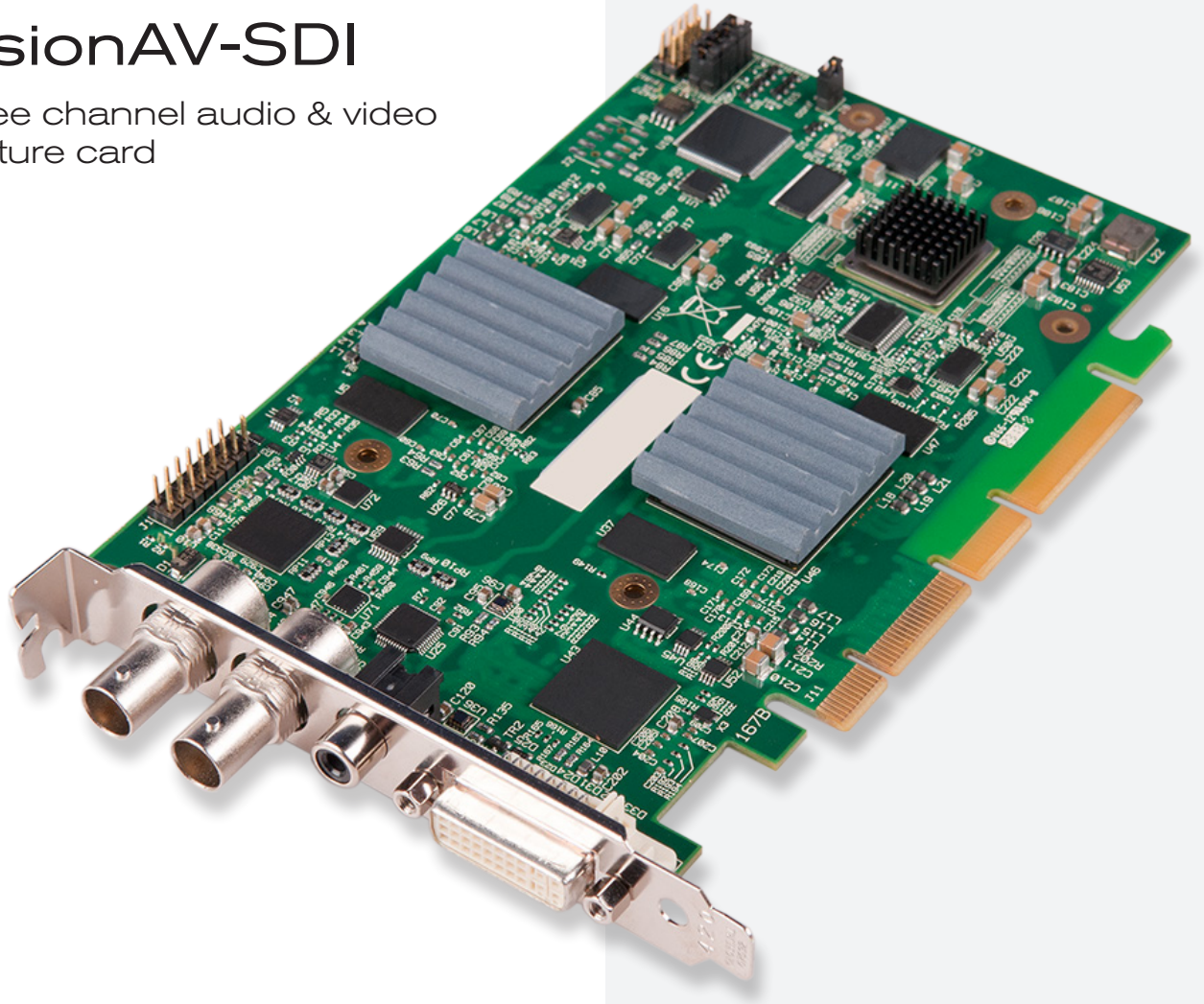
VisionAV-SDI

Three channel audio & video capture card



HIGH PERFORMANCE CARD

The VisionAV-SDI has three independent video capture channels. All channels can be captured simultaneously, one supporting High Definition DVI capture, a second decoding Standard Definition composite video and the third, a High Definition SDI video.

The DVI High Definition channel supports HDMI, DVI, RGB and analog component (YPbPr) input via a DVI-I connector*, at resolutions up to 4096 x 4096 pixels and supports 1080p (1920 x 1080) at 60 frames per second.

The Standard Definition channel is input as composite video on a single RCA connector and can auto-detect between PAL, NTSC and SECAM formats.

The SDI channel supports SD-SDI, HD-SDI and 3G-SDI (including 2K Digital Film Resolution modes).

The VisionAV-SDI also adds embedded HDMI and SDI audio capture, which can be perfectly synchronised with either video capture channel.

Engineering the **world's best** visual solutions

DATAPATH
EXCELLENCE BY DESIGN

Ein Vertriebsprodukt von / Distributed by:
VIDELCO Europe GmbH – Professionelle Audio-, Video-, Medien-Technik
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VIDELCO
Europe GmbH

FEATURES

- 4 Lane PCIe bus, Net 1.6 GB/s total capture bandwidth
- Frame buffer memory - 2 x 256MB
- Direct DMA to graphics memory of third party graphics cards
- Balanced (XLR) and Unbalanced (RCA) audio capture from optional audio module (AM2)
- Datapath unified Windows® driver supports XP and later operating systems and all Datapath PCIe capture cards
- Datapath Linux driver supports common Linux distributions (audio support)

DVI-I capture channel

- HDMI/DVI/RGB/YPbPr video capture
- HDMI embedded Audio Capture and streaming
- Low input to output capture latency

SD/Composite capture channel

- PAL, NTSC, SECAM up to 720 x 576 at 16 Bit colour

SDI capture channel

- SDI embedded Audio Capture and streaming
- Loop through SDI BNC connection

VIDEO STREAMING

DirectShow drivers for WDM Streaming driver supports the following applications, to encode, record and stream video over networks or the Internet:

- Microsoft Media Encoder®
- VLC
- VirtualDub
- Any other DirectShow encoding software

For streaming applications, the VisionAV-SDI can be used with Windows Media Encoder to compress and stream captured video. To replay the video, use Windows Media Player.

