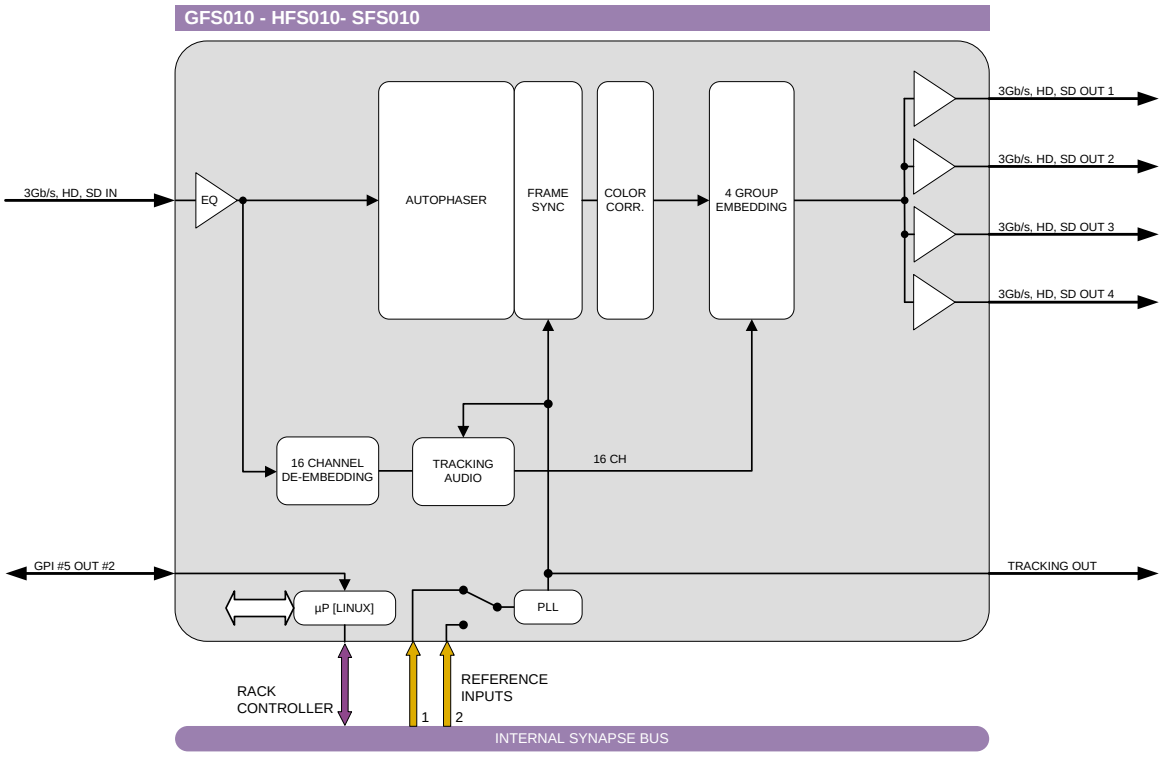
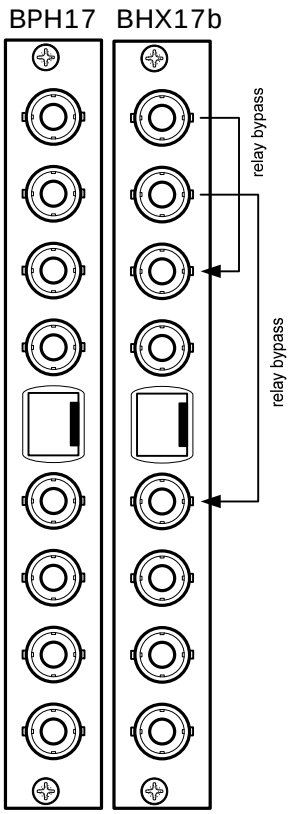
GFS010-HFS010-SFS010

3Gb/s, HD, SD basic frame synchronizer

A Synapse® product

Block schematic & I/O panel





3Gb/s, HD, SD INPUT 1 (OPTIONAL FIBER INPUT)

3Gb/s, HD, SD OUTPUT 1 (OPTIONAL FIBER OUTPUT)

3Gb/s, HD, SD OUTPUT 2

GPI INPUT/OUTPUT

3Gb/s, HD, SD OUTPUT 3

3Gb/s, HD, SD OUTPUT 4

Features

The GFS010, HFS010 and SFS010 are frame synchronizers with 16 channel audio transparency and color correcting capabilities.

