

AVMATRIX CAPTURE RANGE

Video Capture Device Comparison Guide

A side-by-side technical overview of all AVMATRIX USB and PCIe capture devices - interfaces, capture formats, compatibility and codecs - to help you specify the right unit for every workflow.



Three Families, Eleven Devices

FAMILY 01

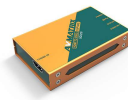
USB HD Capture

Compact, driver-free USB grabbers for SDI, HDMI and Multi-Signal sources up to 1080p.



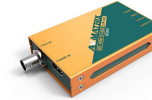
UC1118
SDI → USB

SDI IN USB-C



UC1218
HDMI → USB

HDMI 1.4a USB-C



UC2018
SDI + HDMI → USB

SDI + HDMI USB-C



UC7018
Multi-Signal → USB

Multi-input USB-C

FAMILY 02

USB 4K Capture

4K-ready USB capture with HDMI 2.0 loop-out and full analog audio I/O.



UC1218-4K
4K HDMI → USB

HDMI 2.0 Loop-out



UC2218-4K
Dual HDMI → USB

2x HDMI 2.0 Loop-out



UC1218-4KS
4K30 HDMI → USB

HDMI 2.0 USB 5Gbps



UC1218-4K PRO
4K60 HDMI → USB

HDMI 2.0 USB 10Gbps

FAMILY 03

PCIe Capture Cards

Multi-channel PCIe cards for installed and broadcast systems.



VC12-4K
4K HDMI PCIe Card

HDMI 2.0 4x PCIe



VC41
4-CH SDI PCIe Card

4x SDI 4x PCIe



VC42
4-CH HDMI PCIe Card

4x HDMI 4x PCIe

Compact 1080p USB Grabbers

	UC1118 SDI → USB	UC1218 HDMI → USB	UC2018 SDI + HDMI → USB	UC7018 Multi-Signal → USB
SIGNAL INPUT	1x SD/HD/3G-SDI	1x HDMI 1.4a	1x HDMI 1.4a, 1x SD/HD/3G-SDI	1x SDI, 1x HDMI, 1x DVI-I / VGA, 1x S-VIDEO / CVBS / YPBPR
ANALOG AUDIO	—	1x 3.5 mm stereo audio (Line in)	1x 3.5 mm stereo audio (Line in)	1x 3.5 mm analog audio (Line in)
HOST / OUTPUT	1x USB 3.0 Type-C (USB 3.1 Gen1, up to 200MB/s)	1x USB 3.0 Type-C (USB 3.1 Gen1, up to 200MB/s)	1x USB 3.0 Type-C (USB 3.1 Gen1, up to 200MB/s)	1x USB 3.0 Type-C (USB 3.1 Gen1, up to 200MB/s)
A/V CAPTURE	UVC (USB Video Class) standard UAC (USB Audio Class) standard	UVC (USB Video Class) standard UAC (USB Audio Class) standard	UVC (USB Video Class) standard UAC (USB Audio Class) standard	UVC (USB Video Class) standard UAC (USB Audio Class) standard
AUDIO CODEC	2-channel, 16-bit PCM, 48kHz, 1536 kbps	2-channel, 16-bit PCM, 48kHz, 1536 kbps	2-channel, 16-bit PCM, 48kHz, 1536kbps	2-channel, 16-bit PCM, 48kHz, 1536 kbps
VIDEO COLOR / FORMAT	YUY2	YUY2	YUY2	RGB, YUY2, NV12
HW DE-INTERLACE	Support 1080i hardware de-interlacing, clearer and more stable picture	—	—	—
SUPPORTED OS	Windows 7/8/10, Linux (Kernel 2.6.38 and above), macOS (10.8 and above)	Windows 7/8/10, Linux (Kernel 2.6.38 and above), macOS (10.8 and above)	Windows 7/8/10, Linux (Kernel 2.6.38 and above), macOS (10.8 and above)	Windows 7/8/10/11, Linux (kernel 2.6.38 and above), macOS (10.8 and above)
SOFTWARE	OBS Studio, Skype, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, Wirecast, Camtasia, Ecamm.live, Twitch.tv, etc.	OBS Studio, Skype, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, Wirecast, Camtasia, Ecamm.live, Twitch.tv, etc.	OBS Studio, Skype, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, Wirecast, Camtasia, Ecamm.live, Twitch.tv, etc.	OBS Studio, Skype, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, etc.
SDK / API	DirectShow (Windows), DirectSound (Windows)	DirectShow (Windows), DirectSound (Windows)	DirectShow (Windows), DirectSound (Windows)	DirectShow (Windows), DirectSound (Windows)

