



SYNAPSE  
CONVERTER



CONVERT VIDEO AND AUDIO STREAMS IN REAL TIME BETWEEN  
AN EXTENSIVE RANGE OF INDUSTRY STANDARD FORMATS

**ANALOG ⇒ SDI**

**HDMI ⇒ SDI**

**SDI ⇒ HDMI**

**ANA140**  
ANALOG ⇒ SDI

**BLUEFISH444**  
ANALOGUE TO HD/SD-SDI CONVERTER



**HDMI120**  
HDMI ⇒ SDI

**BLUEFISH444**  
HDMI TO HD/SD-SDI CONVERTER



**SDI 110**  
SDI ⇒ HDMI

**BLUEFISH444**  
HD/SD-SDI TO HDMI CONVERTER



	A/V INPUTS	CONVERSIONS	A/V OUTPUTS	FEATURES
<b>Video I/O</b>	1 x YUV, 1 x S-video 1 x Composite	1 x Analogue => 2 x HD-SDI (3Gb/s)	2 x HD-SDI (3Gb/s)	HD SDI Downconversion PsF Modes Redundancy Channel HD/SD-SDI Preview
<b>Audio I/O</b>	1 x Stereo Unbalanced Audio 1 x Digital Audio AES/EBU pair	Muxed with video input => Embedded Audio	2 x Embedded Audio	

Synapse conversions from Analogue to HD/SD-SDI are configured via DIP switches on the side of the converter.

YUV, S-Video or Composite Analogue video is converted to 2 x HD/SD-SDI (3Gb/s). Stereo pair Analogue audio, or, stereo pair AES EBU audio signals are muxed together with Analogue video inputs and converted to 2 channels of embedded audio within the resulting HD/SD-SDI streams.

Two HD/SD-SDI outputs are available after conversion. The second can be used as a backup in the event of redundancy, or, as a downconverted simultaneous HD/SD-SDI output for preview.

An on-screen display utility provides status information about the configuration settings of the converter and an embedded pattern generator is available to calibrate 3rd party monitors.

	A/V INPUTS	CONVERSIONS	A/V OUTPUTS	FEATURES
<b>Video I/O</b>	2 x HDMI1.3 8 Channels of Embedded Audio	1 x HDMI1.3 => 2 x HD-SDI (3Gb/s)	2 x HD-SDI (3Gb/s) 8 Channels of Embedded Audio	HD SDI Downconversion PsF Modes Redundancy Channel HD/SD SDI Preview
<b>Audio I/O</b>	1 x Stereo Unbalanced Audio 1 x Digital Audio AES/EBU pair	Muxed with HDMI input => Embedded Audio	2 x Embedded Audio	

HDMI 1.3 Input supports 8 channels of embedded audio and 12/10/8-bit acquisition.

A second HDMI input is provided for redundancy, providing a fail-safe mechanism should the first HDMI input be lost. Independent stereo Analogue and Digital audio inputs can be muxed together with HDMI and output and HD/SD-SDI with 2 channels of embedded audio in SDI.

Two HD/SD-SDI outputs are provided. The second can be used as a backup in the event of redundancy, or, as downconverted simultaneous HD/SD-SDI outputs for preview.

An on-screen display utility provides status information about the configuration settings of the converter and an embedded pattern generator is available to calibrate 3rd party monitors.

	A/V INPUTS	CONVERSIONS	A/V OUTPUTS	FEATURES
<b>Video I/O</b>	2 x HD/SD-SDI 3Gb/s	1 x HD/SD-SDI 3Gb/s => 1 x HDMI 1.3	1 x HDMI 1.3 1 x HD-SDI (3Gb/s)	HD-SDI Downconversion PsF Modes Redundancy Channel HD/SD-SDI Loop
<b>Audio I/O</b>	8 Channels of Embedded Audio	Embedded Audio => Stereo Analogue/Digital Audio	1 x Stereo Unbalanced Audio 1 x digital AES/EBU Pair	

Synapse conversions from HD/SD-SDI to HDMI include video scaling, PsF mode and de-interlacing, all configured via dip switches on the side of the converter.

The HD/SD-SDI input signal is simultaneously displayed as an HD/SD-SDI loop-through. A second SDI input is provided for redundancy, providing a fail-safe mechanism should an input be lost.

An on-screen display utility provides status information about the configuration settings of the converter and an embedded pattern generator is available to calibrate 3rd party monitors.

AT A GLANCE	SDI110	HDMI120	ANA140
Video Input	3G/HD/SD-SDI	HDMI1.3	CVBS/YPBPR/S-VIDEO
Video Output	HDMI1.3	3G/HD/SD-SDI	3G/HD/SD-SDI
Audio Input	SDI EMBEDDED	HDMI/AES/ANA	AES/ANA
Audio Output	HDMI/AES/ANA	SDI EMBEDDED	SDI EMBEDDED
2nd Copy Output	NA	SDI 2	SDI 2
2nd Fail-safe Input	SDI 2	HDMI 2	NA
SDI Loop Output	SDI LOOP	NA	NA
Downconverter	YES	YES	YES
On-screen Status	YES	YES	YES
De-interface	YES	NA	NA
PsF Mode	YES	YES	YES



“Vizrt is pleased to qualify and recommend the Bluefish444 Synapse converters because they are reliable and tailored to broadcasters needs.”

**Gerhard Lang, Chief Engineering Officer, Vizrt**



“The analog to SDI conversion is flawless... Our impression of the product is simple amazement. It’s cost effective, flawless, and has exceeded all our expectations.”

**Walter Procek, President, Reboot Entertainment**



“We are very happy with the performance and the economy of the products. They were easy to configure out of the box, and they do what we need them to do. I believe they have solved two important issues in our video editing workflow, and they have performed rock-solid.”

**Wayne Mills, Avid Certified Trainer, Southern Illinois University Edwardsville**