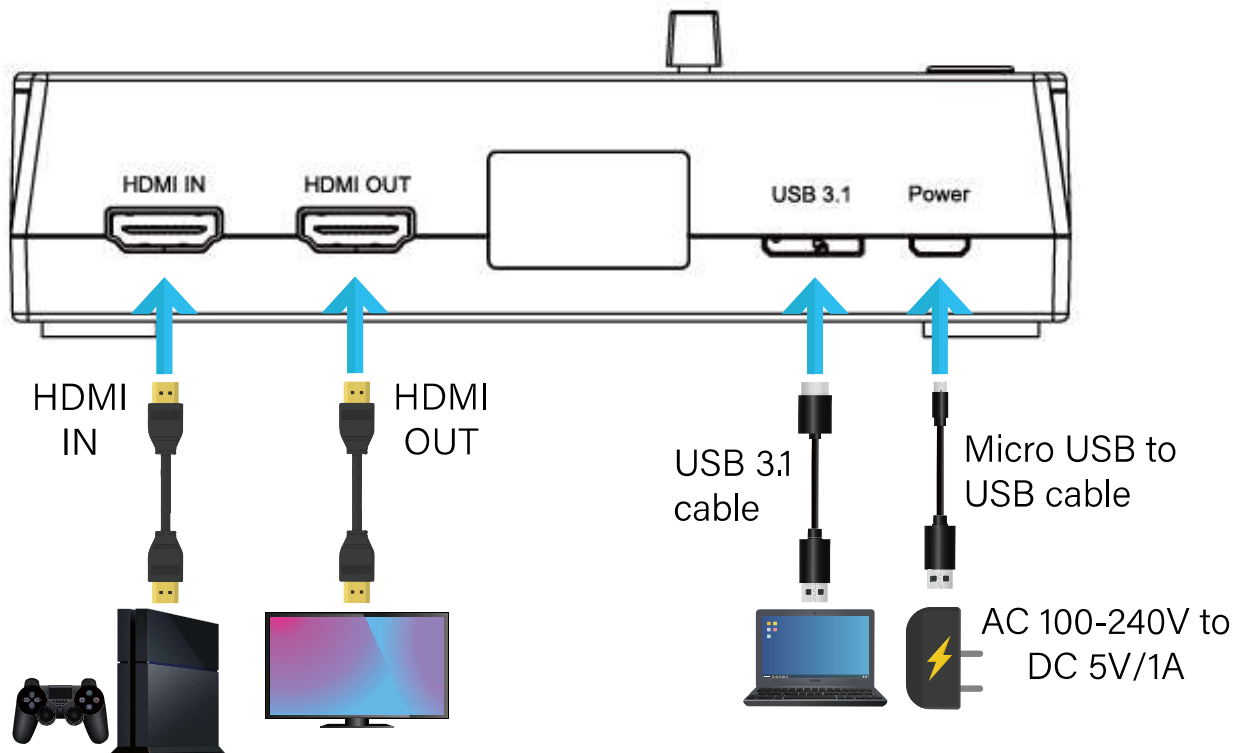
- ◆ Short press to power on
- ◆ 3 seconds long press to power down

LED indicator	Device status		
	Power down (Standby mode)	Device Initiating	Normal Running
Power button	Breathing	On	On
Logo	Off	Breathing	On

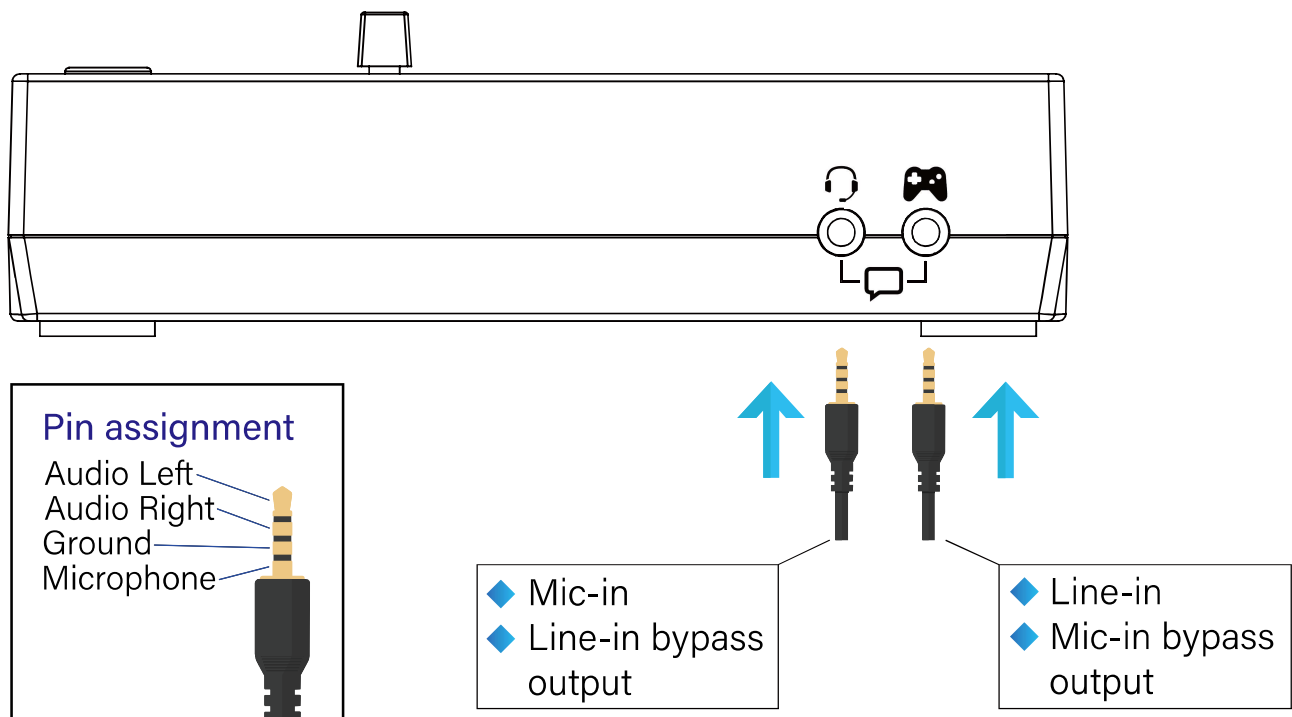
! Notice

- ▶ Device initiating time is around 15 seconds (From power on to Pirect Capture X3 software start video preview).
- ▶ USB device of Uldra-U3M in Windows will reset (disconnect/reconnect) during video initiating, HDMI input plug in or input resolution change.
- ▶ For HDMI input plug-in or input resolution change, it takes around 5 - 10 seconds to resume video preview.