HDMI 2.0 · 4K with Loop-out & Audio

	UC1218-4K 4K HDMI → USB	UC2218-4K Dual HDMI → USB	UC1218-4KS 4K30 HDMI → USB	UC1218-4K PRO 4K60 HDMI → USB
SIGNAL INPUT	1x HDMI 2.0 1x HDMI out, 1x HDMI 2.0 Loop-out	1x HDMI 2.0, 1x HDMI 1x HDMI 2.0 Loop-out	1x HDMI 2.0 1x HDMI 2.0 Loop-out	1x HDMI 2.0 1x HDMI 2.0 Loop-out
ANALOG AUDIO	1x 3.5 mm stereo audio (Line in) 1x 3.5 mm stereo audio (Mic in) 1x 3.5 mm stereo audio out	1x 3.5 mm stereo audio (Line in) 1x 3.5 mm stereo audio (Mic in) 1x 3.5 mm stereo audio out	1x 3.5 mm stereo audio (Line in) 1x 3.5 mm audio (Mic in) 1x 3.5 mm stereo audio out	1x 3.5 mm stereo analog audio (Line in) 1x 3.5 mm stereo (Mic in) 1x 3.5 mm audio monitor out
HOST / OUTPUT	1x USB 3.1 Type-C (USB 3.1 Gen1, up to 200MB/s)	1x USB 3.0 Type-C (USB 3.1 Gen1, up to 200MB/s)	1x USB 3.0 Type-C (Up to 5Gbps)	1x USB 3.1 Type-C (USB 3.1 Gen2, up to 10Gbps)
A/V CAPTURE	UVC (USB Video Class) standard UAC (USB Audio Class) standard	UVC (USB Video Class) standard UAC (USB Audio Class) standard	UVC (USB Video Class) standard UAC (USB Audio Class) standard	UVC (USB Video Class) standard UAC (USB Audio Class) standard
AUDIO CODEC	2-channel, 16-bit PCM, 48kHz, 1536 kbps	2-channel, 16-bit PCM, 48kHz, 1536 kbps	2-channel, 16-bit PCM, 48kHz, 1536kbps	2-channel, 16-bit PCM, 48kHz, 1536 kbps
VIDEO COLOR / FORMAT	YUY2	YUY2	RGB24: Up to 2560x1440 p30 P010: Up to 3840x2160 p60 YUY2: Up to 2560x1440 p60 NV12: Up to 3840x2160 p30 I420: Up to 3840x2160 p30 MJPEG: Up to 3840x2160 p60	RGB24: Up to 2560x1440 p60 P010: Up to 3840x2160 p60 YUY2: Up to 3840x2160 p50 NV12: Up to 3840x2160 p60 I420: Up to 3840x2160 p60 MJPEG: Up to 3840x2160 p60
HW DE-INTERLACE	—	Support 1080i hardware de-interlacing, clearer and more stable picture	—	—
SUPPORTED OS	Windows 7/8/10/11, Linux (Kernel 2.6.38 and above), macOS (10.8 and above)	Windows 7/8/10/11, Linux (Kernel 2.6.38 and above), macOS (10.8 and above)	Windows 7/8/10/11, Linux (Kernel 2.6.38 and above), macOS (10.8 and above)	Windows 7/8/10/11, Linux (kernel 2.6.38 and above), macOS (10.8 and above)
SOFTWARE	OBS Studio, Skype, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, etc.	OBS Studio, Skype, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, etc.	OBS Studio, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, etc.	OBS Studio, ZOOM, Teams, Google Meet, YouTube Live, QuickTime Player, FaceTime, etc.
SDK / API	DirectShow (Windows), DirectSound (Windows)	DirectShow (Windows), DirectSound (Windows)	DirectShow (Windows), DirectSound (Windows)	DirectShow (Windows), DirectSound (Windows)

