



2HX10

Dual channel HD/SD integrity checking probe with clean switch over function and wings or split screen creation capabilities

A Synapse® product

Synapse

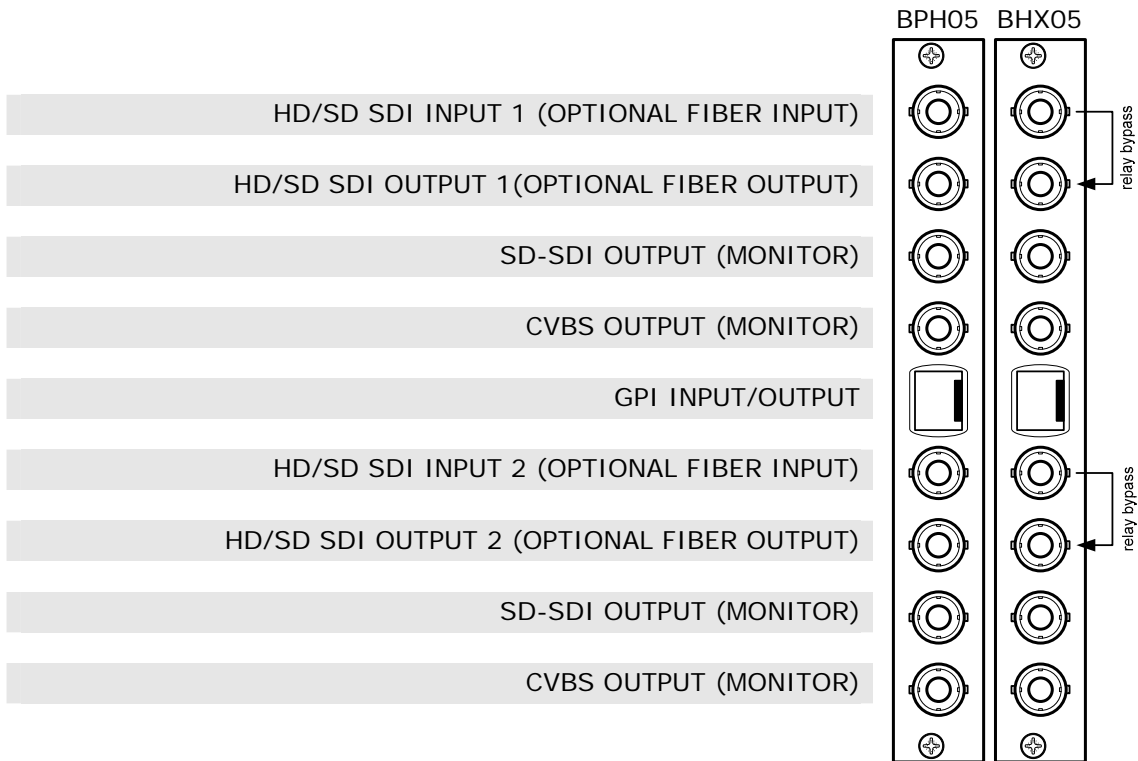
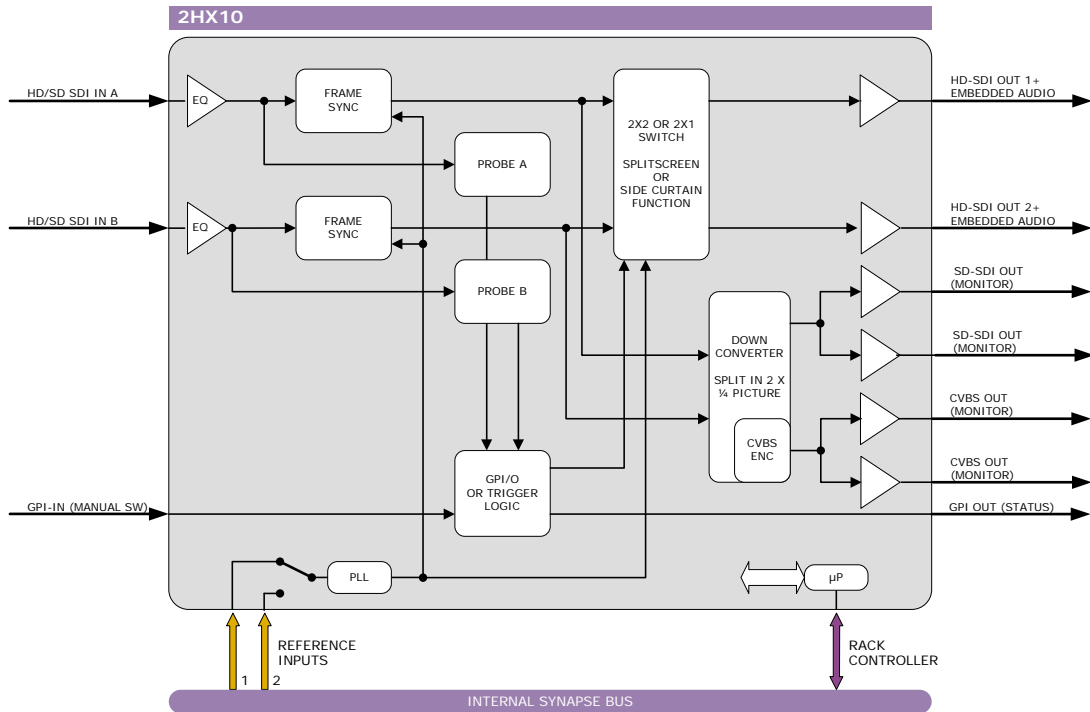