Any application compatible with Windows DirectShow technology can use the VisionAV-SDI due to it built-in WDM support.

AUDIO FEATURES

- Flexible input/output mixing capabilities
- Supports audio capture at popular sample rates from 44.1 to 96k samples/s at 16 bits/sample
- Playback and mixing of Analog, embedded HDMI and SDI audio

Input and output connection via the Audio Breakout Cable which is supplied with the optional AM2 audio module attached to a 15 pin high density D-type connector on the Audio Module. The physical connections comprise of:

- Left and right balanced audio input on female XLR jacks
- Left and right unbalanced line inputs on female RCA connectors
- Left and right unbalanced line outputs on female RCA connectors for direct passthrough of selected analog input

To see our full range of Vision features, please visit our product section on our website **www.datapath.co.uk**.

SOFTWARE CAPABILITIES

Timestamp support for streaming synchronisation

- Synchronisation of multiple inputs across multiple cards
- Synchronise systems using network clock synchronisation
- For edge blending and other applications

Flexible and configurable EDID Management

- Allows programming of custom EDID parameters for capture cards

Low input to output capture latency

- Direct DMA to graphics memory of Datapath and third party graphics cards
- Compatibility with AMD DirectGMA
- Compatibility with Nvidia GPUDirect

User Mode filter for source selection

- Enables cropping support in DirectShow on all inputs
- Supports Start and Stop trigger interface on all Vision inputs

Datapath Unified Vision Driver

- Multiple cards per system, 16 streams per input
- Frame sync and time stamping
- DirectShow interface
- The RGBEasy API for advanced audio and video control
- Fully integrated for use with Datapath Wall Control software for video wall applications

COMPATIBILITY

The VisionAV is supported by the following operating systems: Linux, Windows® XP, Windows Vista, Windows Server 2003, Windows Server 2008, Windows 7, Windows 8/8.1 and Windows 10.

Datapath SDK is included for software developers.

SPECIFICATION

BOARD FORMAT
PCI-Express x4 half length, full height card, 110mm x 170mm

CONNECTORS
DVI-I , RCA and 2 x BNC connectors: Input (Green LED) and loop through output (Blue LED)

HDMI CAPTURE
Supports HDMI 1.3 to 225MHz (including deep colour modes)
For HDCP support, contact the Sales Department at Datapath for more information
HDMI audio can be selected as source for audio streaming
Incorporates TMDS equalizer to support up to 20m cables

DVI CAPTURE
Supports DVI 1.0 RGB 24bit capture to 165MHz
Incorporates TMDS equalizer to support up to 20m cables

VGA / YPBPR CAPTURE
Triple ADCs sampling up to 170Msps
Full 4:4:4 sampling, 8 bits per colour
5-wire, 4-wire or sync-on-green signal formats

DVI-I MODES
1920 x 1200/60fps. 32 bit colour, up to 4096 x 4096 resolution

COMPOSITE VIDEO CAPTURE
CCIR601 sampling. PAL, NTSC, SECAM formats automatically detected

SDI CAPTURE
SD-SDI (480i/576i), HD-SDI to 1080i, 3G-SDI up to 1080p and 2K Digital cinema modes
SDI audio can be selected as source for audio streaming

ANALOG AUDIO CAPTURE
Balanced and unbalanced analog Audio Capture (through optional Audio Module)

VIDEO CAPTURE MEMORY
256MB high bandwidth frame buffer supports triple buffering of HD and SD video
Local storage of complex scatter-gather tables for DMA engine (eliminates read overhead)

VIDEO PROCESSING
Polyphase FIR scaling engine (7 x 5) for hardware downscaling and upscaling
Colour space conversion allows captured data to be transferred in any format:
RGB 16 bit (5-5-5, 5-6-5), 24 bit (8-8-8) or 32 bit (8-8-8-alpha)
YUV 16 bit (4:2:2)
Mono: 8bit

DMA ENGINE
Direct DMA to physical or virtual memory buffers with full scatter-gather support
DMA bandwidth: up to 800MB/s
16 independent DMA streams any mix of HD and SD sources, colour space, cropping and scaling parameters

POWER REQUIREMENTS
Max current at +3.3V – 0.9A
Max current at +12V – 0.5A
Max power – 15.5W (typical)

OPERATING TEMPERATURE
0 ºC to 35 ºC / 32 ºF to 96 ºF

STORAGE TEMPERATURE
-20 ºC to 70 ºC / -4 ºF to 158 ºF

RELATIVE HUMIDITY
5% to 90% non-condensing

WARRANTY
3 years

MODELS AVAILABLE

Order Code: VisionAV-SDI
Triple channel HD/SD/SDI capture card

** Adapters for other types of video connectors such as DVI/HDMI, DVI/VGA or DVI/Component are not included with the VisionAV-SDI but are available from Datapath, contact our Sales team for details.*

All products are shipped with the latest software available, unless stated otherwise. Special requirements may be organised by contacting our Sales team.

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