

VC12-4K

4K HDMI PCIE
VIDEO CAPTURE CARD

AVMATRIX®



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1. Brief Introduction

1.1 Overview

VC12-4K is a 4K HDMI PCIE video capture card, it supports 4K HDMI inputs and capture, and compatible with console or PC games and digital cameras. HD video capture up to 4K60 with bit rates up to 800Mbps, transfer bandwidth up to 2.5GB/S, VC12-4K can meet the needs of high-bandwidth, high-performance image acquisition and processing applications, ideal for use in live streaming platforms.

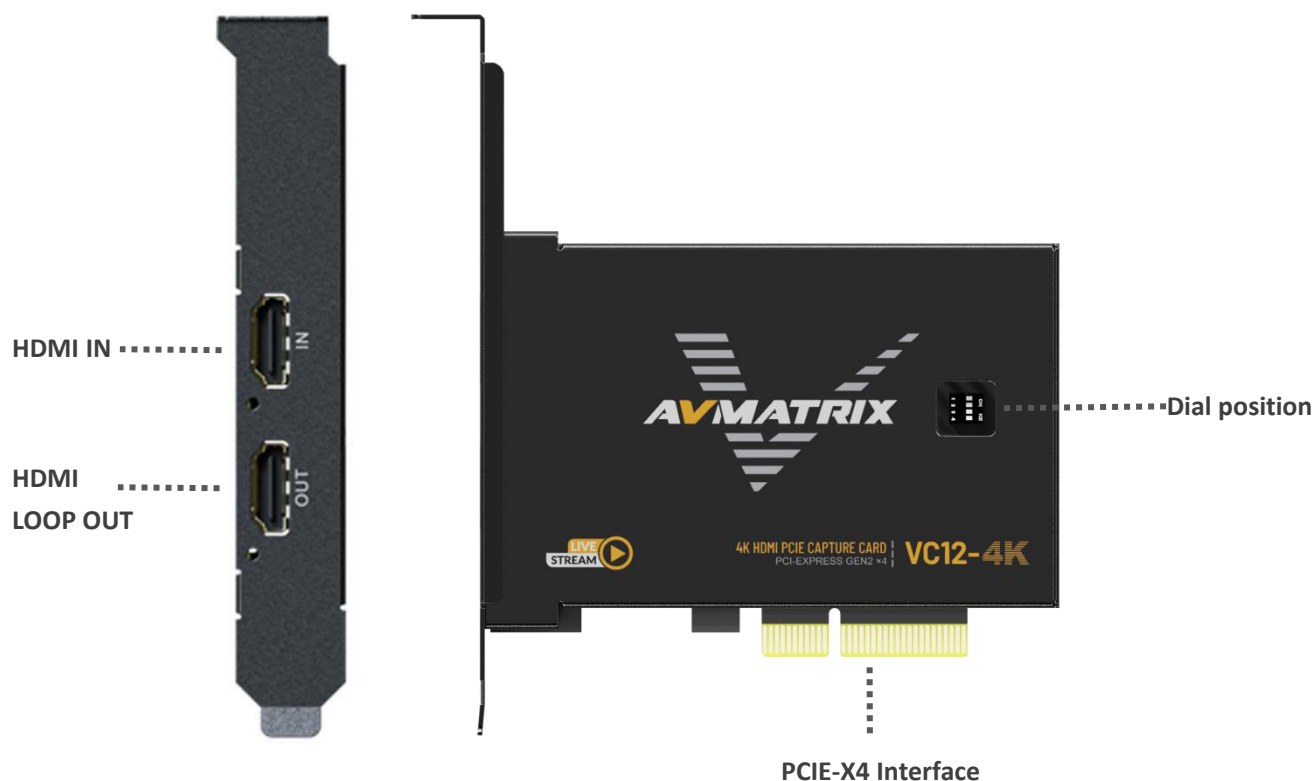


1.2 Main Features

- 4K HDMI PCIE capture card
- 1-channel HDMI 2.0 input loop-out
- Input and capture support up to 4K60 with bit rates up to 800Mbps
- Support YUV2 uncompressed video
- PCIE GEN2 x4, 2.5GB/S transfer bandwidth
- Compatible with Windows 7 and above, Linux 18.04 and above
- Compatible with OBS/PotPlayer/XSplit and other live recording software
- Stable operation, 24 hours non-stop work
- Support one machine with multiple cards for multi-channel live streaming and recording



