

# DDR/HD™

**Uncompressed (Lossless) HD Recorder Player with 1080i, 720p Support. Built with AJA Xena PCIe card and Microsoft Server 2003. Dual Core and Dual Processor, High Performance Motherboard with Gig/E, and Equipped with LSI Logic Advanced ESATA Storage Controller Managing 6-12 RAID Drives with .5 TB High Performance Drives. Comes with Very Friendly GUI with Sliding Viewer and Time Code Based Control and Provides Amazing Performance at a Reasonable Price.**



Front



Back

## Features

- New custom 4 RU rackmount workstation
- AJA XENA 2Ke bundle, card, AV I/O breakout box
- Xeon 64-bit workstation featuring single Intel Xeon Quad-Core X5550 Nehalem 2.66 GHz CPUs
- 4 GB RAM
- 1394A/B Firewire
- Gbit Ethernet I/O
- D: 2-8 TB Raid0 SATA II Internal Storage
- E: Dual Layer Blu-Ray 8X Burner Internal SATA Drive
- Keyboard & optical mouse
- Records and plays uncompressed capture footage
- XENA 2Ke card is AJA's top-of-the-line card for Windows XP/Vista, delivering uncompressed SD, HD & Dual Link HD & enabling customers to work with 2K frames in a flexible & future-safe architecture

Note: These are custom configured for each customer and are burned in and tested with high performance content over 24 hours.

## Applications

- Post production
- Digital Signage
- Military

## Overview

Up until recently recording two hours of uncompressed HD content was very expensive. Today with the availability of high speed computers, I/O cards, and large capacity hard drives, you can have this for reasonable prices.

HD-SDI is a digital uncompressed video format that is standardized as SMPTE 292M. It is used to create or originate content by cameras that use this standard. Television stations also use this standard as the “in house” standard and route HD-SDI all around their facilities.

The DDR/HD™ is an Uncompressed HD Digital Video Recorder Player built from off the shelf components.

We use either the Xena 2Ke or LHe HD-SDI I/O card. We typically use RAID 0 for the configuration for the typical DDR/HD systems, although we can use other RAIDs, including RAID 10.

We typically configure the DDR/HD systems with one to six internal drives. When more performance is called for we can use external RAID subsystems.



Main GUI

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## Specifications – AJA XENA 2Ke Card

|                         |   |
|-------------------------|---|
| <b>Card Format</b>      | PCIe 4-lane compatible  |
| <b>Video Formats</b>    |   |
| SD:                     | 525i: 29.97, 29.97 (Wide)<br>625i: 25, 25 (Wide)<br>480i: 29.97, 29.97 (Wide)   |
| HD:                     | 720p: 23.976, 24, 25, 29.97, 30, 50, 59.94, 60<br>1080i: 25, 29.97, 30<br>1080p: 23.98, 24, 25, 29.97, 30, 50, 59.94, 60<br>1080psf: 23.98, 24, 25, 29.97, 30   |
| 2K:                     | 2048 x 1080p: 23.976, 24<br>2048 x 1080psf: 23.976, 24<br>2048 x 1556p: 14.98, 15   |
| <b>Video Input</b>      | HD-SDI/SDI, SMPTE-259/292/296, Dual-link HD 4:4:4, 2K HSDL  |
| <b>Video Output</b>     | Digital:<br>HD/SD "SDI", SMPTE-259/292/296<br>Dual-link HD 4:4:4<br>2K HSDL<br>Analog:<br>SD and HD Output, 12-bits, BNC<br>HD: YPbPr, RGB<br>SD: YPbPr, RGB, Composite/YC<br>12-bit D/A  |
| <b>Audio Input</b>      | 16/24/32-bit 48 KHz synchronous<br>16-channel SDI/HD-SDI embedded audio<br>or 48/96 KHz 8 channel AES audio; sample rate conversion on AES inputs (no source synchronization required)  |
| <b>Up-Conversion</b>    | Hardware 10-bit<br>Anamorphic: (full-screen)<br>Pillar box 4:3: results in a 4:3 image in center of screen with black sidebars<br>Zoom 14:9: results in a 4:3 image zoomed slightly to fill a 14:9 image with black sidebars<br>Zoom Letterbox: zooms a 16:9 Letterbox source to full screen<br>Zoom Wide: combines zoom and horizontal stretch to fill a 16:9 screen |
| <b>Down-Conversion</b>  | Hardware 10-bit<br>Anamorphic: full-screen<br>Letterbox: 16:9 with black top and bottom<br>Crop: Image is cropped for full screen image   |
| <b>Cross-Conversion</b> | Hardware 10-bit<br>1080i to 720p, 720p to 1080i<br>SD to SD Aspect Ratio Conversion<br>16:9 to 4:3 Letterbox or Horizontal Crop<br>4:3 to 16:9 Pillarbox or Vertical Crop   |
| <b>Reference Input</b>  | Color Black or Tri-level sync (Looping/non-terminating on K3-Box; terminated on supplied breakout cable)  |
| <b>Machine Control</b>  | RS-422, Sony 9-pin protocol   |