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Block schematic & I/O panel



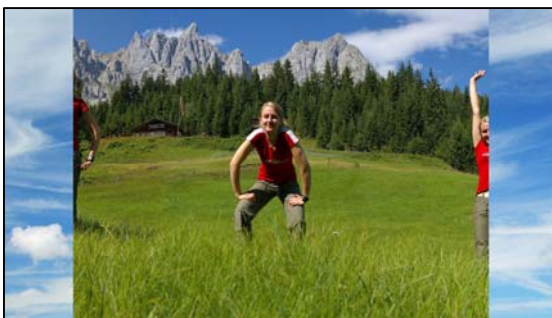
Features

The 2HX10 is a dual channel high performance HD/SD SDI video and embedded audio probe (signal integrity monitor) with clean switch-over function. The switch function can be triggered by any of the integrity controls or by GPI. Besides the extensive probe functions, the cards also provide full line and frame synchronization on both inputs. A monitor output available in both SD and CVBS shows both inputs on a single screen (1/4 size each)

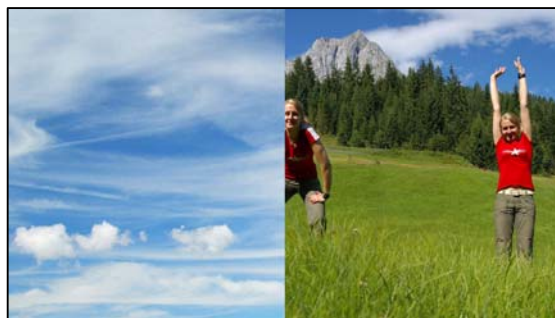
- Clean backup switching through built-in frame synchronizers
- Preview output showing both signals on a single screen (monitoring quality)
- Creating wings and split screens
- Probe functions:
 - SDI carrier detect
 - TRS validation
 - ANC checksum validation
 - Video content freeze detection
 - Video content black detection
 - Timecode availability
 - Audio channel detection (16 channels)
 - Audio silence detection (4 pairs 2 groups)
 - Audio Phase reversal detection within one group (4 pairs)
 - Audio Clip/5 sample full-scale indication (4 pairs)
 - Dolby E present detection
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)
- Optional 2 fiber inputs (replacing 2 SDI inputs) or 2 fiber outputs (replacing 2 SDI outputs) on I/O panel

Applications

- The 2HX10 can be used as station output card, and ingest quality control card or a generic 2 x 2 switch.
- The integrity checking can also be performed for alarm monitoring purposes with the switch function disabled.
- Generic probing with automatic back-up switching
- Creation of wings (see picture 1)
- Creation of split screens (see picture 2)



Picture 1: Wings example



Picture 2: Split screen example

Ordering information

Module:

- **2HX10:** Dual channel HD/SD integrity checking probe with switch over function

Standard I/O:

- **BPH05_2HX10:** I/O-panel for 2HX10
- **BHX05_2HX10:** I/O-panel with relay bypass for 2HX10

Fiber outputs:

- **BPH05T2_FC/PC_2HX10:** I/O-panel for 2HX10 with 2 fiber transmitter on FC/PC
- **BPH05T2_SC_2HX10:** I/O-panel for 2HX10 with 2 fiber transmitter on SC

Fiber inputs:

- **BPH05R2_FC/PC_2HX10:** I/O-panel for 2HX10 with 2 fiber receiver on FC/PC
- **BPH05R2_SC_2HX10:** I/O-panel for 2HX10 with 2 fiber receiver on SC

Specifications

HD/SD Serial Video Input

Standard	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio SMPTE 292M (1.5Gb/s), SMPTE 260M, SMPTE 274M, SMPTE 296M, SMPTE 349M 1080i/59.94, 1080i/50, 720p/59.94, 720p/50
Equalization	Automatic to 100m @ 1.5Gb/s with Belden 1694A or equivalent cable.
Number of inputs	2 (auto or manual selection)
Return Loss	> 15dB up to 1.5GHz

HD/SD Serial Video Output

Standard	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio SMPTE 292M (1.5Gb/s), SMPTE 260M, SMPTE 274M, SMPTE 296M, SMPTE 349M 1080i/59.94, 1080i/50, 720p/59.94, 720p/50
Signal Level	800mV nominal
DC Offset	0V \pm 0.5V
Rise and Fall Time	200ps nominal for HD, 750ps nominal for SD
Overshoot	< 10% of amplitude
Return Loss	> 15dB up to 1.0Gb/s, > 10dB up to 1.5Gb/s

SD Serial Video output

Standard	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio
Number of Outputs	2
Signal Level	800mV nominal
DC Offset	0V \pm 0.5V
Rise/Fall Time	800ps nominal
Overshoot	< 10% of amplitude
Return Loss	> 15dB up to 270MHz
Return Loss	> 15dB at 270Mb/s
Wideband Jitter	< 0.2UI
Video Delay	1 field

Analog Video Output

Standard	PAL (ITU624-4) or NTSC (SMPTE 170M)
Number of Outputs	2
Connector	BNC
Signal Level	1V nominal
Impedance	75 Ohms
Return Loss	> 35dB to 10MHz
Frequency Response	0.5dB to 4.5 MHz
Differential Gain	< 0.6%
Differential Phase	< 0.7°
SNR	> 75dB

Miscellaneous

Weight	Approx. 250g
Operating Temperature	0 °C to +50 °C
Dimensions	137 x 296 x 20 mm (HxWxD)

Electrical

Voltage	+24V to +30V
Power	<13 Watts