Multi-Channel Capture



	VC12-4K 4K HDMI PCIe Card	VC41 4-CH SDI PCIe Card	VC42 4-CH HDMI PCIe Card
SIGNAL INPUT	1x HDMI 2.0 1x HDMI 2.0 Loop-out	4x SD/HD/3G-SDI	4x HDMI 1.4
ANALOG AUDIO	—	—	—
HOST / OUTPUT	4x PCIe 2.0, 2.5GB/s transfer bandwidth	4x PCIe 2.0, 2.5GB/s transfer bandwidth	4x PCIe 2.0, 2.5GB/s transfer bandwidth
A/V CAPTURE	1x HDMI embedded audio capture	4x SDI embedded audio capture	4x HDMI embedded audio capture
AUDIO CODEC	2-channel, 16-bit PCM, 48kHz, 1536 kbps	2-channel, 16-bit PCM, 48kHz, 1536 kbps	2-channel, 16-bit PCM, 48kHz, 1536 kbps
VIDEO COLOR / FORMAT	YUY2, uncompressed	YUY2, uncompressed	YUY2, uncompressed
HW DE-INTERLACE	—	Support 1080i hardware de-interlacing, 3D noise reduction algorithm	Support 1080i hardware de-interlacing, 3D noise reduction algorithm
SUPPORTED OS	Windows 7 and above, Linux 18.04 and above	Windows 7 and above, Linux 18.04 and above	Windows 7 and above, Linux 18.04 and above
SOFTWARE	OBS Studio, XSplit, VLC, VirtualDub, Vmix, VidBlaster, Wirecast, Microsoft Media Encoder, Adobe Flash Media Encoder, and any other DirectShow / V4L2 / AVCaptureSession encoding / streaming software	OBS Studio, XSplit, VLC, VirtualDub, Vmix, VidBlaster, Wirecast, Microsoft Media Encoder, Adobe Flash Media Encoder, and any other DirectShow / V4L2 / AVCaptureSession encoding / streaming software	OBS Studio, XSplit, VLC, VirtualDub, Vmix, VidBlaster, Wirecast, Microsoft Media Encoder, Adobe Flash Media Encoder, and any other DirectShow / V4L2 / AVCaptureSession encoding / streaming software
SDK / API	Windows (DirectShow, DirectSound / WASAPI), Linux (V4L2, ALSA)	Windows (DirectShow, DirectSound / WASAPI), Linux (V4L2, ALSA)	Windows (DirectShow, DirectSound / WASAPI), Linux (V4L2, ALSA)

All Eleven Devices at a Glance



	UC1118	UC1218	UC2018	UC7018	UC1218-4K	UC2218-4K	UC1218-4KS	UC1218-4K PRO	VC12-4K	VC41	VC42
SIGNAL INPUT	SDI	HDMI 1.4	HDMI + SDI	Multi-input	HDMI 2.0	2x HDMI 2.0	HDMI 2.0	HDMI 2.0	HDMI 2.0	4x SDI	4x HDMI
CHANNELS	1	1	1	1	1	2	1	1	1	4	4
ANALOG AUDIO IN	-	✓	✓	✓	✓	✓	✓	✓	-	-	-
HDMI LOOP-OUT	-	-	-	-	✓	✓	✓	✓	✓	-	-
HOST INTERFACE	USB-C	USB-C	USB-C	USB-C	USB-C 3.1	USB-C	USB-C 5G	USB-C 10G	4x PCIe	4x PCIe	4x PCIe
HW DE-INTERLACE	✓	-	-	-	-	✓	✓	-	-	✓	✓
CAPTURE TYPE	UVC	UVC	UVC	UVC	UVC	UVC	UVC	UVC	Embedded	Embedded	Embedded

USB HD

USB 4K

PCIe

✓ = supported