Ports and connection



! 5V/1A power must be connected in order to provide enough power to the device.

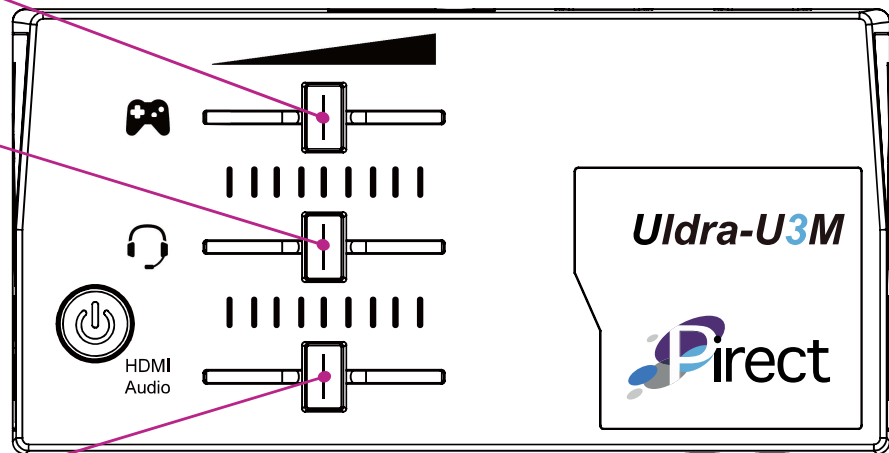


Audio mixer control

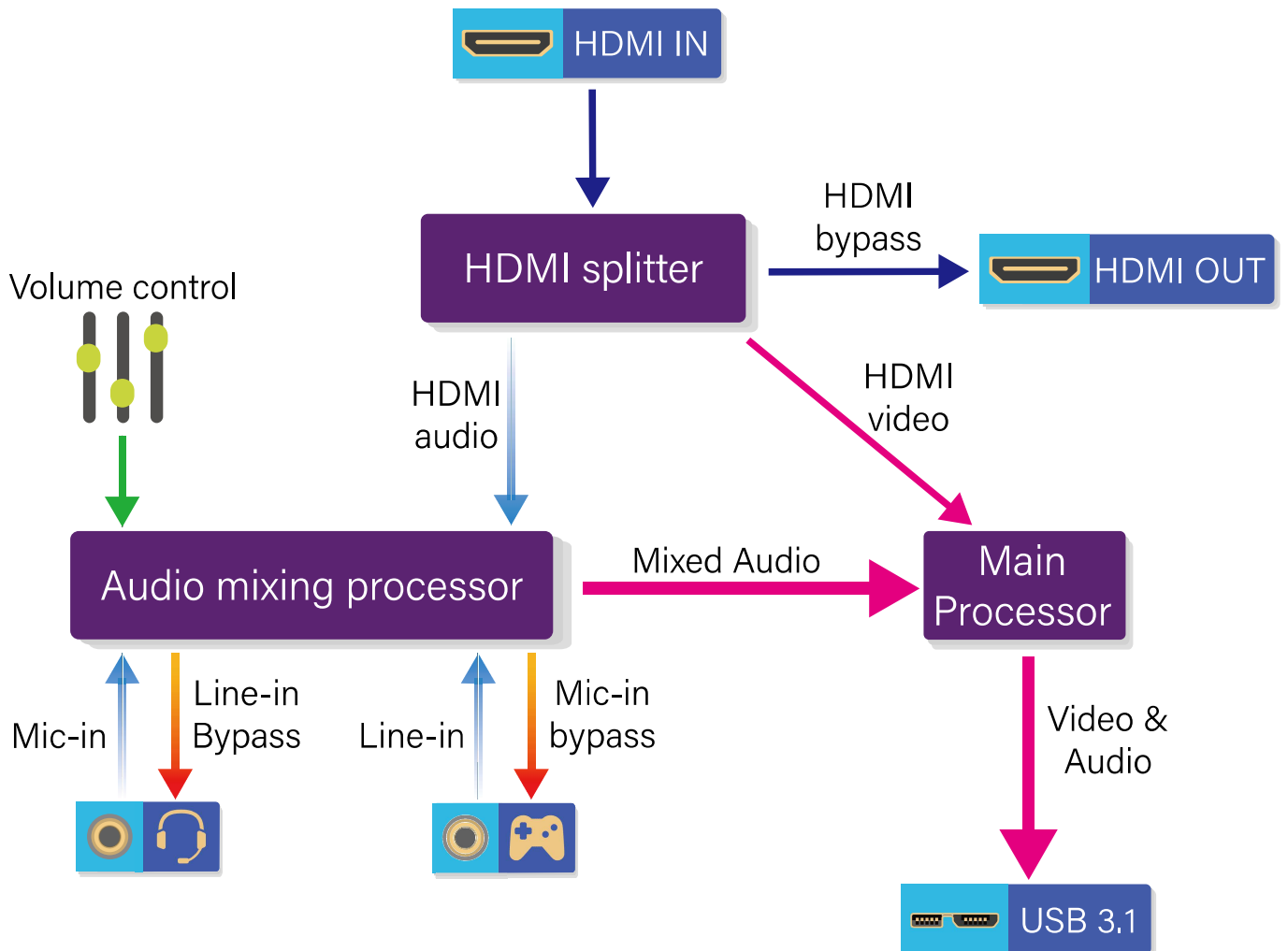
Volume control
(Line-in)

Volume control
(Microphone)

