

AJA KONA LHi Multi-format analog and digital Capture I/O Card

Video Formats

- 525i 29.97
- 625i 25
- 720P 50, 59.94, 60
- 1080i 25, 29.97, 30
- 1080PsF 23.98, 24
- 1080p 23.98, 24, 25, 29.97, 30, 50, 59.94, 60
- 2K
 - 2048 x 1080P 23.98, 24, 25, 29.97, 30
 - 2048 x 1080PsF 23.98, 24

Software-dependent Formats

These formats are dependent on specific software functionality and are not normal 'over-the-wire' formats.

- 525i 23.98
- 720P 23.98

Video Input Digital

- 3G/SD/HD SDI, SMPTE-259/292/296/424, 8- or 10-bits
- Single link 4:2:2 (1 x BNC)
- HDMI v1.3 30 bits/pixel, RGB or YUV, 2.25 Gbps, SD, HD, 1080p-50/60 (1 x mini-HDMI)

Video Input Analog

- Composite/S-Video (Y/C) (1 x BNC/2x BNC+Adaptor)
- NTSC, NTSCJ, PAL
- Component (3 x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.0 MHz Y Frequency Response
- +/- .2 dB to 1 MHz C Frequency Response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain
- <1 ns Y/C delay inequity

Video Output Digital

- 3G/SD/HD SDI, SMPTE-259/292/296/424
- Single link 4:2:2 or 4:4:4 (1 x BNC)
- HDMI v1.3 30 bits/pixel, RGB or YUV, 2.25 Gbps, SD, HD, 1080p-50/60 (1 x mini-HDMI)

Video Output Analog

- Composite/S-Video (Y/C) (1 x BNC/2x BNC+Adaptor)
- NTSC, NTSCJ, PAL
- Component (3 x BNC)
- HD: YPbPr, RGB
- SD: YPbPr, RGB (component mode)
- SMPTE/EBU N10, Betacam 525 line, Betacam 525J, RGB
- 12-bit D/A, 8x oversampling
- +/- .2 dB to 5.0 MHz Y Frequency Response
- +/- .2 dB to 1 MHz C Frequency Response
- .5% 2T pulse response
- <1% Diff Phase
- <1% Diff Gain
- <1 ns Y/C delay inequity

Audio Input Digital

- 8-channel, 24-bit SMPTE-259 SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous
- 2-channel, 24-bit AES/EBU audio, 48kHz sample rate, Synchronous or Non-synchronous, Internal sample rate conversion (via 1 x XLR on breakout cable or optional KLHi-Box)

Audio Input Analog

- 2-channel, 24-bit A/D analog audio, 48kHz sample rate, balanced (via 2 x XLR on DB-25 breakout cable or optional KLHi-Box)
- +24dbu Full Scale Digital
- +/- 0.2db 20 to 20kHz Frequency Response

Audio Output Digital

- 8-channel, 24-bit SMPTE-259 SDI embedded audio, 48kHz sample rate, Synchronous
- 8-channel, 24-bit HDMI embedded audio, 48kHz sample rate, Synchronous
- 2-channel, 24-bit AES/EBU audio, 48kHz sample rate, Synchronous or Non-synchronous, Internal sample rate conversion (via 1 x XLR on breakout cable or optional KLHi-Box)

Audio Output Analog

- 2-channel, 24-bit D/A analog audio, 48kHz sample rate, balanced (via 2 x XLR on DB-25 breakout cable or optional KLHi-Box)
- +24dbu Full Scale Digital (0dbFS)
- +/- 0.2db 20 to 20kHz Frequency Response
- 2-channel unbalanced output (via 2 x RCA jacks on optional KLHi-Box)

Up-Conversion

- Hardware 10-bit
- Anamorphic: full-screen
- Pillar box 4:3: results in a 4:3 image in center of screen with black sidebars
- Zoom 14:9: results in a 4:3 image zoomed slightly to fill a 14:9 image with black side bars
- Zoom Letterbox: results in image zoomed to fill full screen
- Zoom Wide: results in a combination of zoom and horizontal stretch to fill a 16:9 screen; this setting can introduce a small aspect ratio change

Down-conversion

- Hardware 10-bit
- Anamorphic: full-screen
- Letterbox: image is reduced with black top and bottom added to image area with the aspect ratio preserved
- Crop: image is cropped to fit new screen size

Cross-conversion

- Hardware 10-bit
- 1080i to 720P
- 720P to 1080i
- 720P to 1080PsF

SD to SD aspect ratio conversion

- Letterbox: This transforms SD anamorphic material to a letterboxed image.
- H Crop: Will produce a horizontally stretched effect on the image; transforms anamorphic SD to full frame
- SD Pillarbox: Will produce an image in the center of the screen with black borders on the left and right sides and an anamorphized image in the center
- V Crop: Will transform SD letterbox material to an anamorphic image.

Reference Input

- Analog Color Black (1V) or Composite Sync (2 or 4V)
- looping
- 75 ohm on optional KLHi-Box, terminated on supplied breakout cable

Machine Control

- RS-422, Sony 9-pin protocol (via DB-25 breakout cable or optional KLHi-Box)
- 9-pin D-connector pinout is as follows::

1	GND
2	RX-
3	TX+
4	GND
5	No Collection
6	GND
7	RX+
8	TX-

9	GND
Shell	GND