

DESCRIPTION

The Angstrom Microsystems bdp-12SDHD is a Single Input Channel, Dual Output Channel Broadcast Development Platform for 525/59.94Hz and 625/50Hz SD television systems and for 1080i/59.94Hz, 1080i/50Hz, 720p/59.94Hz and 720p/50Hz HD television systems. It is designed to offer Windows XP application developers for the professional broadcast market a highly integrated and cost-effective software applications and I/O platform based on AMD's state-of-the-art 64-bit dual-core Opteron CPUs and Matrox's multi-channel XMIO I/O cards.

It supports uncompressed YUV video I/O for SD and HD and Matrox's MPEG-2 and DV codecs for SD and HD. Digital audio I/O is uncompressed AES. I/O signals are SMPTE-259M SDI compliant with support for up to eight embedded AES pairs per video I/O. Uncompressed VBI line support is also available. An LTC Input is provided via an optionally available LTC Reader to RS-232 Serial Port adapter.



The bdp-12SDHD natively supports YUV 4:2:2 uncompressed 10 and 8-bit video I/O. The software-based MPEG-2 and DV codecs support a variety of profiles and bit rates for SD and HD. Video streams are formatted as AVI files. AES digital audio pairs are supported using 16, 20 or 24-bit sampling. Each AES pair is formatted as a WAV file. Also, sixteen lines of uncompressed VBI are supported per field for record or play of Vertical Blanking test or data signals.

D10 codecs for SD and HDV codecs for HD are also supported.

Each bdp-12SDHD input and output is a fully-independent SDI/HD-SDI I/O. An analog blackburst or tri-level input is used to genlock the video outputs to an external video reference. Each output can be independently timed to the external reference.

Each bdp-12SDHD is equipped with two Gigabit Ethernet ports for connecting to remotely-mounted CIFS file systems. Two USB ports are available for attaching low-speed peripheral devices.

The bdp-12SDHD is housed in a 1RU rack-mount enclosure with dual, hot swappable 7200RPM SATA disk drives and dual, hot-swappable power supplies. In addition to Windows XP Pro, it supports Matrox's XMIO SDK for applications development. The XMIO SDK provides many video functions such as compositing, color correction, chroma/luma/linear keying, fade/dissolve/wipe, graphic overlay, pan/scan, logo insertion, slow-motion and numerous other effects. This software development environment, along with the robust capabilities of AMD's 64-bit dual-core CPUs, make the bdp-12SDHD the ideal solution for application developers targeting television networks and stations, cable networks, satellite uplinks, postproduction suites and any other professional broadcast facilities.

HARDWARE SPECIFICATIONS

Chassis Type	1RU, Dual 400W Power Supply, hot-swappable
CPU	Dual AMD 2.2GHz Dual-Core Opterons
Memory	2GB, 400Mz DDR, Registered, ECC
Hard Disks	Two 80GB SATA, 7200RPM, hot-swappable
RAID Configuration	RAID 0 or 1
Removable Media	24x CD-ROM
Audio/Video I/O Board	Matrox XMIO/12/8000, 1-SDI/HD-SDI in, 2-SDI/HD-SDI out
LTC Reader to RS-232 Serial Port Adaptor (option)	Miranda Little Red

SOFTWARE SPECIFICATIONS

Operating System Microsoft Windows XP Professional SP2
Development Software Matrox XMIO SDK

I/O SPECIFICATIONS

Video Input One SDI per SMPTE 259M, 75 Ohm BNC Connector or
One HD-SDI per SMPTE 292M, 75 Ohm BNC Connector
Video Output Two SDI per SMPTE 259M, 75 Ohm BNC Connectors or
Two HD-SDI per SMPTE 292M, 75 Ohm BNC Connectors or
One SDI per SMPTE 259M, 75 Ohm BNC Connector and
One HD-SDI per SMPTE 292M, 75 Ohm BNC Connector
Audio Input Up to Eight Embedded AES Pairs per SDI/HD-SDI Input per SMPTE 272M
Audio Output Up to Eight Embedded AES Pairs per SDI/HD-SDI Output per SMPTE 272M
Time Code Input VITC via SDI
Time Code Output VITC via SDI
LTC Input Balanced or Unbalanced, 75 Ohm BNC Connector via optional Miranda LTC
Reader to RS 232 Serial Data Adaptor
Reference Input Analog Black Burst or Tri-level Sync, 75 Ohm BNC Loop Through Connectors
Network Dual 100BaseT Ethernet, RJ45 Output Connectors
Peripherals One RS-232 Serial Port,
Two USB 1.1 Ports
One VGA Connector
PS/2 Mouse and Keyboard Connectors

FUNCTIONAL SPECIFICATIONS

Video Standards 525/59.94Hz, 625/50Hz, 1080i/59.94Hz, 1080i/50Hz, 720p/59.94Hz, 720p/50Hz
Video Quantization 10 or 8-bit
Video Codecs SD/HD: Uncompressed 10 or 8-bit YUV 4:2:2
SD-only: MPEG-2 Long GOP 4:2:0 Profile up to 15Mb/s
SD-only: MPEG-2 Long GOP 4:2:2 Profile up to 50Mb/s
SD-only: MPEG-2 I Frame-only 4:2:0/4:2:2 Profile up to 50Mb/s
HD-only: MPEG-2 I Frame-only 4:2:0/4:2:2 Profile up to 300Mb/s
D10: 30Mb/s, 40Mb/s, 50Mb/s
HDV
DV, DVCAM, DVCPPro, DVCPPro50, DVCPPro100
Audio Sampling Frequency 48KHz
Audio Quantization 16bit, 20bit or 24bit
Audio Codecs Uncompressed, up to Eight AES Pairs per Video I/O
Vertical Blanking Interval Up to 16 Lines Uncompressed per Video Frame
Stream Multiplexes AVI for Video Stream
WAV per AES Pair
HDV TS
Remote File System Common Internet File System (CIFS)

CHASSIS SPECIFICATIONS

Size 1RU Rackmount, 1.75"H x 17.25"W x 29"D (44mmH x 431mmW x 725mmD)
Weight **Approximately TBD lbs (TBD kg)**
Operating Temperature 10C to 30C
Humidity 5% to 95% RH, non-condensing, 2000 meters
Power **100 - 240VAC, 60 - 50Hz, TBD A**
Certifications UL, FCC Class A, CE