



UDC-4K

Rugged, compact, and designed for professional workflows, the UDC-4K is our most versatile Mini-Converter. The UDC-4K is a broadcast-quality Up/Down/Cross Mini-Converter that can seamlessly convert between 4K/UHD and 2K/HD video formats. Not only does it perform raster and frame rate conversions, but it can also function as a frame synchronizer and as a 1x4 12G-SDI DA, supporting video formats up to 4Kp60. With both 12G-SDI and HDMI 2.0 inputs and outputs, the UDC-4K makes SDI and HDMI signal conversion simple and efficient.

\$1595 US MSRP

<https://www.aja.com/products/udc-4k>

Video Formats

- (4K) 4096x2160p
- (UHD) 3840x2160p
- (2K) 2048x1080p
- (HD) 1920x1080p
- (HD) 1920x1080i
- (HD) 1280x720p

Note: Raster and Frame Rate Dependent, please see UDC-4K Video Formats in the Download / Documents section of the website product page.

Video Input and Output SDI

- 1x 12G-SDI Input BNC, SMPTE ST 292/424/2081/2082
- 4x 12G-SDI Output BNCs, SMPTE ST 292/424/2081/2082
 - HDR VPID decoder and generation with pass-through or override for Colorimetry and Transfer Characteristic, SMPTE ST 352
 - YCbCr 4:2:2/4:4:4
 - RGB 4:4:4, SMPTE or Full level
 - 10 or 12-bit*
- 1x 12G-SDI
 - (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
 - (UHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 1x 6G-SDI
 - (4K) 4096x2160p 29.97, 30
 - (UHD) 3840x2160p 29.97, 30
- 1x 3G-SDI (Level A or B Dual Link)
 - (2K) 2048x1080p 23.98, 24, 25, 47.95, 48, 50, 59.94, 60
 - (2K) 2048x1080PsF 23.98, 24, 25, 29.97, 30
 - (HD) 1920x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
 - (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30
 - (HD) 1920x1080i 50, 59.94, 60
 - (HD) 1280x720p** 50, 59.94, 60
- 1x 1.5G-SDI
 - (2K) 2048x1080p 23.98, 24, 25, 29.97, 30
 - (2K) 2048x1080PsF 23.98, 24, 25, 29.94, 30
 - (HD) 1920x1080p 23.98, 24, 25, 29.97, 30
 - (HD) 1920x1080PsF 23.98, 24, 25, 29.97, 30

- (HD) 1920x1080i 50, 59.94, 60
- (HD) 1280x720p 50, 59.94, 60

*Some 12-bit formats not supported, please see UDC-4K Video Formats in the Download / Documents section of the website product page.

**1280x720p is Level A Only

Video Input and Output HDMI

- 1x HDMI Input Type A connector, HDMI v2.0b
- 1x HDMI Output Type A connector*, HDMI v2.0b
- HDR Infoframe decoder and generation with pass-through or override for Colorimetry and Transfer Characteristic as defined in CTA-861.3 and HDMI v2.0b
- YCbCr 4:2:2/4:4:4/4:2:0
- RGB 4:4:4, SMPTE or Full level
- 24, 30, or 36 Bits Per Pixel (HFR 4K/UHD 4:4:4 limited to 24 BPP)
- (4K) 4096x2160p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (UHD) 3840x2160p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (2K) 2048x1080p 23.98, 24, 25, 29.97, 30, 47.95, 48, 50, 59.94, 60
- (HD) 1920x1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- (HD) 1920x1080i 50, 59.94, 60
- (HD) 1280x720p 50, 59.94, 60

*If a connected monitor doesn't support HDMI protocol, the unit automatically switches to DVI protocol (which does not pass audio).

Note: Raster and Frame Rate Dependent, please see UDC-4K Video Formats in the Download / Documents section of the website product page.

HDCP

- Does not encode the HDMI output with HDCP encryption
- Does not accept HDCP input
- SDI outputs are unencrypted

Reference Input

- External, 1x BNC
- 75-ohm terminating
- Blackburst or tri-level sync

Genlock

- Ext Ref
- SDI In
- HDMI In
- Free Run based on Temperature Compensated Crystal Oscillator

Audio Pass-Through Formats

- PCM
- Dolby Digital (AC-3)
- Dolby Digital Plus (E-AC-3), including Atmos Immersive Sound (JOC)

Audio Input Digital

- SDI embedded audio, 24-bit, 16-channel
- HDMI embedded audio, 24-bit, 8-channel

Audio Output Digital

- SDI embedded audio, 24-bit, 16-channel
- HDMI embedded audio, 24-bit, 8-channel

User Interface

- Color LCD Display
- 4x dedicated, backlit navigation and selection buttons
- USB-C port used with supplied cable and Mini-Config software application to configure and view device status via Mac or Windows

Video Processing

- Frame synchronization
- Up, down, cross-conversion
- Format conversion
- Frame rate conversion
- Polyphase scaling algorithm
- Motion adaptive deinterlacer
- Hardware 12-bit
- Nominal video delay 2 frames, (Interlaced and PsF formats increase delay)
 - Frame sync can be 1 frame when locked to input

Audio Processing

- High quality Sample Rate Conversion supported on all audio inputs
- SRC bypass for non-PCM audio (e.g., Dolby E, AC-3, etc.)
- Delay audio 0 to 100 video frames in 1/16 of a frame increments

Ancillary Data

- Supports pass-through of PCM embedded audio
- Supports pass-through of non-PCM audio when source is in time with the selected ref (SDI In, HDMI In, or Ext Ref). Non-PCM audio is not supported during frame sync operation.

Size (w x d x h)

- 5.0" x 8.09" x 1.65" (127.0 x 205.5 x 41.8 mm)

Weight

- 2.0 lb (0.9 kg)

Power

- External power supply required
 - Enclosure: 10-18VDC regulated, 4-pin mini-XLR, 25W max

- AC Adapter, included: 100-240VAC, 50/60 Hz, universal input, 60W
- Optional spare AC adapter sold separately, AJA-PWR-12-60W

Environment

- Safe Operating Temperature: 0 to 40 C (32 to 104 F)
- Safe Storage Temperature (Power OFF): -40 to 60 C (-40 to 140 F)
- Operating Relative Humidity: 10-90% noncondensing
- Operating Altitude: <3,000 meters (<10,000 feet)