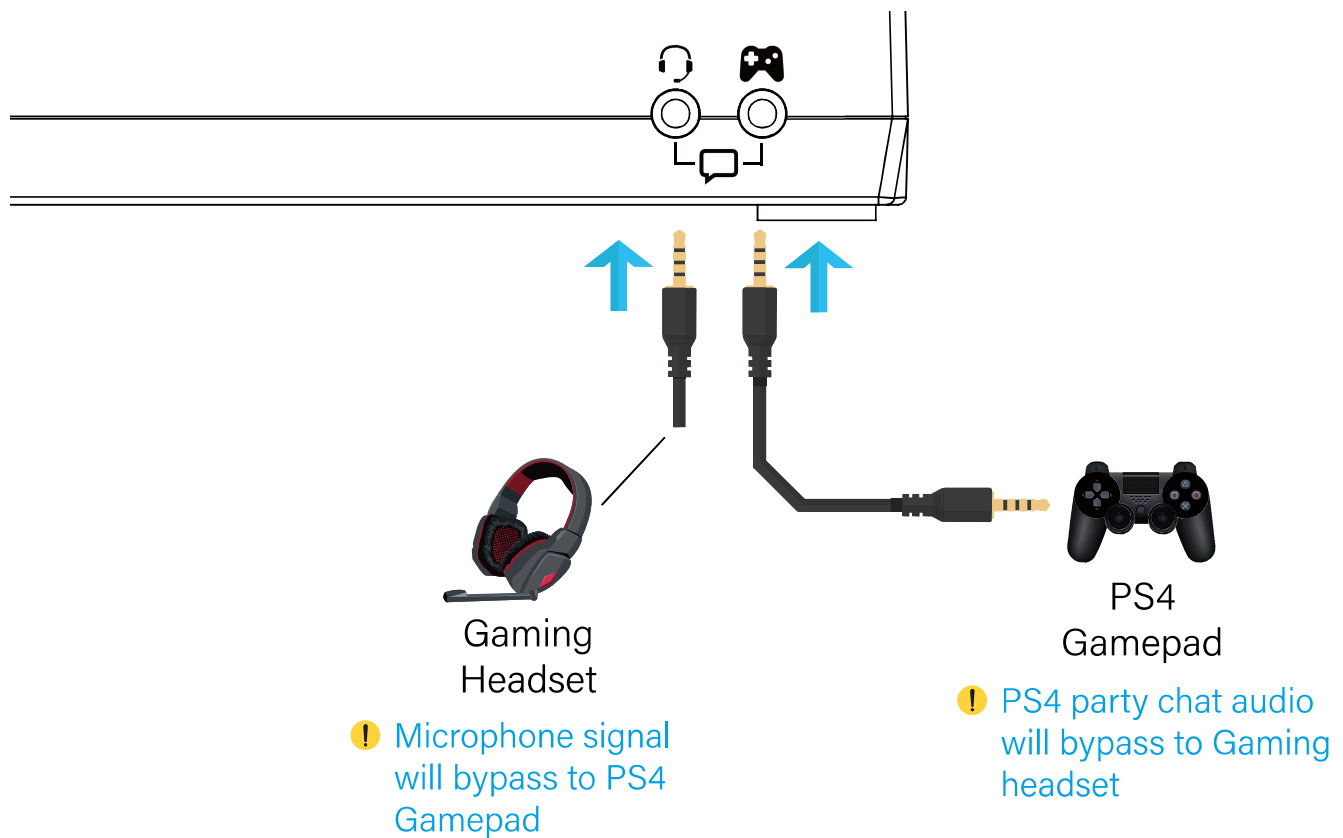
Volume control
(HDMI audio)



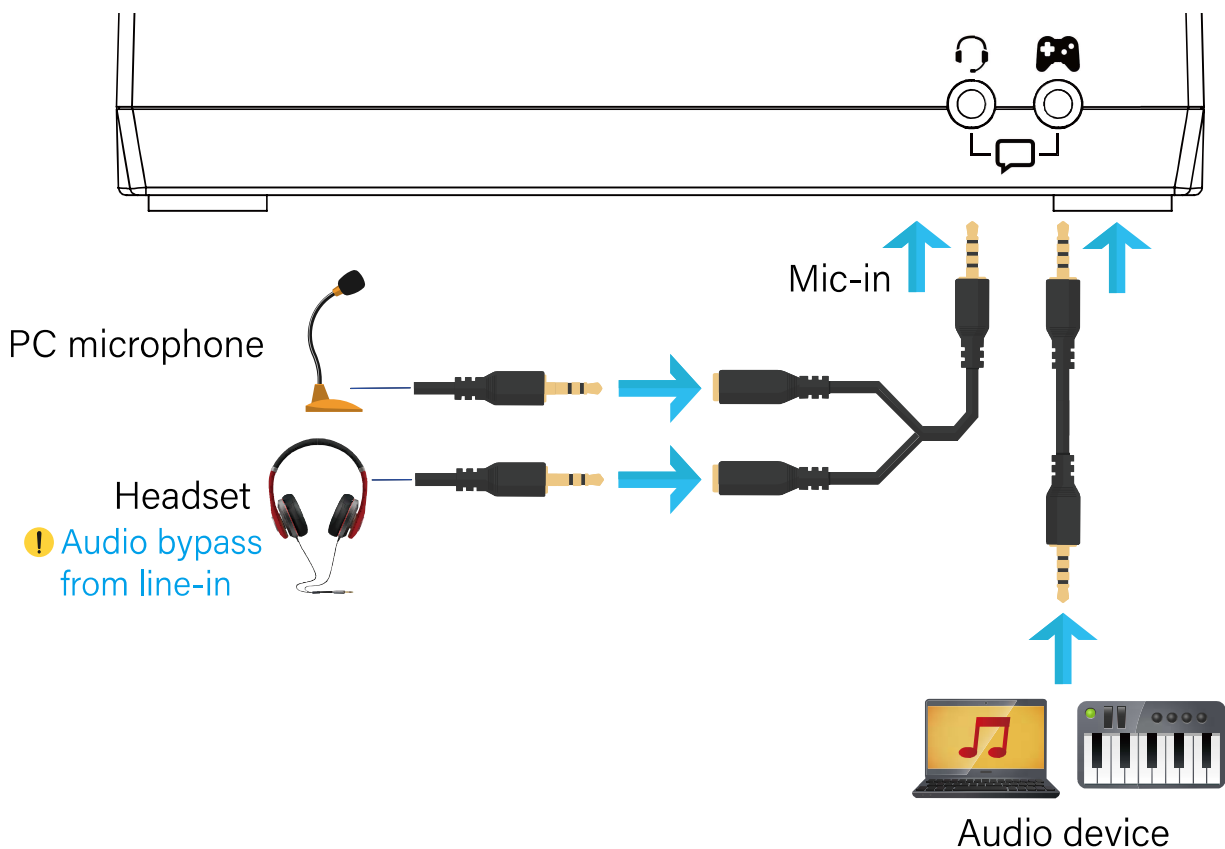
How audio mixing works?



