



## HIM10

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

**A Synapse® product**

The logo for Synapse, written in a light blue, cursive script font with a slight shadow effect.

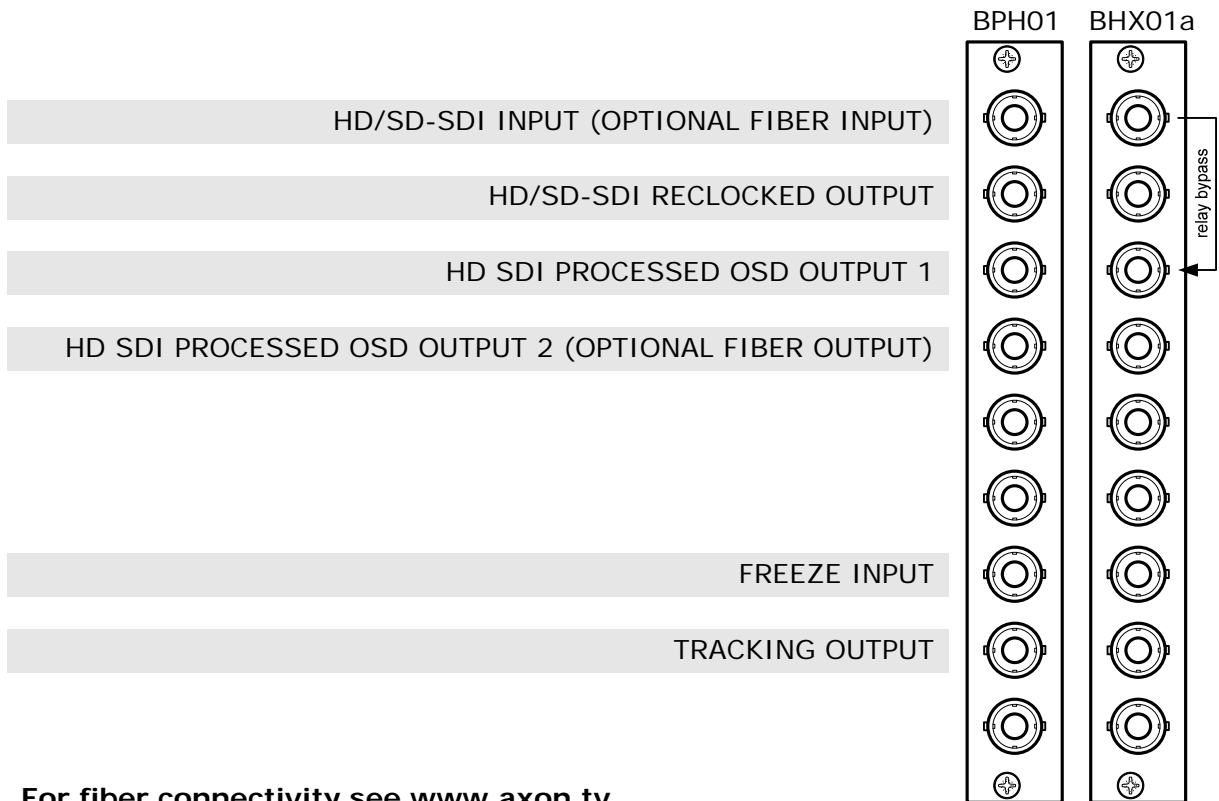
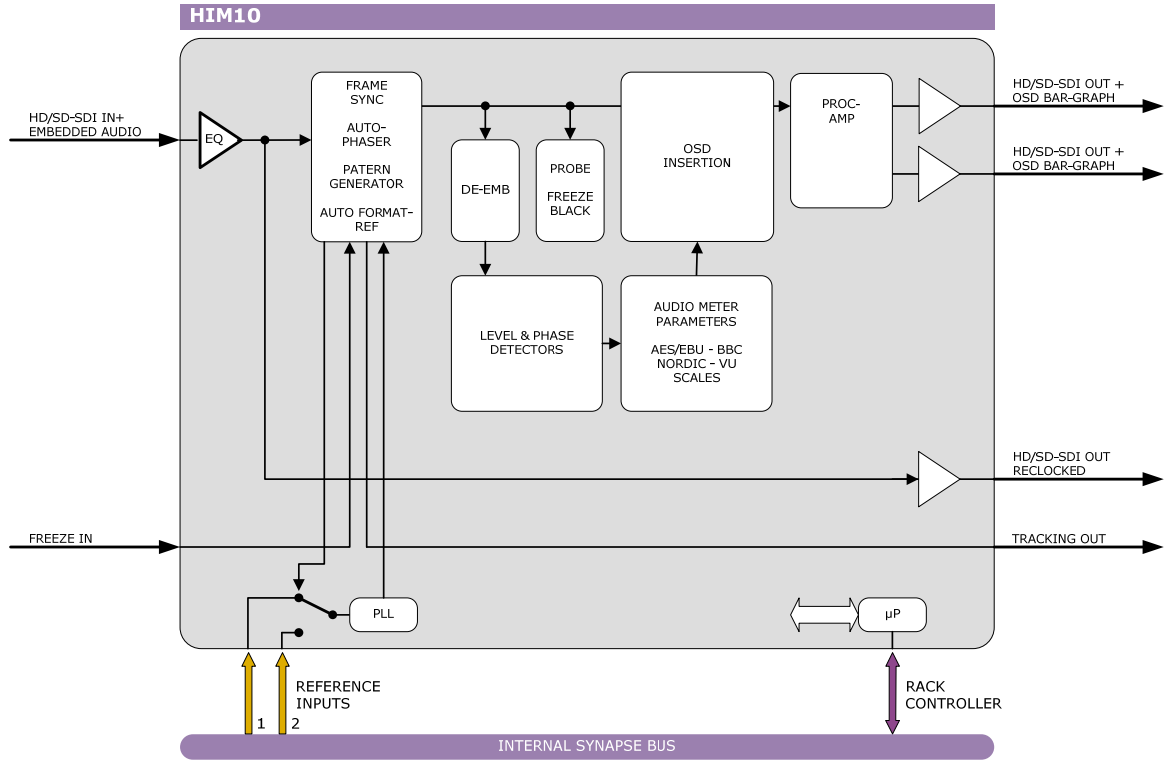