2.Interfaces



3.Specification

CONNECTIONS	Host Interface	PCIE2.0×4, 2.5GB/s transfer bandwidth
	Video Interfaces	1×HDMI2.0 input, 1×HDMI2.0 loopout
	HDMI Input Format	Up to 4K60hz, 1440p144hz, 1080p240hz
	Capture Format	4096×2160, 3840×2160, 3440×1440, 2560×2048, 2560×1920, 2560×1440, 2560×1080, 1920×1200, 1920×1080, 1600×1200, 1440×900, 1280×1024, 1280×800, 1280×720, 1024×768, 800×600, 720×576, 720×480 60fps 4096×2160, 3840×2160, 2560×1440, 1920×1080, 1280×720 50fps

		4096×2160, 3840×2160, 2560×1440, 1920×1080, 1280×720, 800×600, 720×576, 720×480 30fps 4096×2160, 3840×2160, 2560×1440, 1920×1080, 1280×720 25fps 2560×1440, 1920×1080, 1280×720 144fps 2560×1440, 1920×1080, 1280×720 120fps 1920×1080, 1280×720 240fps 1920×1080, 1280×720 59.49fps
	Capture Color Space	YUY2, uncompressed
	Audio Capture	1×HDMI embedded audio capture
	Audio Codec	16 bit PCM, 48kHz, 1536kbps
	Other Features	Support 1080i hardware de-interlacing, 3D noise reduction algorithm
SUPPORTS	Device Support	Support XBOX, PS4, SWITCH, Video player, TV box and media box, etc.
	OS Support	Windows 7 and above, Linux 18.04 and above
	Software Compatible	OBS, XSplit, VLC, VirtualDub, VMix, VidBlaster, Wirecast, Microsoft Media Encoder, Adobe Flash Media Encoder, Any other DirectShow/V4L2/AVCaptureSession encoding/streaming software
	APIs Support	Windows(DirectShow, DirectSound/WASAPI) Linux(V4L2, ALSA)
OTHERS	Power consumption	≤2.0W
	Temperature	Operating temperature: 0℃~60℃ Storage Temperature: -20℃~70℃
	Relative Humidity	5%~90% non-condensing
	Dimension	120.1×95.7×21.6mm
	Weight	Net weight: 100g, Gross Weight: 145g



4.Installation



Note: Only hold the edge of the card or the metal bracket when taking the card, do not touch the electronic components to prevent the chip from being harmed by static electricity.

The PCIE Card must not be plugged or unplugged while the system is powered. When the PCIE card are added to or removed from the system, should be ensured that the computer is turned off.

4.1 Hardware Installation

Step1. Power off the computer device before the pcie capture card installation, unplug the power cable.

Step2. Remove the cover from the computer case. Insert the PCIE capture card into the PCIe-X4 Gen2 slot in your computer chassis and lock.

Step3. Connect the HDMI interface device signal source to the PCIE card interface and make sure the cable is connected properly.

Step4. Connect the power cable to the power supply, turn on the computer, beginning to install the PCIE capture card drivers.