Headset commentary / Console party chat connection



PC microphone / Audio line-in connection

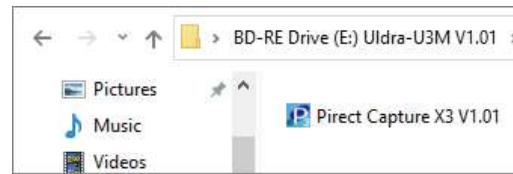


Software installation

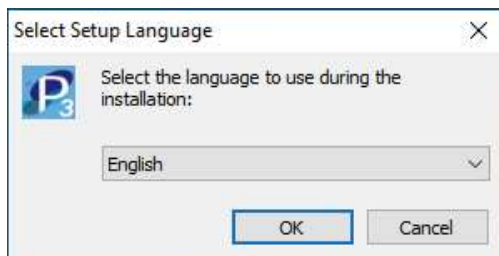
- ! Please make sure the computer has internet connection before start software installation. Please connect Uldra-U3M to the computer and power on before software installation. Microsoft Visual C++ 2015-2019 Redistributable (x86) will install to Windows.



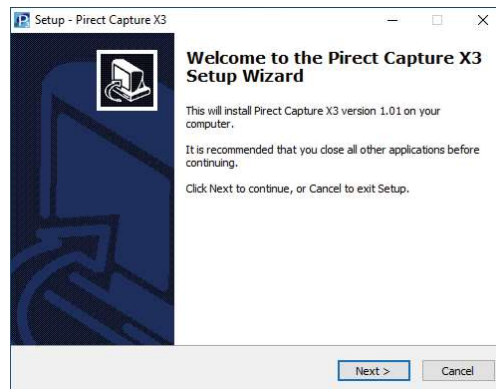
1) Please insert software CD.



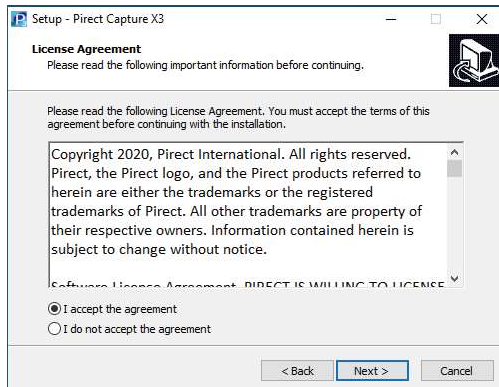
2) Please open software folder. Please double-click "Pirect Capture X3 V1.01" to start installation.



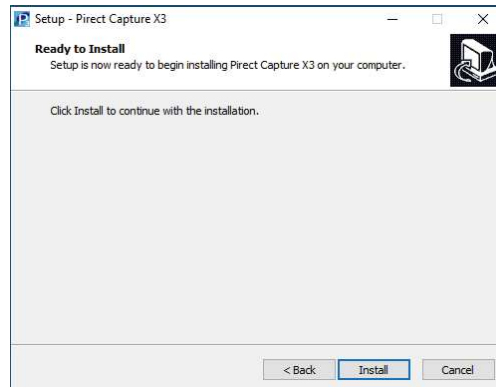
3) Please select language.



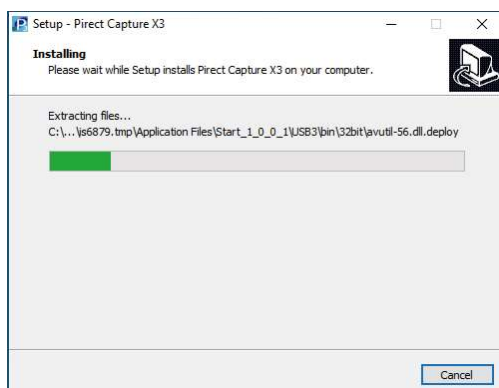
4) Please click "Next"



5) Please select "I accept the agreement" and click "Next"



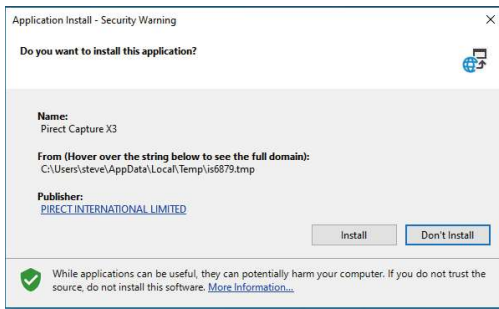
6) Please select "Install"



7) Installing Microsoft Visual C++ 2015-2019 Redistributable (x86).



8) Checking server for latest software version.

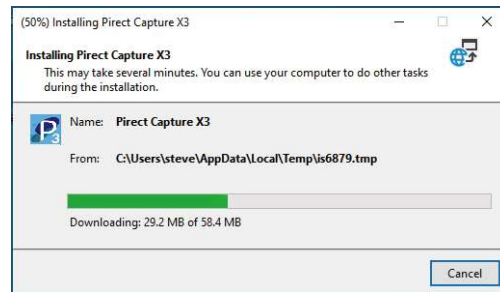


9) Please click "Install".

