



# Synapse

## GDL200

## HDL200

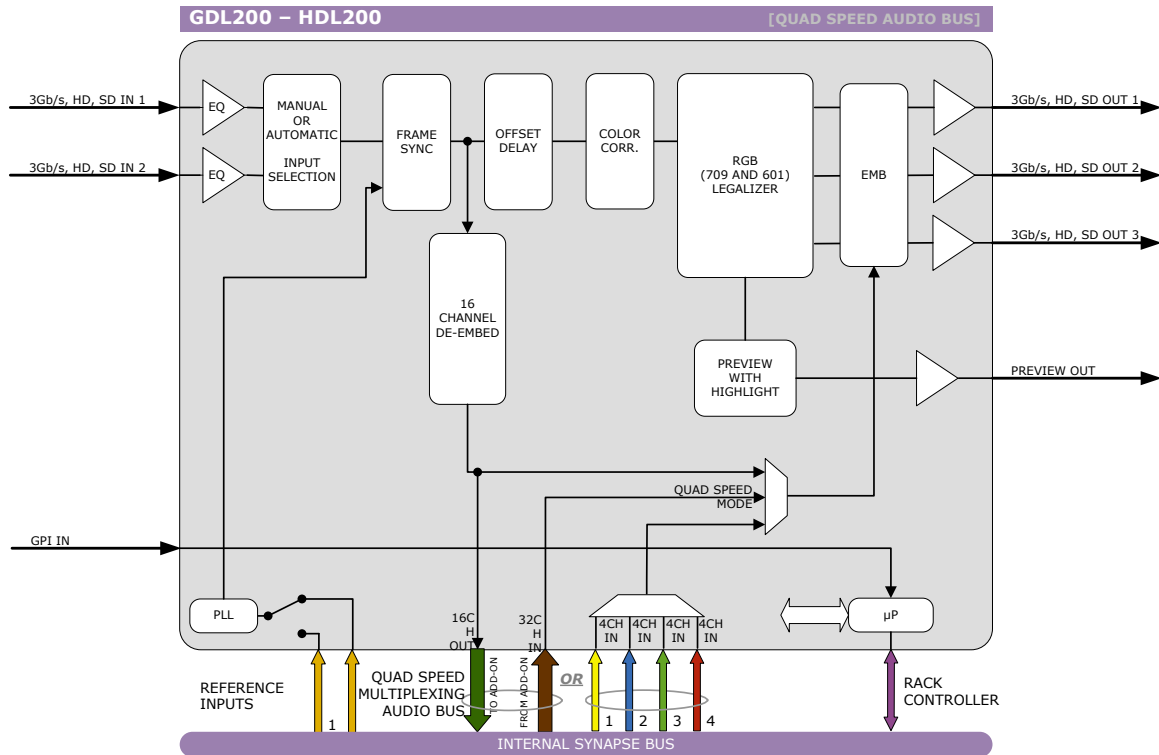
Dual input 3Gb/s and HD RGB legalizer and framesync with preview output with Quad Speed ADD-ON handling

A Synapse® product



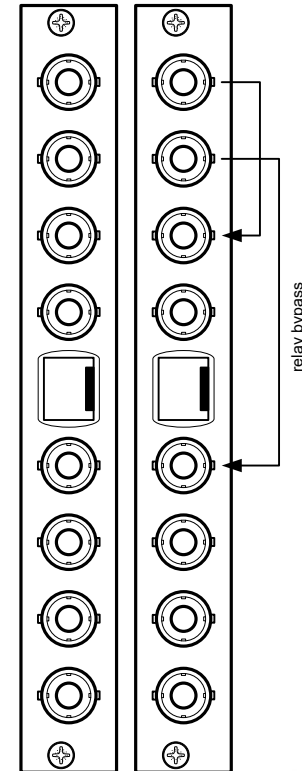
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# Block Schematic & I/O panel



- 3Gb/s, HD, SD SDI INPUT A
- 3Gb/s, HD, SD SDI INPUT B
- 3Gb/s, HD, SD SDI LEGAL OUTPUT 1
- 3Gb/s, HD, SD SDI LEGAL OUTPUT 2
- GPI INPUT/OUTPUT
- 3Gb/s, HD, SD SDI LEGAL OUTPUT 3
- PREVIEW OUTPUT

BPH17 BHX17b



## Features

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The GDL/HDL200 are dual standard legalizers for digital signals with full framesync functionality. It legalizes 3Gb/s, HD and SD SDI streams in the RGB domain within 709 color space (601 for SD).

The preview output with a highlight function that indicates the areas that are being processed. This card is also equipped with the Quad Speed audio bus which enables you to build a complete video and audio legalization ingest platform with the addition of a card of the DLA series.

The HDL200 can be future upgraded to handle 3Gb/s signals.

- 2x 3Gb/s(Level A&B), HD or SD-SDI input (auto selecting)
- 2 input backup functions
  - Automatic by input carrier or fixed format detection
  - Manual by direct control (ACP)
  - GPI
- Frame sync/autophaser
- RGB legalization in either HD or 3Gb/s (709) or SD (601) domain
- HD is 16 channel (4 group) transparent
- Triple 3Gb/s (Level A&B), HD or SD output
- Preview output with highlighted legalization markers
- Color correction
- Compatible with the following standards:
  - 1080p 50/59.94
  - 1080i 50/59.94
  - 720p 50/59.94
  - 625/50
  - 525/59.94
- Reporting of chosen input
- CRC status information for both inputs
- Quad Speed audio bus and normal bus
- Locks to SDI input
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

Complementary cards:

- DIO88, DBD18

## Applications

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- Ingest legalizing tool for video as well as audio together with a DSF66
- Transmission legalizer for 3Gb/s, (level A&B) HD or SD signals
- Transmission legalizer with automatic back-up switching
- Tape transfer legalizer

## Ordering information

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**Module:**

- **GDL200:** Dual 3Gb/s and HD input RGB legalizer
- **HDL200:** Dual HD input RGB legalizer (3Gb/s upgradable)

**Standard I/O:**

- **BPH17\_GDL200:** I/O panel for G-HDL200

**Relay bypass I/O:**

- **BHX17b\_GDL200:** I/O panel for G-HDL200 with relay bypass

## Specifications

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### Serial video input

|                         |  |
|-------------------------|--|
| <b>Standard</b>         | 3Gb/s, HD and SD SDI: 424M, SMPTE 425M (3Gb/s), SMPTE 274M, SMPTE 296M, SMPTE 259M             |
| <b>Number of inputs</b> | 2  |
| <b>Connector</b>        | BNC  |
| <b>Equalization</b>     | Typical maximum equalized length of Belden 1694A cable: 120m at 1.485Gb/s, and 250m at 270Mb/s |
| <b>Return loss</b>      | > 15dB up to 1.5GHz  |

### Serial video output

|                          |  |
|--------------------------|--|
| <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.)<br>> 10dB up to 3GHz (typ.) |
| <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>Tri-level</b>        | SMPTE274M, SMPTE296M<br>600 mVp-p nominal, 75 Ohms terminated through loop                                     |
| <b>Bi-level</b>         | PAL Black Burst ITU624-4/SMPTE318, Composite NTSC SMPTE 170M<br>1Vp-p nominal, 75 Ohms terminated through loop |

### Miscellaneous

|                              |                           |
|------------------------------|---------------------------|
| <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

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