



SYNAPSE
C O N V E R T E R

Announcing the Bluefish444 range of Synapse converter products. Designed and manufactured with the same “No Compromise” attitude to quality as our video cards, Bluefish444 completes the hardware workflow chain with a suite of stand-alone Synapse conversion products.

Feature Packed & Easy to Use

Synapse converters are controlled by easily accessible dip switches on the side of each converter. Simply choose a setting to convert in real time between an extensive range of industry formats such as HD SDI 3Gb/s, HDMI 1.3, Component, S-Video, Composite, SDI Embedded Audio, Stereo Unbalanced Audio and AES/EBU Digital Audio.

Extra I/O provided for Redundancy

Unlike most other converters, Bluefish444 has added an extra connector on the Synapse range to insure against a workflow disaster in the event a signal is lost. Don't let equipment failures ruin your workflow! If an HD SDI or HDMI signal is lost on the way, Bluefish444 has a failsafe mechanism to keep you converting.

Complete the Hardware Workflow Chain

If you are one of Bluefish444's 20,000 installed customers, you no longer have to use a 3rd party manufacturer's converter in your Bluefish444 uncompressed SDI workflow. Bluefish444 can now offer stand alone converters designed and manufactured to the same exacting standards as our world renowned uncompressed SDI video cards.



ANA140
ANALOG ⇒ SDI

SYNAPSE
CONVERTER

Bluefish444's Analog to HD/SD-SDI Converter

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

YUV, S-Video or Composite Analog video is converted to 2 X HD/SD-SDI (3Gb/s). Stereo pair Analog audio, or, stereo pair AES EBU audio signals are muxed together with Analog 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.

ANA140 - Key Features

VIDEO MODES

1080P, 720P AT 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 FPS
1080I AT 25 / 29.97 / 30 FPS
576P, 486i, 480P, 576i, 480i AT 25 / 29.97 FPS

VIDEO INPUT

1 x YUV (SMPTE-274)
1 x S-VIDEO
1 x COMPOSITE

AUDIO INPUT

1 x STEREO UNBALANCED AUDIO @ 48KHZ
1 x DIGITAL AUDIO AES/ EBU PAIR

VIDEO OUTPUT

2 x HD-SDI 3GB/s
2ND HD-SDI 3GB/s IS A REDUNDANCY CHANNEL
SDI COMPLIANCE: SMPTE-259M, SMPTE-292M & SMPTE-424M

DOWNSCALING AVAILABILITY (BOTH OUTPUTS)

1080P 60/50	▶	720P 60/50
720P 50	▶	576i 25
720P 59.94/60	▶	486i 29.97/30
1080i 25	▶	576i 25
1080i 29.97/30	▶	486i 29.97/30

PROGRESSIVE ▶ PSF PROCESSING

1080P 60	▶	1080i 30
1080P 50	▶	1080i 25
1080P 24	▶	1080i 24

AUDIO OUTPUT

2 X EMBEDDED AUDIO CHANNELS IN SDI

OTHER FEATURES

UPGRADABILITY THROUGH USB CONNECTOR
LOCKABLE CONNECTOR
AUTO-ADAPTATION SD & HD
STATUS LED INDICATOR
12 BIT A/D CONVERSION



ANA140 back



ANA140 front



	A/V Inputs	Conversions	A/V Outputs	Features
Analog Video Inputs	1 x YUV, 1 x S-video 1 x Composite	1 x Analog => 2 x HD-SDI (3Gb/s)	2 x HD-SDI (3Gb/s)	HD SDI Downconversion PsF Modes
Audio Inputs	1 x Stereo unbalanced audio 1 x digital audio AES/EBU pair	Muxed with video input => Embedded Audio	2 x Embedded Audio	Redundancy Channel HD/SD-SDI Preview

Bluefish444's HDMI To HD/SD-SDI Converter

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

A second HDMI input is provided for redundancy, providing a fail safe mechanism should the first HDMI input be lost. Independent stereo Analog 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.