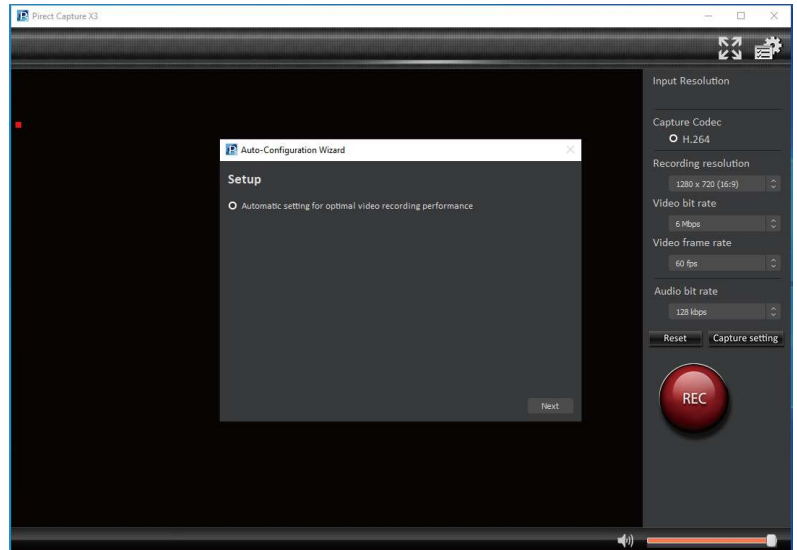


**Pirect
Capture X3**

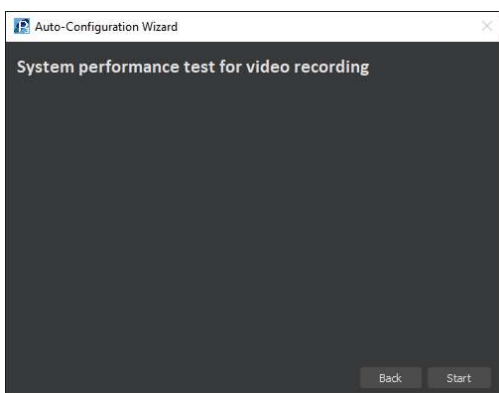
11) Installation completed, icon will be created in Desktop.



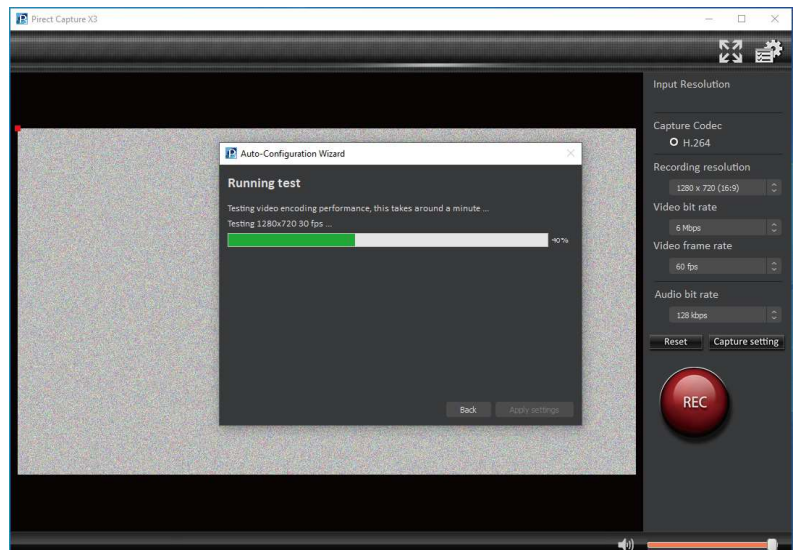
10) Installing Pirect Capture X3 software.



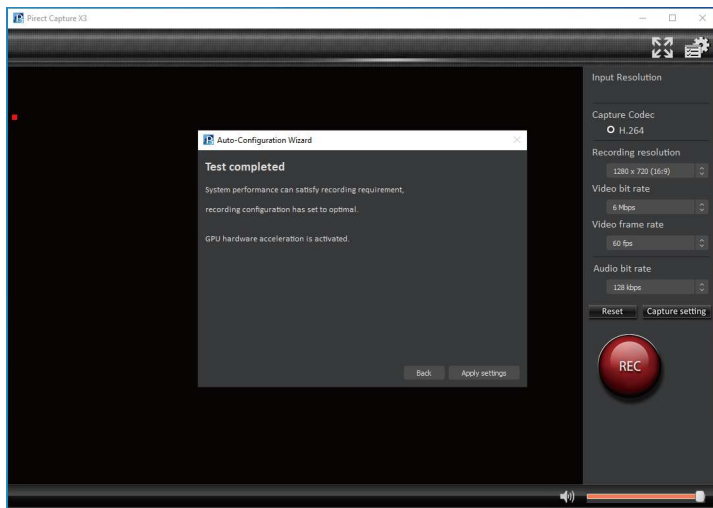
12) Software will open automatically to run Auto-Configuration Wizard.



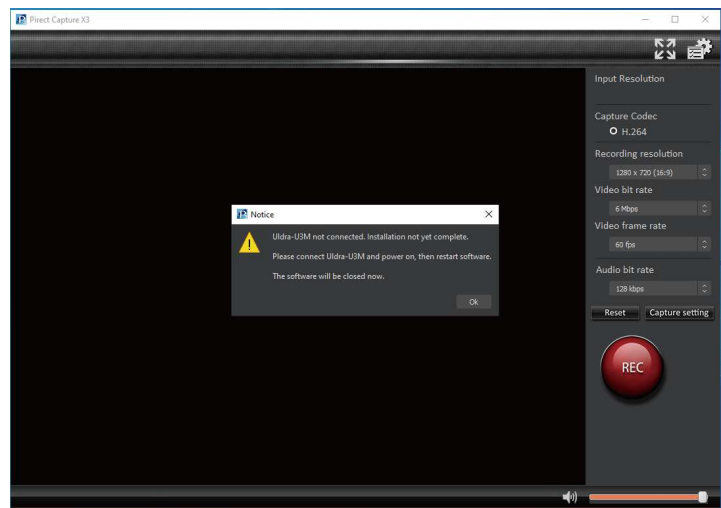
13) Please click "Start" to start auto configuration.



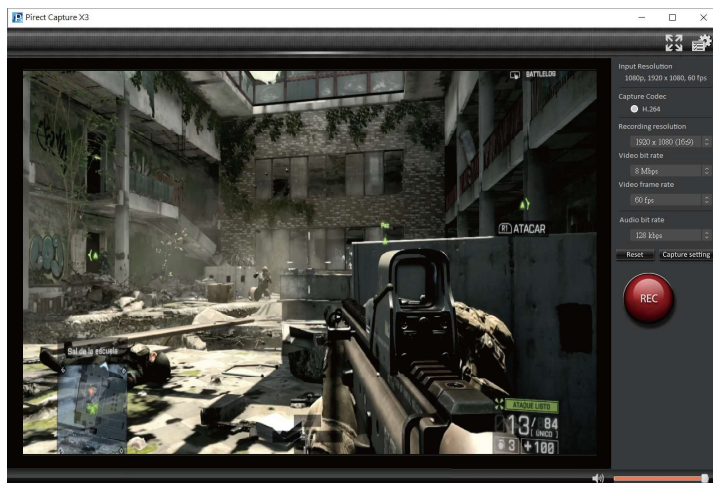
14) auto configuration in progress.



