



# Synapse

## GDR216

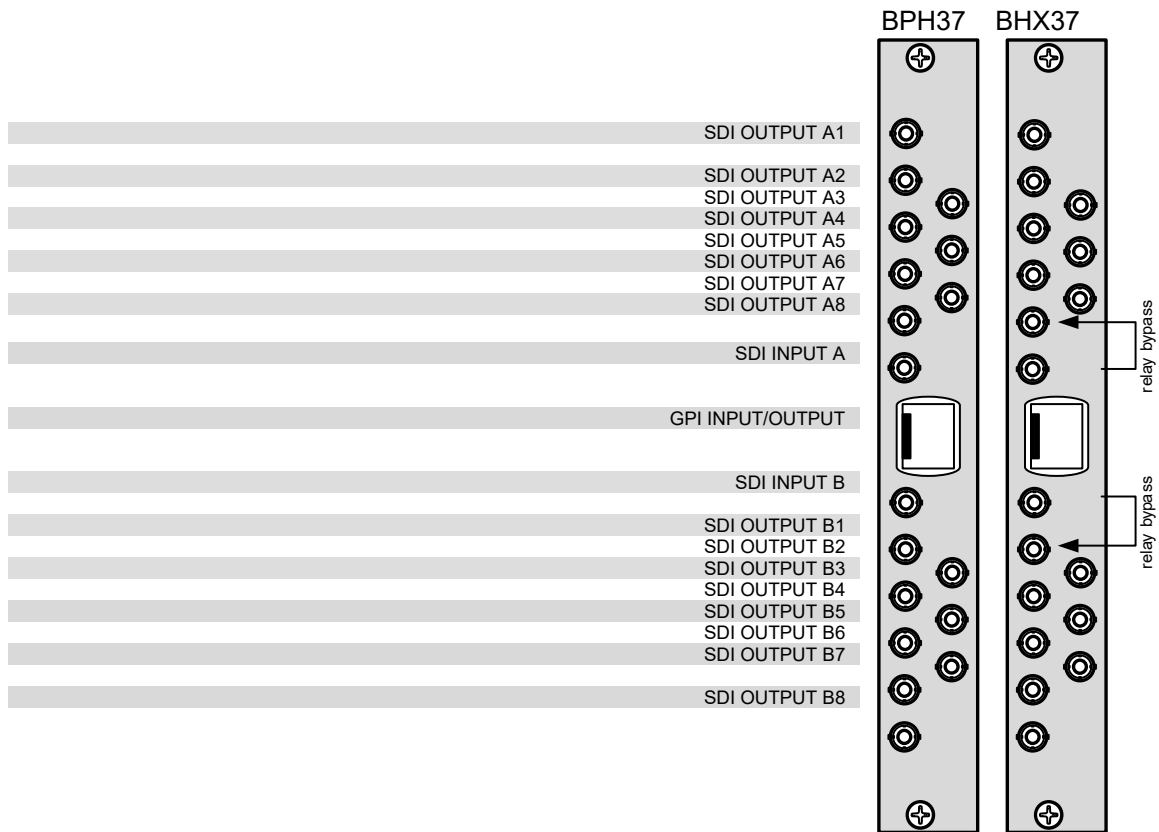
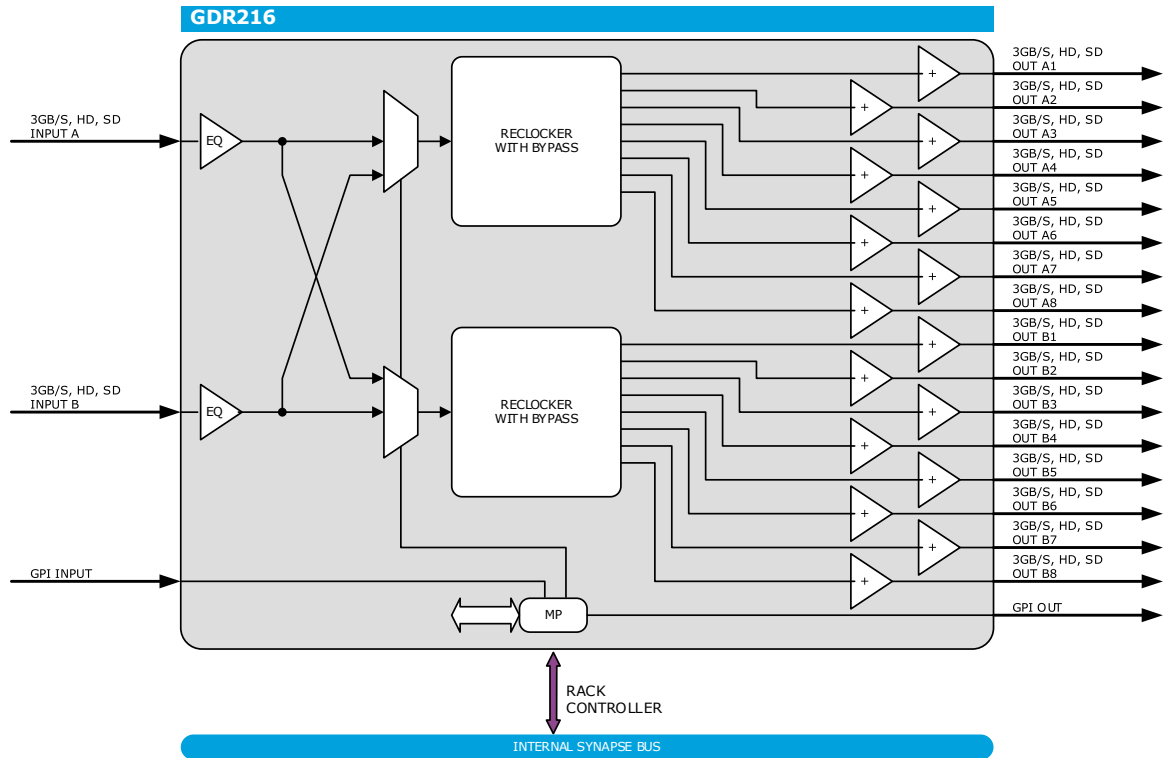
3Gb/s, HD and SD dual input distribution amplifier with 8 reclocked outputs per channel (ASI/DVB compatible)