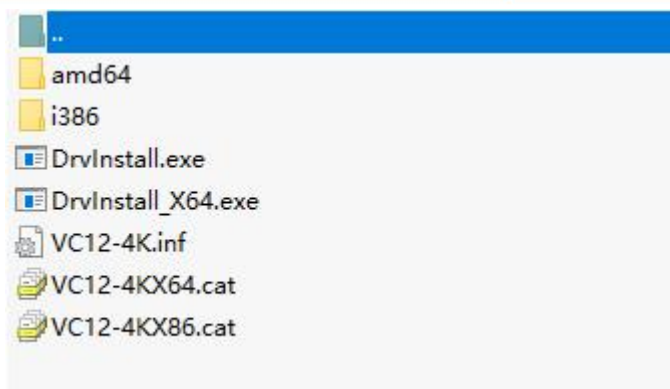
4.2 Driver Installation

Step1. Download the driver from the AVMATRIX website at www.avmatrix.com and opening the driver.

Product	File Description	Link
VC12-4K	PC software for VC12-4K	V1.0
VC41 & VC42	PC software for VC41 & VC42	V1.0

Step 2. When the driver is opened a notification of "Find Video Capture Card Driver: 1" will pop up, which indicates that the PCIE capture card has been recognized, then click "Install". Finally, Click "OK" to complete the installation.





Note: Supported Windows 7 and above, Linux 18.04 and above Operating Systems.

5.DIP Funtions

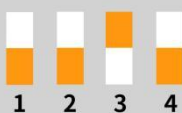
Multiple PCIE capture cards can be installed on one computer to work simultaneously to realize multiple live streaming and capture. When working with multiple PCIE capture cards at the same time, you need to adjust the dip switches on the PCIE card.

The dipswitch on the PCIE card provides the following settings. Make sure the setup dip code is different for each pcie card.

	1.First card When(SW1, SW2, SW3, SW4) is set to downward,it sets the PCIE capture card to first card.
	2.Second card When(SW1) is set to upward, and (SW2, SW3, SW4) is set to downward, it sets the PCIE capture card to second card.
	3.Third card When(SW2) is set to upward, and (SW1, SW3, SW4) is set to downward, it sets the PCIE capture card to third card.



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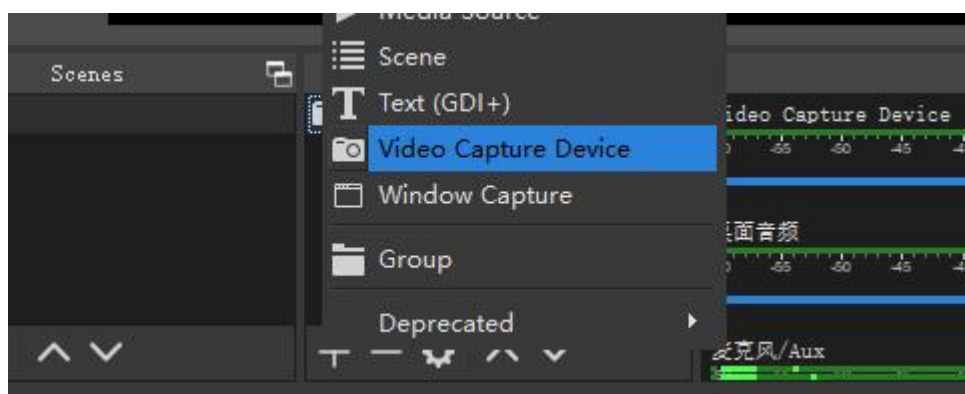