15) Auto configuration completed. Please click "Apply setting"

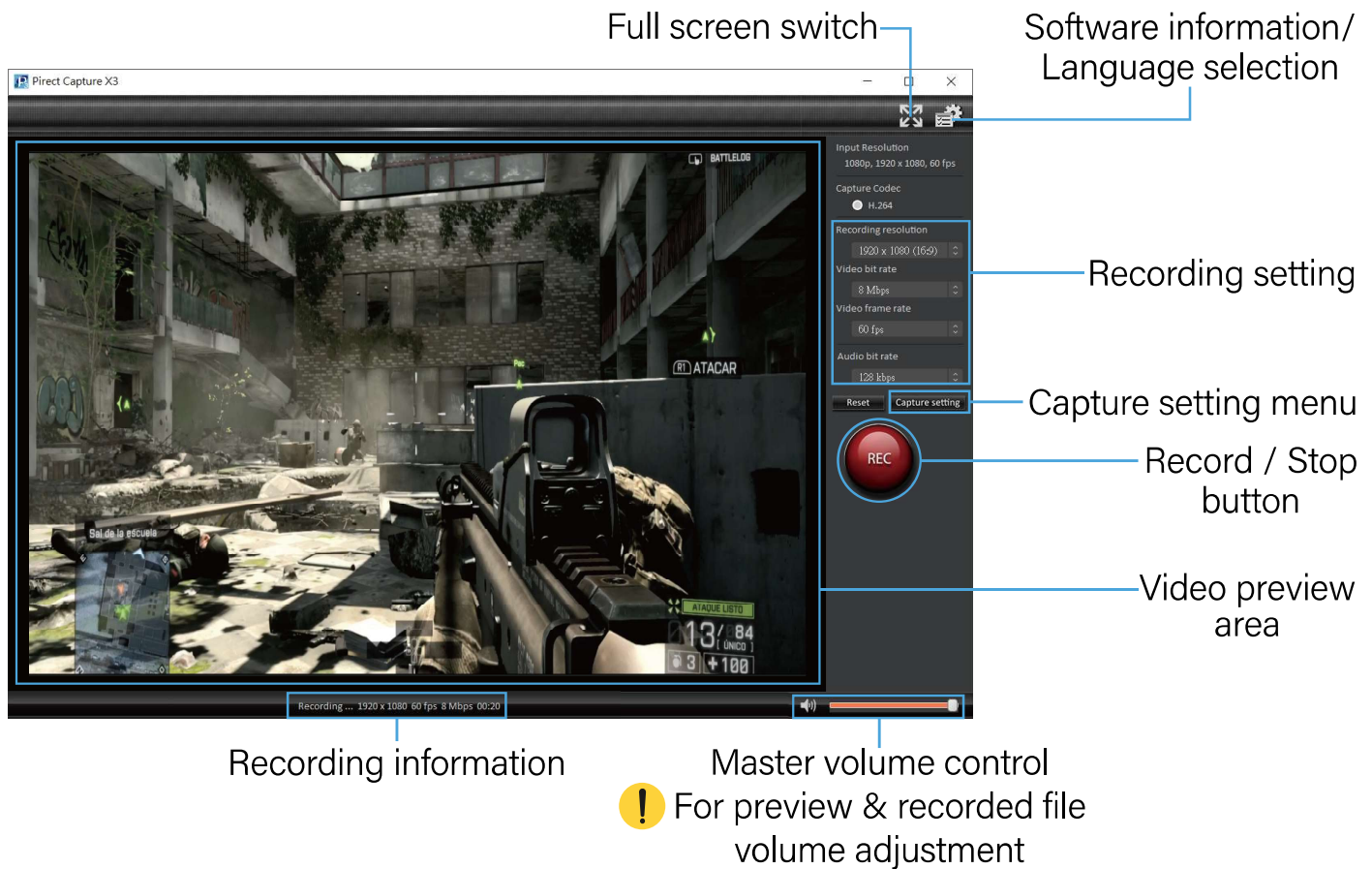


16) If Uldra-U3M is not connected, the software need to close first. Please connect Uldra-U3M and power on, then open the software to complete the setting.

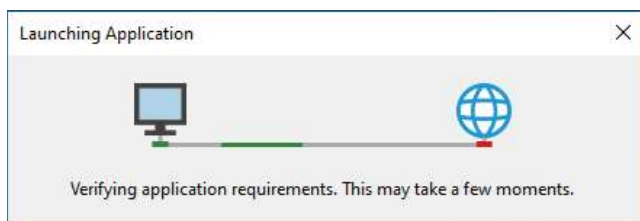


17) If Uldra-U3M is connected, the software will complete the setting and it is ready to use.

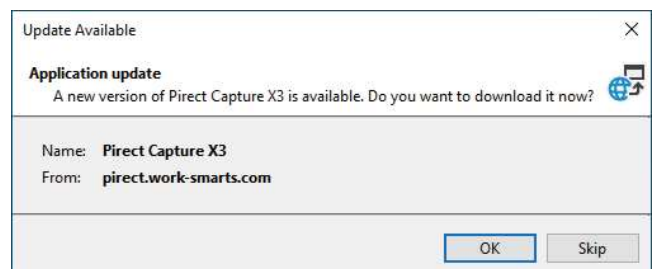
Software guide



Software auto update



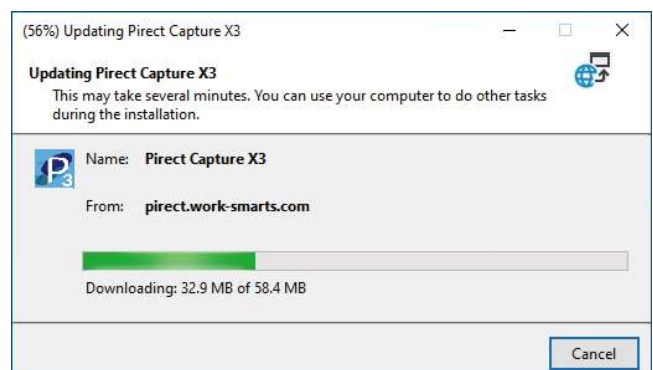
1) Everytime when Pirect Capture X3 open, it will check the server for any new version update.



