

DESCRIPTION

The Angstrom Microsystems bdp-12SD is a Single Input Channel, Dual Output Channel Broadcast Development Platform for 525/59.94Hz and 625/50Hz SD 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, as well as Matrox's MPEG-2 and DV encoding and decoding. 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-12SD natively supports YUV 4:2:2 uncompressed 10 and 8-bit video I/O. The software-based MPEG-2 codecs support Long GOP and I Frame-only MPEG-2 streams. Software-based DV, DVCAM, DVCPPro and DVCPPro50 codecs are also supported. 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.

Each bdp-12SD input and output is a fully-independent SDI I/O. An analog blackburst 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-12SD 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-12SD 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-12SD 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 1.8GHz Dual-Core Opterons
Memory	1GB, 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/12/6000, 1-SDI in/2-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
Video Output Two SDI per SMPTE 259M, 75 Ohm BNC Connectors
Audio Input Up to Eight Embedded AES Pairs per SDI Input per SMPTE 272M
Audio Output Up to Eight Embedded AES Pairs per 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, 75 Ohm BNC Loop Through Connectors
Network Dual 1000BaseT 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
Video Quantization 10 or 8-bit
Video Codecs Uncompressed 10 or 8-bit YUV 4:2:2
MPEG-2 Long GOP 4:2:0 Profile up to 15Mb/s
MPEG-2 Long GOP 4:2:2 Profile up to 50Mb/s
MPEG-2 I Frame-only 4:2:0/4:2:2 Profile up to 50Mb/s
D10: 30Mb/s, 40Mb/s, 50Mb/s
DV, DVCAM, DVCPRO, DVCPRO50
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
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