## Specifications – System

|                   |   |
|-------------------|---|
| <b>Warranties</b> | 6 Month system warranty with tech support<br>3 year AJA card International Warranty<br>3 year Seagate Direct Warranty on 2-8 TB hard drives panel |
| <b>Power</b>      | 650W  |
| <b>Dimensions</b> | Rackmountable 3RU unit – 26"(D)x16.9"(W)x 5.2"(H)<br>132 mm Height x 430 mm Width x 660 mm Depth  |
| <b>Weight</b>     | 44 lbs. (20 Kg.)  |
| <b>Conformity</b> | UL, CSA, RoHS, CE Mark  |

## Ordering Information

DDR/HD/X/XXX/Xena

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## Specifications – AJA XENA LHe Card

|                           |   |
|---------------------------|---|
| <b>Card Format</b>        | PCIe 4-lane compatible  |
| <b>Look Up Tables</b>     | Real-time primary LUT or Import/export text-based LUT   |
| <b>File Import/Export</b> | Import (capture) and export (playback)<br>Formats: DPX, Cineon, TGA TIFF, BMP, QuickTime, AVI   |
| <b>Video Formats</b>      |   |
| SD:                       | 525i: 29.97<br>625i: 25   |
| HD:                       | 720p: 23.976, 24, 25, 29.97, 30, 50, 59.94, 60<br>1080i: 25, 29.97, 30<br>1080p: 23.976, 24, 25, 29.97, 30, 50, 59.94, 60<br>1080psf: 23.976, 24, 25, 29.97, 30   |
| 2K:                       | 2048 x 1080p: 23.976, 24<br>2048 x 1080psf: 23.976, 24<br>2048 x 1556p: 14.98, 15   |
| <b>Video Input</b>        | Digital:<br>3G/HD/SD SDI, SMPTE-259/292/296<br>HD-SDI 1.5Gb and 3Gb<br>HDMI v1.3, 30/36 bits/pixel, RGB or YUV, 2.25Gbs, SD, HD, 1080p50/60<br>Analog:<br>SD and HD Output, BNC<br>HD: YPbPr, RGB<br>SD: YPbPr, RGB, Composite/YC<br>12-bit A/D   |
| <b>Video Output</b>       | 3G/HD/SD SDI, SMPTE-259/292/296<br>HD: YPbPr, RGB<br>SD: YPbPr, RGB, Composite/YC<br>12-bit D/A<br>HD-SDI 1.5Gb and 3Gb<br>HDMI v1.3 (see HDMI Input)   |
| <b>Audio Input</b>        | Digital:<br>2-channel 16/24/32-bit AES/EBU, 48 kHz sample-rate<br>Synchronous or Nonsynchronous (Internal sample-rate conversion)<br>16/24/32-bit SMPTE-259 SDI embedded audio, 8-channel, 48 kHz synchronous<br>Analog:<br>2-channel balanced input<br>+24 dbu Full Scale Digital<br>16/24/32-bit A/D, 48 kHz sample rate<br>+/- 0.2db 20 to 20 kHz Frequency Response |
| <b>Up-Conversion</b>      | Hardware 10-bit<br>Anamorphic: (full-screen)<br>Pillar box 4:3: centers 4:3 image, with black sidebars<br>Zoom 14:9: slightly zooms 4:3 image to fill a 14:9 image with black sidebars<br>Zoom Letterbox: zooms 16:9 Letterbox source to full screen<br>Zoom Wide: combines zoom and horizontal stretch, 16:9   |
| <b>Down-Conversion</b>    | Hardware 10-bit, 16/24/32-bit internal processing<br>Anamorphic: full-screen<br>Letterbox: 16:9 with black top and bottom<br>Crop: image is cropped horizontally  |
| <b>Cross-Conversion</b>   | Hardware 10-bit<br>1080i to 720p, 720p to 1080i<br>SD to SD Aspect Ratio Conversion<br>16:9 to 4:3 Letterbox or Horizontal Crop<br>4:3 to 16:9 Pillarbox or Vertical Crop   |
| <b>Reference Input</b>    | Color Black or Tri-level sync (Looping/non-terminating on K3-Box; terminated on supplied breakout cable)<br>BNC assignable as LTC input or Reference Input  |
| <b>Machine Control</b>    | RS-422, Sony 9-pin protocol<br>Connector provided on XENA LH/LHe breakout cable and on optional KL-Box  |



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