2) If there is a new version available, please click "OK" if you want to install new version.



3) Please click "Install" to start installation.



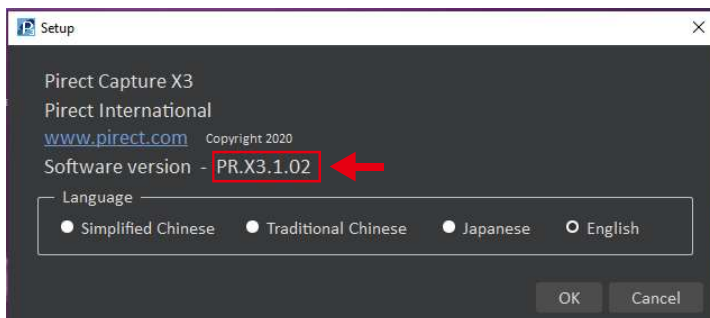
4) Installing new version.



5) If Windows Defender SmartScreen pop up, please click "More info".

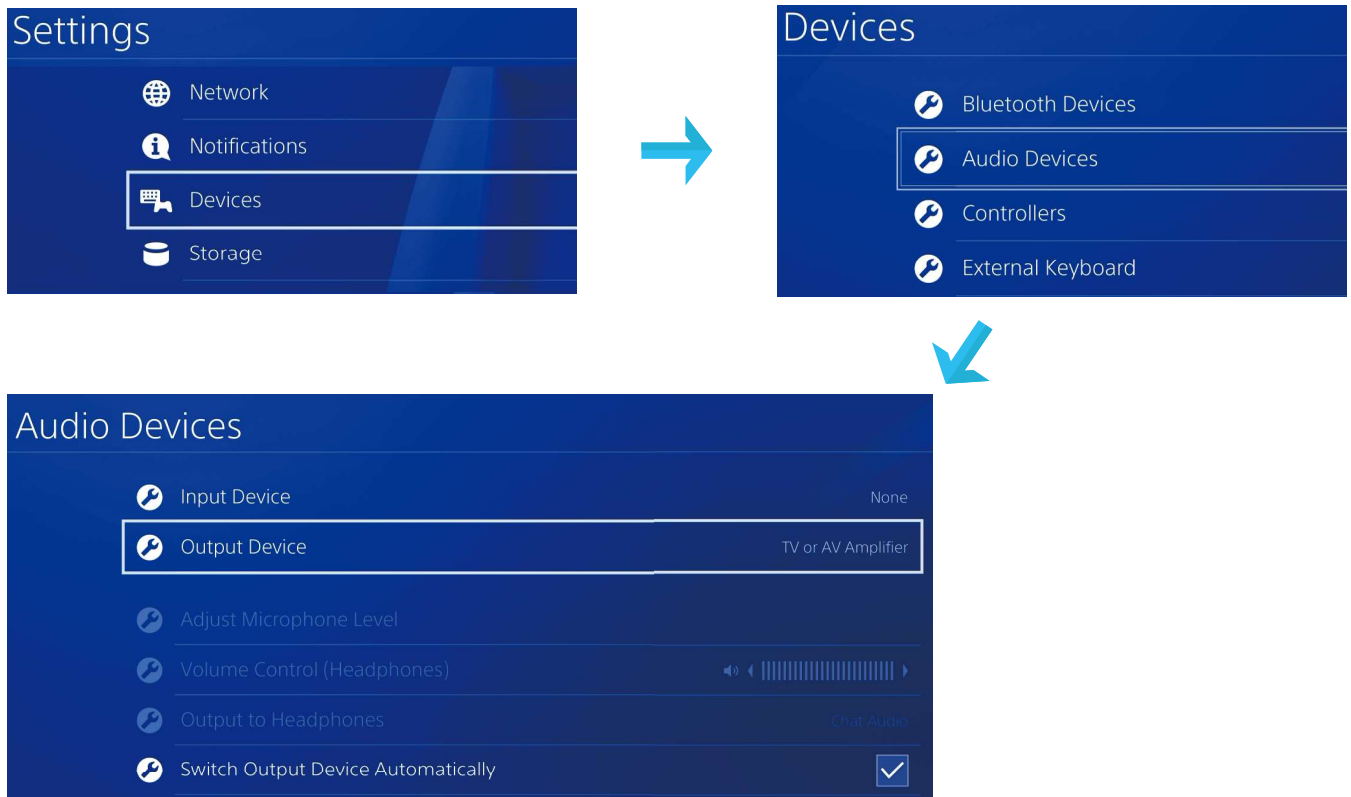


6) Please click "Run anyway"; then the installation will complete.