HDMI120 - Key Features

VIDEO MODES

1080P, 720P AT 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 FPS
1080I AT 25 / 29.97 / 30 FPS
576P, 486i, 480P, 576i, 480i AT 25 / 29.97 FPS

VIDEO INPUT

2 x HDMI v1.3 WITH 8 CHANNELS OF EMBEDDED AUDIO
2ND HDMI v1.3 IS A REDUNDANCY CHANNEL

- 30/36 BITS PER PIXEL
- 4:2:2 YCbCr
- 4:4:4 YCbCr/RGB 24 BIT
- 1080P 50/60

AUDIO INPUT

1 x STEREO UNBALANCED ANALOG AUDIO @ 48KHZ
1 x DIGITAL AUDIO AES/EBU PAIR
8 x DIGITAL AUDIO EMBEDDED IN HDMI

VIDEO OUTPUT

2 x HD-SDI 3Gb/s
2ND HD-SDI 3GB/S IS A REDUNDANCY CHANNEL
SDI COMPLIANCE: SMPTE-259M, SMPTE-292M & SMPTE-424M

DOWNSCALING AVAILABILITY (BOTH OUTPUTS)

1080P 60/50	▶	720P 60/50
720P 50	▶	576i 25
720P 59.94/60	▶	486i 29.97/30
1080i 25	▶	576i 25
1080i 29.97/30	▶	486i 29.97/30

PROGRESSIVE ▶ PSF PROCESSING

1080P 60	▶	1080i 30
1080P 50	▶	1080i 25
1080P 24	▶	1080i 24

AUDIO OUTPUT

8 x EMBEDDED AUDIO IN SDI, VIA HDMI 1.3 INPUT
2 x EMBEDDED AUDIO IN SDI VIA MUXED AUDIO INPUT

OTHER FEATURES

UPGRADABILITY THROUGH USB CONNECTOR
LOCKABLE CONNECTOR
AUTO-ADAPTATION SD & HD
STATUS LED INDICATOR



HDMI120 back



HDMI120 front



	A/V Inputs	Conversions	A/V Outputs	Features
Video Inputs	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
Audio Inputs	1 x Stereo unbalanced audio 1 x digital audio AES/EBU pair	Muxed with HDMI input => Embedded Audio	2 x Embedded Audio	

Bluefish444's HD/SD-SDI To HDMI Converter

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.

SDI110 - Key Features

VIDEO MODES

1080P, 720P AT 23.98 / 24 / 25 / 29.97 / 30 / 50 / 59.94 / 60 FPS
1080I AT 25 / 29.97 / 30 FPS
576P, 486i, 480P, 576i, 480i AT 25 / 29.97 FPS

VIDEO INPUT

2 x HD-SDI 3 GB/s
2ND HD-SDI 3GB/S IS A REDUNDANCY CHANNEL

AUDIO INPUT

8 x CHANNELS OF EMBEDDED AUDIO

VIDEO OUTPUT

1 x HD/SD-SDI 3GB/s (LOOP PREVIEW)
1 x HDMI v1.3
• 30/36 BITS PER PIXEL
• 4:2:2 YCbCr
• 4:4:4 YCbCr/RGB 24 BIT
• 1080P 50/60
SDI COMPLIANCE: SMPTE-259M, SMPTE-292M & SMPTE-424M

DOWNSCALING AVAILABILITY (BOTH OUTPUTS)

1080P 60/50	▶	720P 60/50
720P 50	▶	576i 25
720P 59.94/60	▶	486i 29.97/30
1080i 25	▶	576i 25
1080i 29.97/30	▶	486i 29.97/30

PROGRESSIVE ▶ PSF PROCESSING

1080P 60	▶	1080i 30
1080P 50	▶	1080i 25
1080P 24	▶	1080i 24

AUDIO OUTPUT

1 x STEREO UNBALANCED ANALOG AUDIO
1 x AES/EBU DIGITAL AUDIO PAIR
8 x EMBEDDED AUDIO IN HDMI 1.3 VIDEO

DE INTERLACE PROCESSING

1080i 30	▶	1080P 60
1080i 25	▶	1080P 50
1080i 24	▶	1080P24

OTHER FEATURES

UPGRADABILITY THROUGH USB CONNECTOR
LOCKABLE CONNECTOR
AUTO-ADAPTATION SD & HD
STATUS LED INDICATOR



SD110 back



SD110 front



	A/V Inputs	Conversions	A/V Outputs	Features
Video Inputs	2 x HD/SD-SDI 3G/bs	1 x HD/SD-SDI 3G/bs ⇒ 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
Audio Inputs	8 Channels of Embedded Audio	Embedded Audio ⇒ Stereo Analog/Digital Audio	1 x Stereo Unbalanced Audio 1 x digital AES/EBU Pair	

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