The GFS010 is compatible with 270Mb/s, 1.5Gb/s and 3Gb/s for full 1080p/50 or 1080p/59.94 use. The HFS010 is compatible with SD-SDI (270Mb/s) and HD-SDI (1.5Gb/s) and can be future upgraded to 3Gb/s compatibility. The SFS010 is limited to 270Mb/s only but can also be upgraded to HD or even 3Gb/s.

- 1 SDI input
- Compatible with the following input formats (auto selecting) (1080p only for GFS010):
  - 1080p/59.94
  - 1080p/50
  - 1080i/59.94
  - 1080i/50
  - 1080p/29.97
  - 1080p25
  - 1080p24
  - 1035i/59.94
  - 720p/59.94
  - 720p50
  - 720p30
  - 720p25
  - 720p24
  - SD525
  - SD625
- Color corrector
- Transparent for 16 channels of embedded audio
- Video proc-amp (Y and C control)
- Color corrector (RGB and total gain, RGB and total black)
- Hue control for NTSC inputs
- Locks to Bi-level, Tri-level syncs or SDI input
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)
- Frame sync with output phase control in Lines and pixels with respect to reference.

Applications

Transmission output frame synchronizer with backup input.
General purpose post router autophaser.

Ordering information

Module:
- **GFS010:** 3Gb/s, HD, SD Frame synchronizer
- **HFS010:** HD, SD Frame synchronizer converter*
- **SFS010:** SD Frame synchronizer converter**

Standard I/O:
- **BPH17_GFSxxx:** I/O-panel for G-H-SFS010

Relay by-pass I/O:
- **BHX17b_GFSxxx:** I/O-panel for G-H-SFS010

Fiber outputs:
- **BPH01T_FC/PC_ GFSxxx:** I/O panel for G-H-SFS010 with fiber transmitter on FC/PC
- **BPH01T_SC_ GFSxxx:** I/O panel for G-H-SFS010 with fiber transmitter on SC

Fiber inputs:
- **BPH01R_FC/PC_ GFSxxx:** I/O panel for G-H-SFS010 with fiber receiver on FC/PC
- **BPH01R_SC_ GFSxxx:** I/O panel for G-H-SFS010 with fiber receiver on SC

* Upgradeable to 3Gb/s
** Upgradeable to HD or HD + 3Gb/s

Specifications

Serial video input

Standard	3Gb/s, HD and SD SDI: SMPTE424, SMPTE 292M, SMPTE 259M
Number of inputs	1
Connector	BNC
Equalization	Typical maximum equalized length of Belden 1694A cable: 90m at 2.97Gb/s, 120m at 1.485Gb/s, and 250m at 270Mb/s
Return loss	> 15dB up to 1.5GHz

Serial video output

Number of outputs	4
Connector	BNC
Signal level	800mV nominal
DC offset	0V ±0.5V
Rise/Fall time	135ps nominal
Overshoot	< 10% of amplitude
Return loss	> 15dB up to 1.5GHz (typ.); > 10dB up to 3GHz (typ.)
Wideband jitter	< 0.2UI

Reference Input through RRC

Number of Inputs	2 on SFR18, 2 on SFR08 and 1 on SFR04
Tri-level	SMPTE274M, SMPTE296M 600 mVp-p nominal, 75 Ohms terminated through loop
Bi-level	PAL Black Burst ITU624-4/SMPTE318, Composite NTSC SMPTE 170M 1Vp-p nominal, 75 Ohms terminated through loop

Miscellaneous

Weight	Approx. 450g
Operating temperature	0 °C to +40 °C
Dimensions	137 x 296 x 20 mm (HxWxD)

Electrical

Voltage	+24V to +30V
Power	<17 Watts