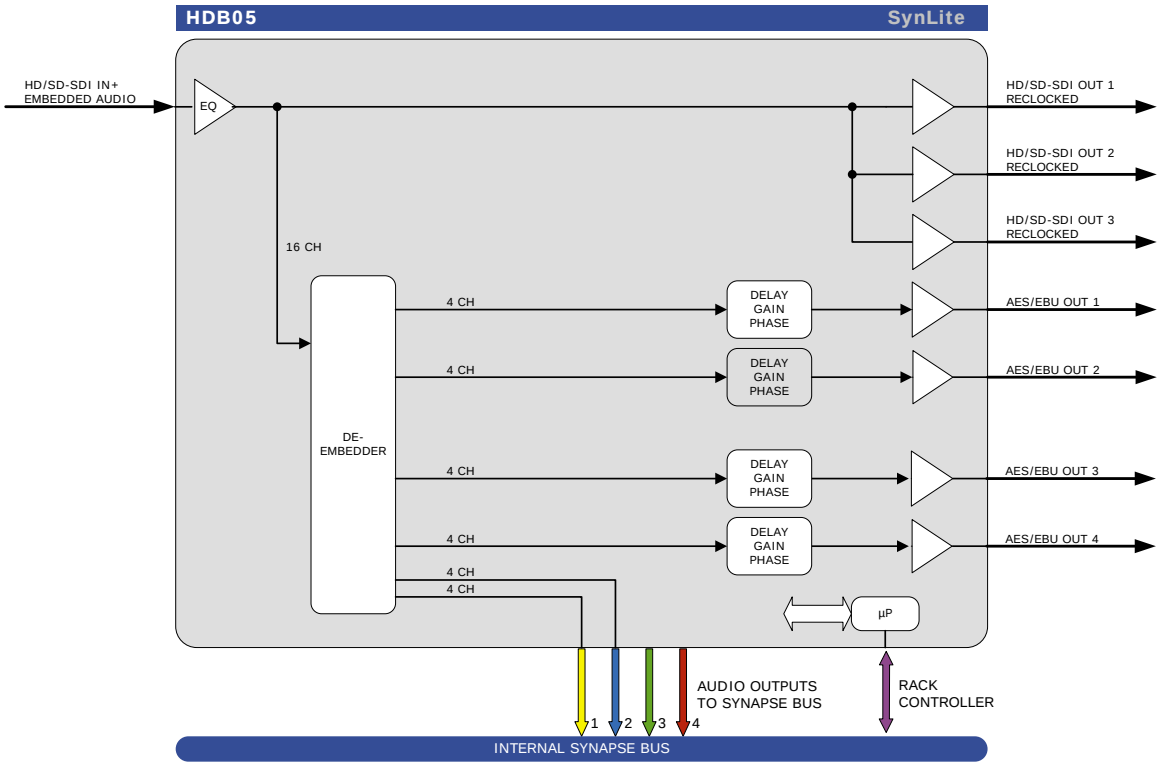
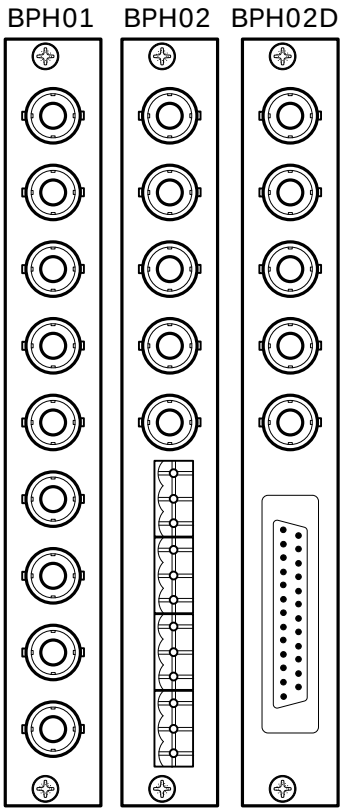
HDB05

HD/SD preset based audio de-embedder

A Synapse ® product

Block schematic & I/O panel





HD/SD SDI INPUT (OPTIONAL FIBER)

HD/SD SDI RECLOCKED OUTPUT

HD/SD SDI PROCESSED OUTPUT 1

HD/SD SDI PROC. OUTPUT 2 (OPTIONAL FIBER)

AES/EBU OUTPUT 1

AES/EBU OUTPUT 2

AES/EBU OUTPUT 3

AES/EBU OUTPUT 4

HD/SD SDI INPUT (OPTIONAL FIBER)

