

# VisionIO-SDI4

Quad channel 3G SDI capture card



## LIVE MONITORING AND AUGMENTATION

Today's most popular 4K video standards are inherently point-to-point in nature, yet systems are required to split video pipelines whenever capture and monitoring is required simultaneously. Duplicating frames in software adds latency and uses system resource, whilst external signal splitters are often too cumbersome and unreliable for many professional applications.

The Datapath VisionIO-SDI4 provides four 3G SDI zero latency loop through ports, each with alpha-blended overlay capability. When connected in series between the video source and the local monitor, the VisionIO-SDI4 is capable of capturing video at full quality whilst mixing in overlay data into the live monitoring path without adding latency.

The VisionIO-SDI4 offers a unique solution for the operator who needs both live video and overlay data to be displayed on a single monitor, whilst recording the stream in the background. Whether in a Medical Operating Room overlaying patient data onto surgical camera inputs, or whether adding overlays in Augmented Reality (AR) based applications, the VisionIO-SDI4 offers a uniquely unparalleled and professional solution to the market.

## FEATURES

- 4 x 3G SDI inputs
- 4 x 3G SDI outputs
- Flexible I/O Routing (Any input can be routed to multiple outputs)
- Real time hardware overlay
- Eight lane PCI Express 3.0 capture card
- Capture and display 4x 3G/HD/SD-SDI signals with audio (which can be combined to create one 4K/ UHD capture and display)
- All the features of Datapath's VisionSC range

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

**DATAPATH**  
EXCELLENCE BY DESIGN

# Zero latency loop through with overlay

## MISSION CRITICAL 24/7

The VisionIO-SD14 provides a fail-safe mechanism for the loop through ports, requiring only power for video pass through to be operational. Additionally, the overlay hardware contains a timeout mechanism to prevent applications from corrupting the main video feed in the event of a software crash or other system failure.

## VISION PERFORMANCE FEATURES

The VisionIO series is supported by the Datapath Vision Performance Driver. Optimised at the lowest level to work efficiently with proprietary Datapath hardware, the Vision Performance Driver provides users with a variety of features including Livestream, Multi-Stream, Precision Hardware Timestamping, Efficient DMA Transfer, Flexible Signal Detection and Automatic Mode Changing.

## VIDEO STREAMING

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

- 4 x 3G SDI inputs
- VLC
- Telestream WireCast
- vMix
- Opencast Matterhorn
- Vidblaster
- OBS Project
- Adobe Flash Media Encoder
- Dataton Watchout

Any application compatible with Windows® DirectShow technology can use the VisionIO due to the built-in WDM support. The latest Windows Media Foundation Framework is also supported under the AVStream minidriver framework, allowing application development suitable for the Windows 10 App Store®.

## COMPATIBILITY

The VisionIO-SD14 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.

## MODELS AVAILABLE

Order Code: VisionIO-SD14  
Four channel card with 4 SDI inputs/outputs + overlay

## SPECIFICATION

### BOARD FORMAT

PCIe x8 plug-in card

### DIMENSIONS

110 mm x 177 mm (incl heat sink)

### CONNECTORS

4 x BNC Connectors

### MAX CAPTURE RESOLUTION

2.97Gbps capture bandwidth per channel.  
Provides => 4 \* 1920 x 1080p at 60Hz. Frame Buffer 768MB

### INPUT MODE DETECTION

Supports SMPTE - 352 Payload Identifiers

### SAMPLE FORMATS

RGB: 4-4-4 (+A)  
YUV: 4:2:2 (+A), 4:4:4 (+A)

### SMPTE STANDARDS

ST-259, ST-272, ST-274, ST-291, ST-292, ST-293, ST-296, ST-299, ST-352, ST-424, ST-425, ST-2048

### UPDATE RATE

User defined. Captured frame rate will match the source providing max data rate (6.4GB/s per channel) is not exceeded. Multi-buffered to eliminate tearing artefacts

### VIDEO MODES

480i, 576i 720p, 1080i, 1080p, 1080psF, 2048 x 1080p, 2048 x 1080psF

### SUPPORTED FRAME RATES

23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz, 50Hz, 59.94Hz & 60Hz

### POWER

Max current at +3.3 - 0.45A.  
Max current at +12V - 0.85A  
Max power ≈ 18W

### OPERATING TEMP

0 °C to 35 °C / 32 °F to 96 °F

### STORAGE TEMP

-20 °C to 70 °C / -4 °F to 158 °F

### RELATIVE HUMIDITY

5% to 90% non-condensing

### WARRANTY

3 years

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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