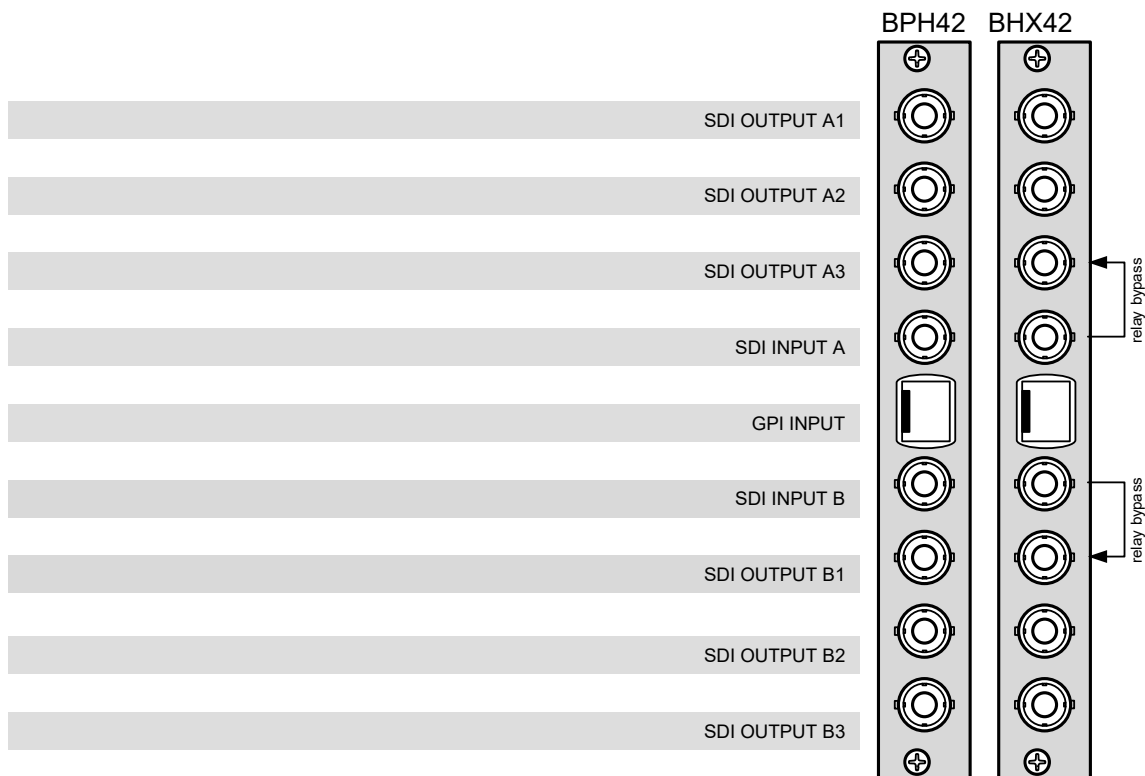
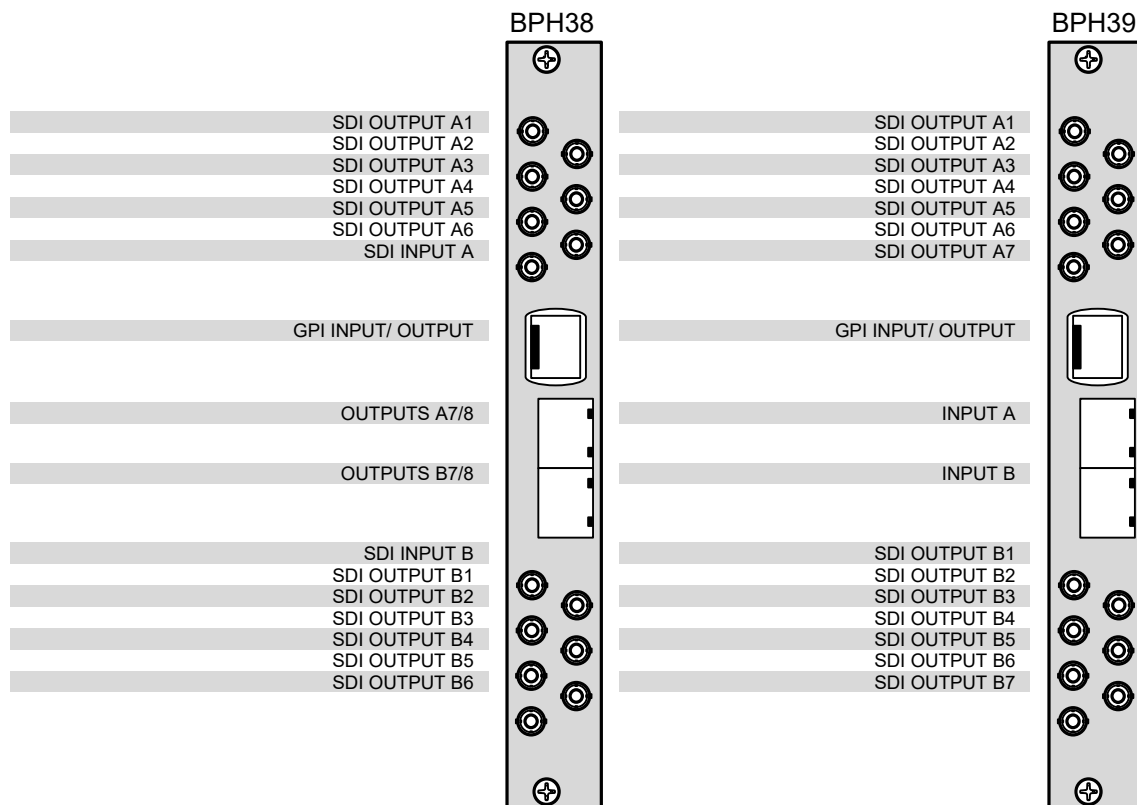
A Synapse® product



