Synapse

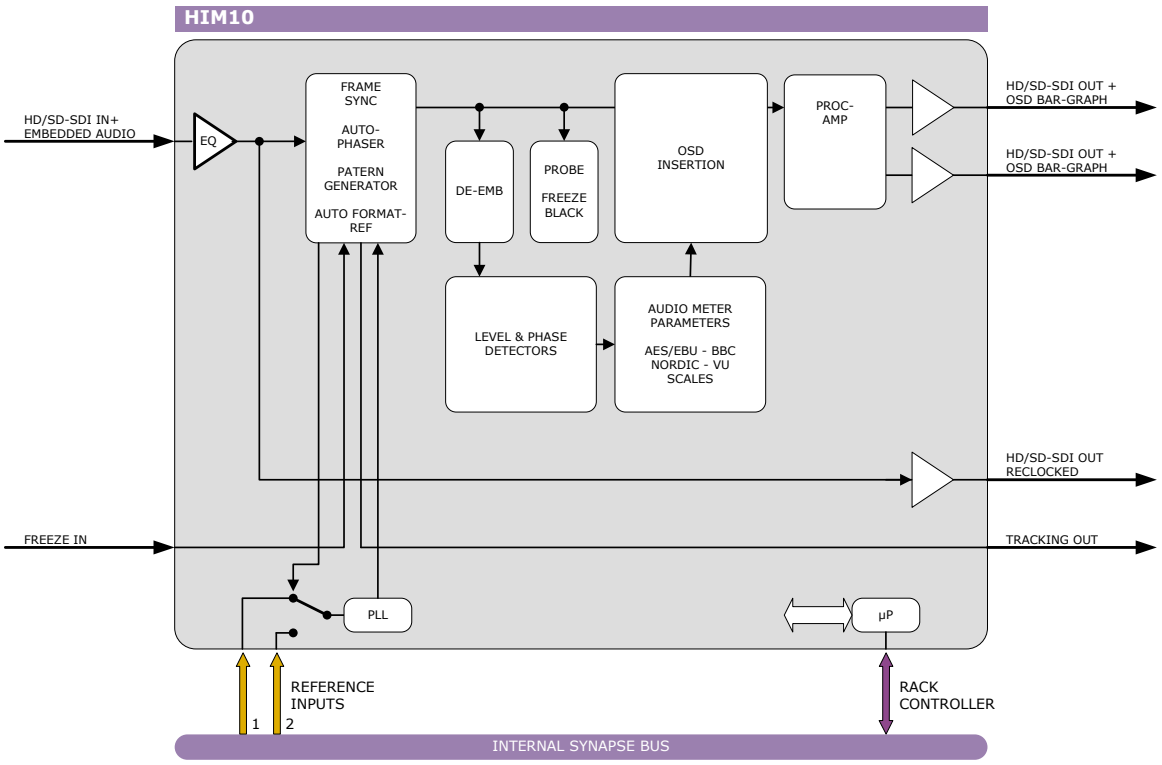
HFS05T

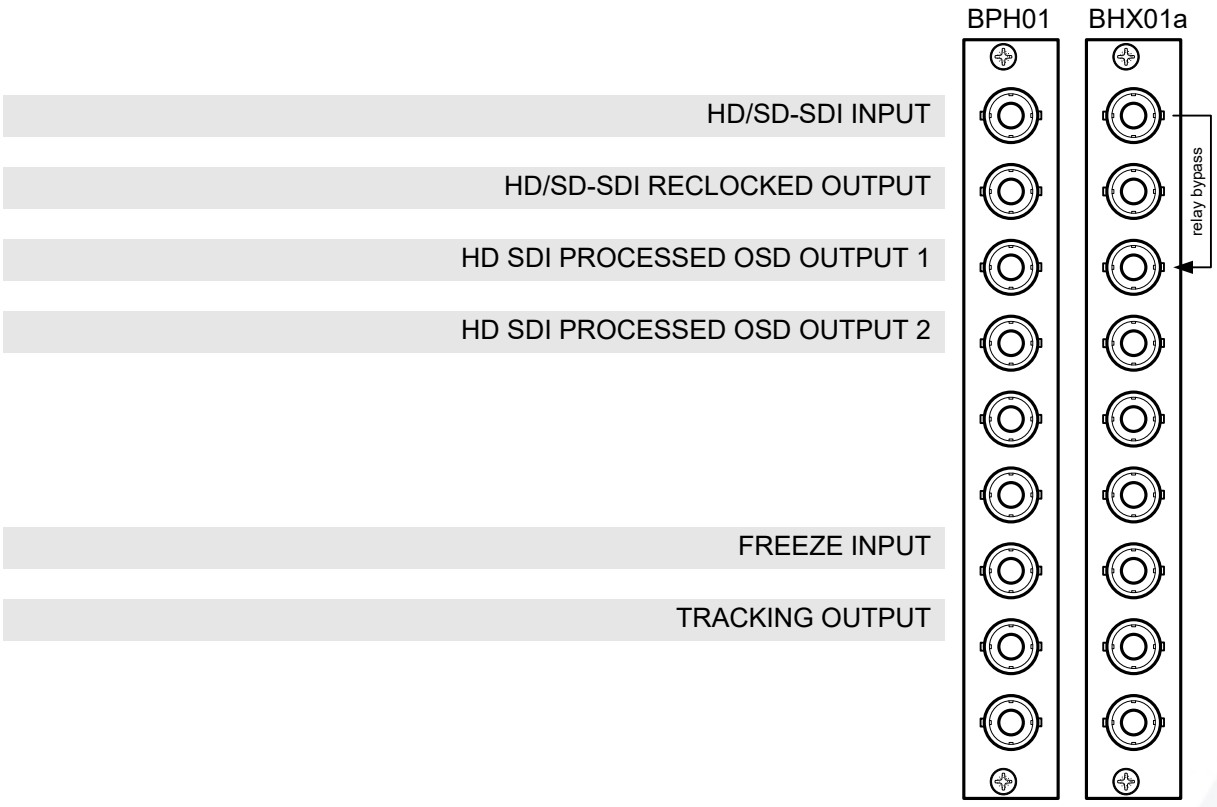
HD/SD integrity checking/probe with audio and phase OSD bar-graph insertion

A Synapse® product

HD
High definition

Block schematic & I/O panel





Features

The HIM10 is an HD/SD Integrity checking probe with OSD audio level & phase bar graphs. The input can detect loss of input, freeze frame and black level. It is based on a full functioning frame synchronizer with auto phasing capabilities (line-synchronizer).

The OSD bar-graph features up to 4 audio levels where each bar can be any of the 16 embedded audio channels. The two phase meters show the phase between the bars 1 and 2, and between bar 3 and 4.

- Full HD/SD frame synchronizer
- Compatible with the following standards:
  - 1080i-59.94
  - 1080i-50
  - 1080p-29.97
  - 1080p-25
  - 1080p-24
  - 1035i-59.94
  - 720p-59.94
  - 720p-50
  - SD525
  - SD625
- Synchronize, delay and free-run modes
- Locks to Bi and Tri level syncs
- Offset H and V adjustment
  - Up to 2199 pixels H
  - Up to 1124 lines V
- Manual Freeze
- GPI Freeze
- Field and Frame Freeze modes
- On input loss display:
  - Freeze
  - Black
  - Grey
  - Green
- Built-in Proc-amp with individual controls for Y, Cr, Cb, Y-Black, Cb-Black, Cr-Black
- Line lock mode for better auto-phasing
- Selectable ANC blanking of H. V or H&V
- Delay status information
- Switch status information