COPYRIGHT © 2011 AXON DIGITAL DESIGN BV

ALL RIGHTS RESERVED

NO PART OF THIS DOCUMENT MAY BE REPRODUCED IN ANY FORM WITHOUT THE PERMISSION OF  
AXON DIGITAL DESIGN BV.

Block schematic & I/O panel



For fiber connectivity see [www.axon.tv](http://www.axon.tv)

## 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 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

## 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

### Fiber outputs:

- **BPH01T\_FC/PC\_HIM10:** I/O panel for HIM10 with fiber transmitter on FC/PC
- **BPH01T\_SC\_HIM10:** I/O panel for HIM10 with fiber transmitter on SC

### Fiber inputs:

- **BPH01R\_FC/PC\_HIM10:** I/O panel for HIM10 with fiber receiver on FC/PC
- **BPH01R\_SC\_HIM10:** I/O panel for HIM10 with fiber receiver on SC

## Specifications

### HD/SD Serial Video Input

<b>Standard</b>	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
<b>Equalization</b>	Automatic to 100m @ 1.5Gb/s with Belden 1694A or equivalent cable.
<b>Return Loss</b>	> 15dB up to 1.5GHz

### HD Serial Video Output

<b>Standard</b>	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
<b>Signal Level</b>	800mV nominal
<b>DC Offset</b>	0V $\pm$ 0.5V
<b>Rise and Fall Time</b>	200ps nominal for HD, 750ps nominal for SD
<b>Overshoot</b>	< 10% of amplitude
<b>Return Loss</b>	> 15dB up to 1.0Gb/s, > 10dB up to 1.5Gb/s
<b>Wideband Jitter</b>	< 0.2UI

### Reference Input through RRC

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

### Miscellaneous

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

### Electrical

<b>Voltage</b>	+24V to +30V
<b>Power</b>	<8 Watts