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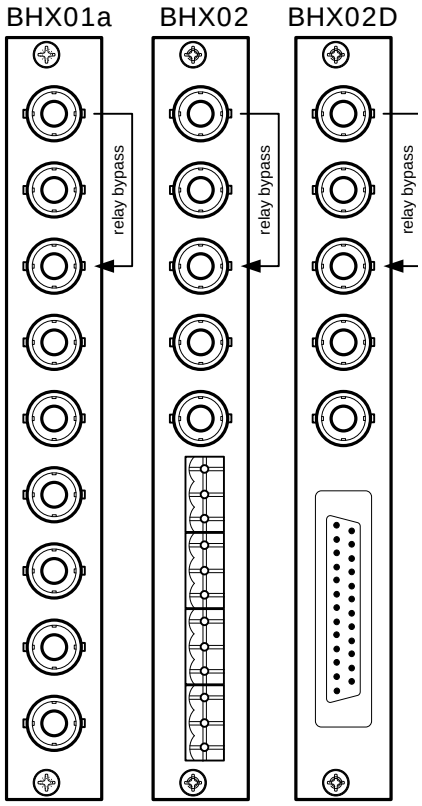

Features

The HDB05 is an HD SDI and SD SDI digital audio de-embedder. It is an audio extractor that outputs four AES/EBU streams on the board itself and four ADD-ON audio signals via the local bus to two ADD-ON Cards. All chosen settings are stored in presets, these presets (8) can be restored via automation to fire up a salvo with 16 independent audio channels in any combination (even duplicates).

- 16 channel (4 group) de-embedder
- 4 local AES/EBU outputs
- 8 extra outputs through ADD-ON Cards
- 3 x reclocked HD SDI output
- 8 presets that configure all 16 output channels at once.
- Audio level and phase control (local outputs only)
- Audio offset delay (local outputs only) up to 2600 ms
- Free selection of all embedded channels
- Peak detection 0, -6, -12 and -18dBFS
- Silence detection with threshold (-100 to -20dBFS) and time control (1 to 255 sec)
- Audio format detection (e.g. AC3, Dolby E and PCM)
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)
- Optional 1 fiber input (replacing 1 SDI input) or 1 fiber output (replacing 1 SDI output) on I/O panel

Complementary cards

- DAC20, DAC24, ADL24, DAS24, DIO48

Applications

- HD and SD preset based 8 channel de-embedding
- HD and SD preset based 16 channel de-embedding with DIO48

Ordering information

Module:

- **HDB05:** HD/ SD preset based audio de-embedder

Standard I/O:

- **BPH01_HDB05:** I/O panel for HDB05 with unbalanced AES/EBU out
- **BPH02_HDB05:** I/O for HDB05 with balanced AES/EBU out
- **BPH02D_HDB05:** I/O panel for HDB05 with balanced AES/EBU out on sub-D

Relay bypass I/O:

- **BHX01_HDB05:** I/O panel for HDB05 with unbalanced AES/EBU out with relay bypass
- **BHX02_HDB05:** I/O for HDB05 with balanced AES/EBU out with relay bypass
- **BHX02D_HDB05:** I/O panel for HDB05 with balanced AES/EBU out on sub-D with relay bypass

Fiber outputs:

- **BPH01T_FC/PC_HDB05:** I/O panel HDB05 with fiber transmitter on FC/PC
- **BPH01T_SC_HDB05:** I/O panel for HDB05 with fiber transmitter on SC
- **BPH02T_FC/PC_HDB05:** I/O panel for HDB05 with fiber transmitter on FC/PC
- **BPH02T_SC_HDB05:** I/O panel for HDB05 with fiber transmitter on SC
- **BPH02DT_FC/PC_HDB05:** I/O panel for HDB05 with fiber transmitter on FC/PC
- **BPH02DT_SC_HDB05:** I/O panel for HDB05 with fiber transmitter on SC

Fiber inputs:

- **BPH01R_FC/PC_HDB05:** I/O panel for HDB05 with fiber receiver on FC/PC
- **BPH01R_SC_HDB05:** I/O panel for HDB05 with fiber receiver on SC
- **BPH02R_FC/PC_HDB05:** I/O panel for HDB05 with fiber receiver on FC/PC
- **BPH02R_SC_HDB05:** I/O panel for HDB05 with fiber receiver on SC
- **BPH02DR_FC/PC_HDB05:** I/O panel for HDB05 with fiber receiver on FC/PC
- **BPH02DR_SC_HDB05:** I/O panel for HDB05 with 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, 1080p/24, 1080p/23.98
Equalization	Automatic to 100m @ 1.5Gb/s with Belden 1694A or equivalent cable.
Return Loss	> 15dB up to 1.5GHz

HD 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, 1080p/24, 1080p/23.98
Signal Level	800mV nominal
DC Offset	0V ±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
Wideband Jitter	< 0.2UI

AES Audio Output

Number of Outputs	4
Connector	BNC, Screw terminal or 25 pins female sub-D (balanced)
Resolution	24 bits
Sampling Rate	48KHz synchronous
Minimum Input/Output Delay	1.5ms
Maximum Input/Output Delay	5400 ms

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	<7 Watts