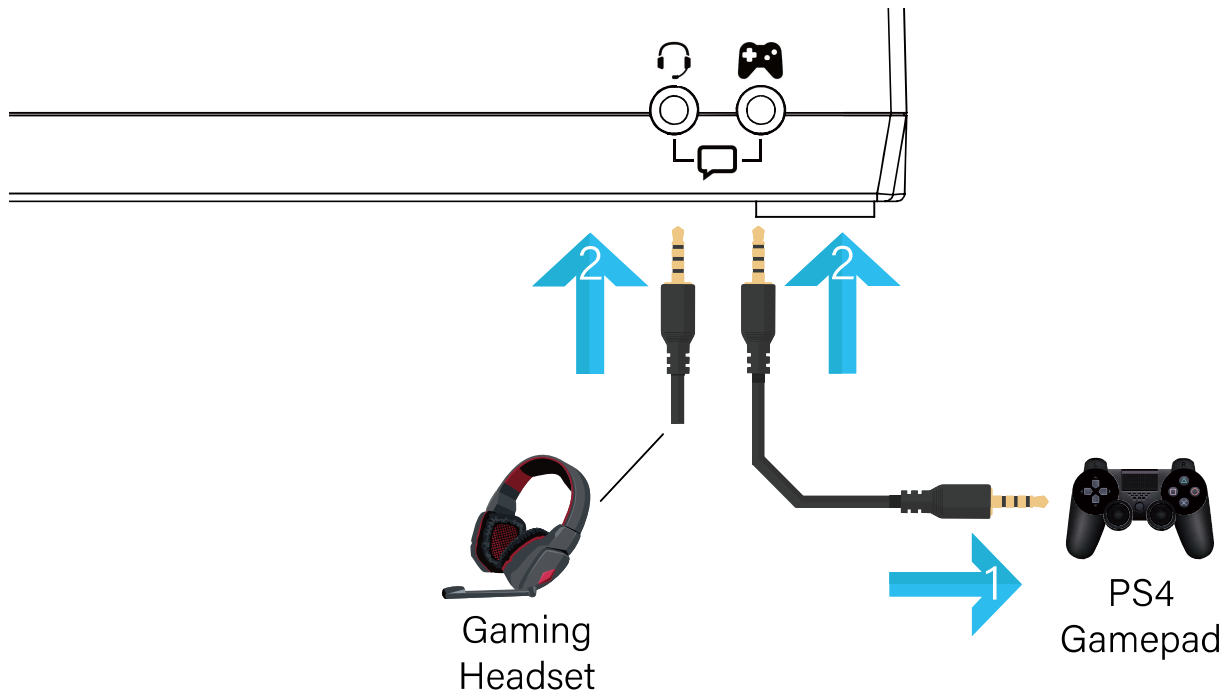


7) After software opened, the software version should change to latest one.

PS4 /PS4 Pro Headset commentary / Console party chat connection and setting



1) Go to Settings → Devices → Audio Devices



2) Cable connection:

Step 1: Connect audio cable to PS4 DualShock 4 gamepad









Step 2: Connect audio cable and Gaming headphone to Uldra-U3M

Audio Devices

 Input Device	Headset Connected to Controller
 Output Device	Headset Connected to Controller

3) Input Device & Output Device will change to "Headset Connected to Controller"

Audio Devices

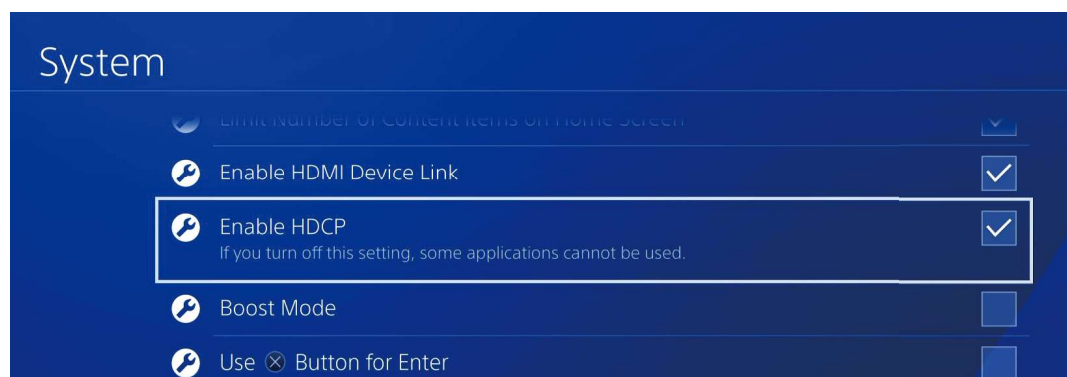
 Input Device	Headset Connected to Controller
 Output Device	Headset Connected to Controller
 Adjust Microphone Level	
 Volume Control (Headphones)	 
 Output to Headphones	<input checked="" type="checkbox"/> All Audio <input checked="" type="checkbox"/> Chat Audio
 Switch Output Device Automatically	

4) Please select Audio output type:

All Audio - All audio will output to Uldra-U3M via DualShock 4 gamepad line-out, no audio will output via HDMI.

Chat Audio - only party chat audio will output to Uldra-U3M via DualShock 4

How to turn off HDCP off protection on PS4/PS4 Pro?



Go to Settings → System → Unselect "Enable HDCP"

FAQ

About Compatibility

1. Can Uldra-U3M use with live streaming software?

Answer: Yes, Uldra-U3M supports most common third party live streaming software such as OBS, Streamlabs OBS, XSplit, Vmix, Wirecast, etc.

2. Can Uldra-U3M support Windows 7?

Answer: No, Uldra-U3M UVC plug & Play driver only support Windows 8.1 & 10. Pirect Capture X3 software only support Windows 10 64-bit.

3. Can you choose to use MJPEG or YUY2 on third party software?

Answer: Yes, you can choose MJPEG or YUY2 on third party software. For Pirect Capture X3 software, only YUY2 is used.

About latency

1. Any latency on Pirect Capture X3 preview screen?

Answer: Latency is near zero. Average Latency is around 0.05 sec.

2. Any latency on HDMI Pass-through output?

Answer: No latency on HDMI Pass-through output.

3. Any latency on mic-in and line-in audio?

Answer: Latency is near zero.

About operation

1. Why Uldra-U3M Windows USB device will disconnect and then connect during device initiating, HDMI input plug in and HDMI resolution change? Is it normal?

Answer: It is because the device will reset the USB device for new setting. It is normal.

2. Why no sound after the software opened?

Answer: Please check the position of volume control buttons on the device to see they are at zero volume position? Please increase the volume if needed.

3. Why TV (which is connected to HDMI pass-through) does not have screen output?

Answer: Please check the AC to DC power is connected to Uldra-U3M via micro USB port.

4. Why the software preview screen output is pure green?

Answer: Uldra-U3M does not support viewing/recording/streaming of HDCP protected signals. HDCP protected signals will turn to pure green screen on software preview.

5. Why when recording at high video bit rate or high frame rate, the recorded file playback is not smooth?

Answer: h.264 recording involves high video compression and consume a lot of system resource (CPU, GPU and memory usage), so please check suggested system requirement if the user need to perform high bit rate/frame rate recording, or the user can choose lower resolution/bit rate/frame rate.



Recording, Streaming, Simple.

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