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Block Schematic & I/O panel





## Features

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The GDR216 is a dual channel 3Gb/s, HD, SD SDI reclocking distribution amplifier with simple switching capabilities and selectable outputs. This card is ASI/DVB compatible.

- Single or Dual channel with 6 to 16 configurable outputs depending on the back panel
- Flexible selection of inputs to outputs
- Input switching as emergency bypass (not clean) on carrier detects
- GPI controlled input swapping and status monitoring
  - GPI-1 = select input 1
  - GPI-2 = select input 2
  - GPO-0 = Crossed mode or straight mode status
  - GPO-1 = input 1 status
  - GPO-2 = input 2 status
- 2x2 or 2x1 function
- 2x1>8 or 1x1>16 function with BPH37, BHX37, BPH38 and BPH39
- 2x1>3 or 1x1>6 function with BPH42 back panel
- Compatible with:
  - SD SDI 270 Mbit/s (SMPTE 259M)
  - HD SDI 1485 Mbit/s (SMPTE 292M)
  - 3Gb/s SDI 2970 Mbit/s (SMPTE 424M)
  - ASI/DVB
- Bypass function of the reclocker for non-standard frequencies
- Flexible choice of IO standards through use of SFP modules
  - Flexible output choice with BPH38: 2x fiber, 2x CVBS, 2x SDI outputs or 1x HDMI output
  - Flexible input choice with BPH39. Options; fiber, CVBS or SDI or HDMI input

## Applications

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- Dual channel generic wideband 3Gb/s DA
- 1 to 16 or 1 to 6 generic wideband 3Gb/s DA

## Ordering information

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### Module:

- **GDR216:** 3Gb/s, HD, SD-SDI dual reclocking distribution amplifiers

### Standard I/O:

- **BPH37\_GDR216:** I/O-panel for GDR216
- **BPH42\_GDR216:** I/O-panel for GDR216 with 2 inputs and 6 outputs on BNC

### Relay bypass I/O:

- **BHX37\_GDR216:** I/O-panel with relay bypass for GDR216
- **BHX42\_GDR216:** I/O-panel with relay bypass for GDR216 with 2 inputs and 6 outputs on BNC

### SFP I/O:

- **BPH38\_GDR216:** I/O-panel for GDR216 with SFP module output options
- **BPH39\_GDR216:** I/O-panel for GDR216 with SFP module input options

## Specifications

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### Video Input

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<b>Standard</b>	3Gb/s ,HD and SD SDI: SMPTE424, SMPTE259M, SMPTE 292M
<b>Number of Inputs</b>	2
<b>Connector</b>	DIN1.0/2.3 or BNC (BPH42)
<b>Equalization</b>	Typical maximum equalized length of Belden 1694A cable: 80m at 2.97Gb/s, 100m at 1.485Gb/s, and 190m at 270Mb/s
<b>Return Loss</b>	> 15dB up to 3GHz

### Serial Video Output

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<b>Number of Outputs</b>	16 (configurable), 6 on BPH42
<b>Connector</b>	DIN1.0/2.3 or BNC (BPH42)
<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

### GPI Input

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<b>Number of Inputs</b>	2
<b>Connector</b>	RJ45
<b>Type</b>	Contact closure
<b>Impedance</b>	> 5 kOhms

### GPI Output

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<b>Number of Outputs</b>	2
<b>Connector</b>	RJ45
<b>Type</b>	>2.5 Volts High Level, <0.8V Low Level

### Miscellaneous

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<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

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<b>Voltage</b>	+24V to +30V
<b>Power</b>	<6 Watts