



# Synapse

## GIX100/110

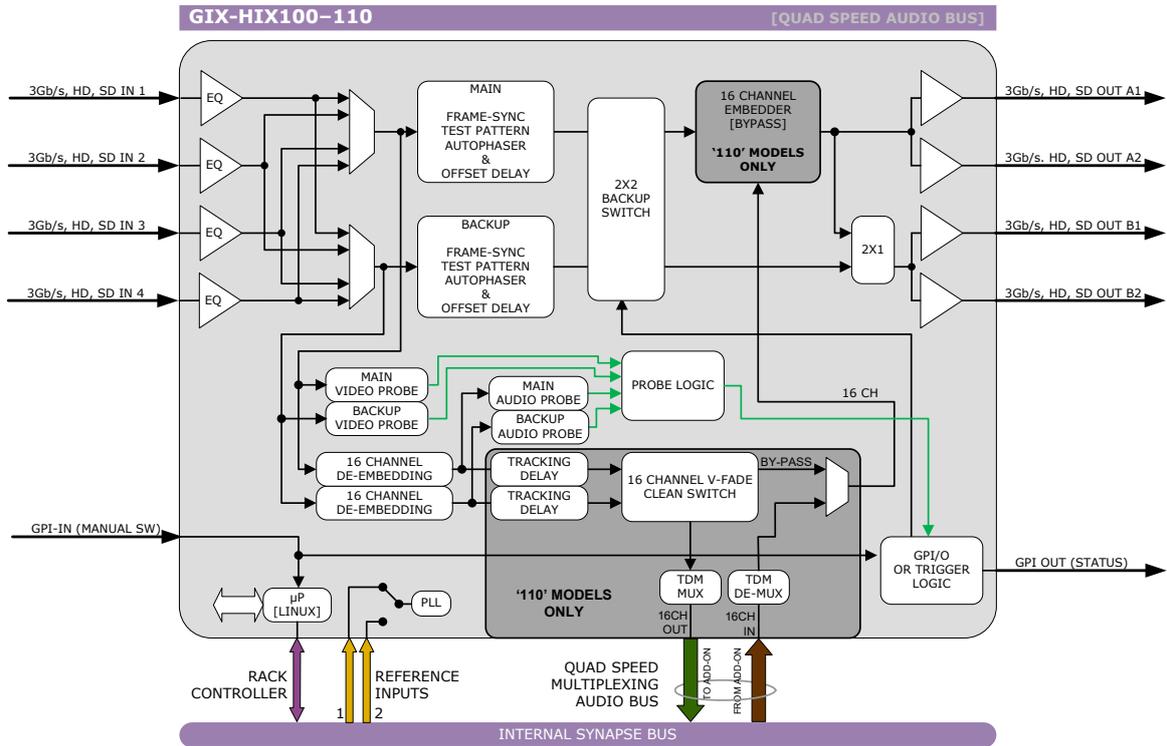
Dual channel 3Gb/s, HD, SD integrity checking probe with optional clean audio (2x1) switch-over function

A Synapse® product

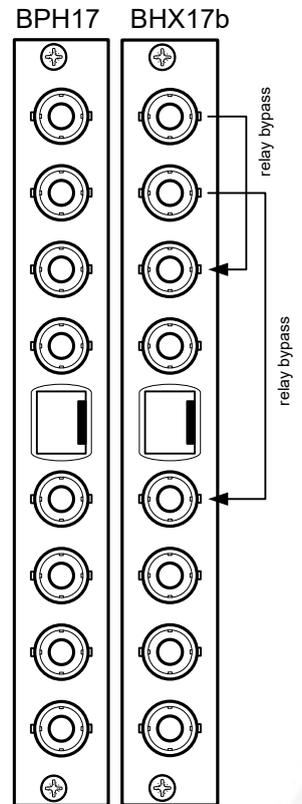


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Block schematics & I/O panel



	3Gb/s, HD, SD INPUT 1
	3Gb/s, HD, SD INPUT 2
	3Gb/s, HD, SD MAIN OUTPUT 1
	3Gb/s, HD, SD MAIN OUTPUT 2
	GPI I/O
	3Gb/s, HD, SD BACKUP OUTPUT 1
	3Gb/s, HD, SD BACKUP OUTPUT 2
	3Gb/s, HD, SD INPUT 3
	3Gb/s, HD, SD INPUT 4



## Features

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The GIX100-110 are dual channel high performance 3Gb/s, HD and SD SDI video and embedded audio probes (signal integrity monitor) with clean video 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.

The '110' adds a smooth 16 channel audio change over with a V fade processing. An interesting feature is the ability to apply 4 individual sources and pre-route these signals to any of the main channels. This enables a backup functionality beyond two channels and can be used for adding a third or fourth backup channel.

- 4 free selectable inputs per probe input
- Clean backup switching through built-in frame synchronizers
  - Input formats need to be equal
- Clean audio switch-over through V fade in '110'
- Tracking audio delay in '110'
- Output configuration of 2 x main + 2x backup or 4 x main (In 2x2 backup channel has no clean audio processing)
- Probe functions:
  - SDI carrier detect
  - TRS validation
  - ANC checksum validation
  - Video content freeze detection
  - Video content black detection
  - VANC WST and OP47 present detection
  - Timecode availability
  - Audio channel detection (16 channels)
  - Audio silence detection (16 channels)
  - Audio Clip/5 sample full-scale indication (16 channels)
  - Dolby E present detection (with disable of V fade function in '110')
- An extensive probing matrix allows adjustment of individual classes of importance of the channels next to the main and backup channels.
- Test pattern generator as 5<sup>th</sup> source for emergency and test.
- Quad Speed Audio Add-On bus for post fade audio processing ('110' only)
- Locks to Bi-level, Tri-level or SDI input
- Full control and status monitoring through the front panel of the frame and the Ethernet port (ACP)

## Applications

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- The GIXxxx family 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
- Multi input backup capability allows for complex backup routing in multi platform environments

## Ordering information

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**Module:**

- **GIX100-I/O:** Dual channel 3Gb/s, HD, SD enhanced integrity checking probe with switch-over function
- **GIX110-I/O:** Dual channel 3Gb/s, HD, SD enhanced integrity checking probe with switch-over function and clean audio switching

**Standard I/O:**

- **BPH17-PANEL:** I/O-panel for GIXxxx

**Relay bypass I/O:**

- **BHX17b-PANEL:** Relay backup I/O-panel for GIXxxx

## Specifications

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### Serial video input

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<b>Standard</b>	3Gb/s, HD and SD SDI., SMPTE424, SMPTE 292M, SMPTE 259M
<b>Number of inputs</b>	4
<b>Connector</b>	BNC
<b>Equalization</b>	Typical maximum equalized length of Belden 1694A cable: 90m at 2.97Gb/s, 120m at 1.485Gb/s, and 250m at 270Mb/s
<b>Return loss</b>	> 15dB up to 1.5GHz

### Serial video output

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

### Reference Input through ERC

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

### Miscellaneous

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

### Electrical

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<b>Voltage</b>	+24V to +30V
<b>Power</b>	<17 Watts