- Embedded audio locking to embedded audio clock or Video clock
- 4 free selectable OSD audio level Bar-graphs
- Masked or transparent bar-graphs
- AES/EBU, BBC, Nordic and VU scales
- Picture freeze and black detection between 1 and 4000 frames
- Adjustable thresholds for freeze and black (allows for detection of noisy signals)
- Audio silence detection with adjustable time (1-255 sec) and level (-20 to -100 dBFs)
- Locks to Bi-level, Tri-level sync and SDI input
- Full control and status monitoring through the front panel of the SFR08/SFR18 frame and the Ethernet port (ACP)

Applications

The HIM10 can be used as an active probe in an ingest or lines centre. The unit can also perform audio level and phase insertion (OSD) for use in a lines centre, Control-room and OB van applications.

Ordering information

Module:

- **HIM10:** HD/SD integrity checking/probe with audio and phase OSD bar-graph insertion

Standard I/O:

- **BPH01_HIM10:** I/O panel for HIM10

Relay bypass I/O:

- **BHX01a_HIM10:** I/O panel with relay bypass for HIM10

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.
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
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

Reference Input through ERC

Number of Inputs	2 on SFR18, 2 on SFR08 and 1 on SFR04
Bi-level	PAL Black Burst ITU624-4/SMPTE318, Composite NTSC SMPTE 170M 1Vp-p nominal, 75 Ohms terminated through loop

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	<8 Watts