4.Fourth card

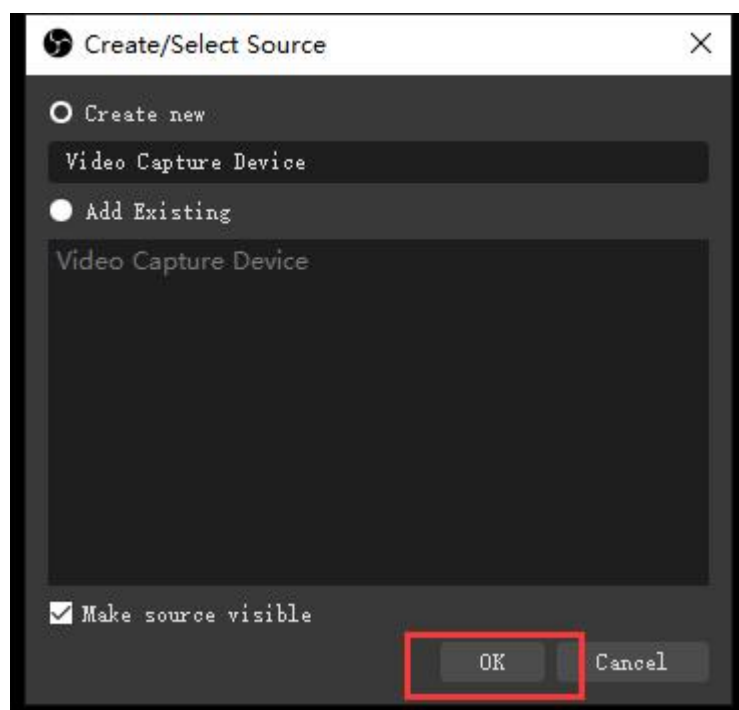
When(SW3) is set to upward, and (SW1, SW2, SW4) is set to downward, it sets the PCIE capture card to fourth card.

6.Operating Instructions

Step1. Open OBS Studio , click "+" and select "Video Capture Device".



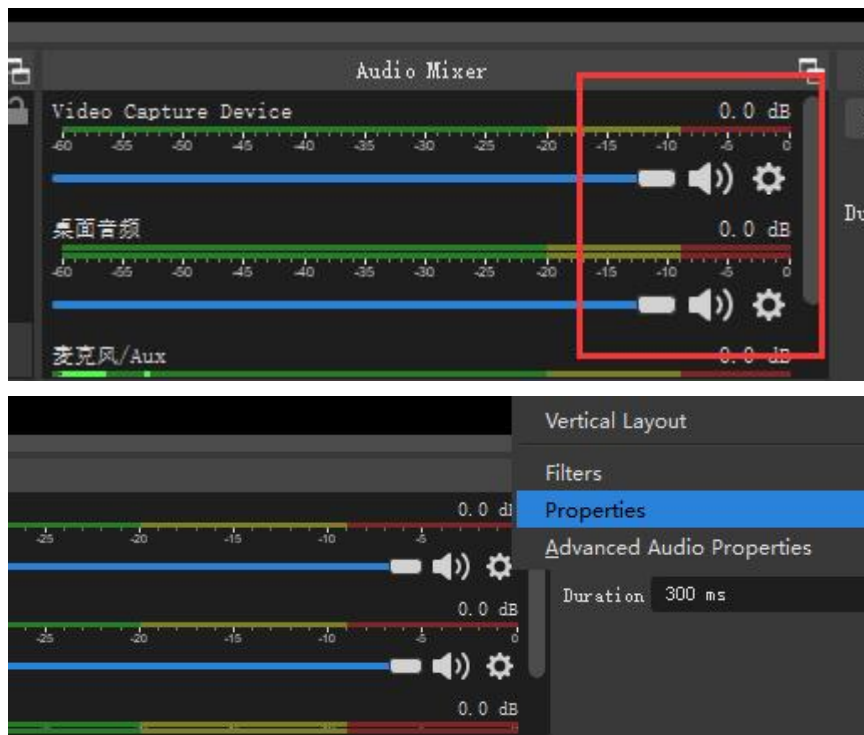
Rename the name of the signal source and click OK.



Step2. Right-click "Video Capture Device" and select properties, enter the properties interface, and select the signal source as your device. Users can set other parameter setting in the properties pages and then click OK.



Step3. Click on the audio setting icon to setting audio, as shown in the picture. Then enter the properties, and select the device.



Step4. Enter "Advanced Audio properties" can change the setting about the volume, balance, audio monitoring, and Tracks etc.

