



Synapse

GDK100

HDK100

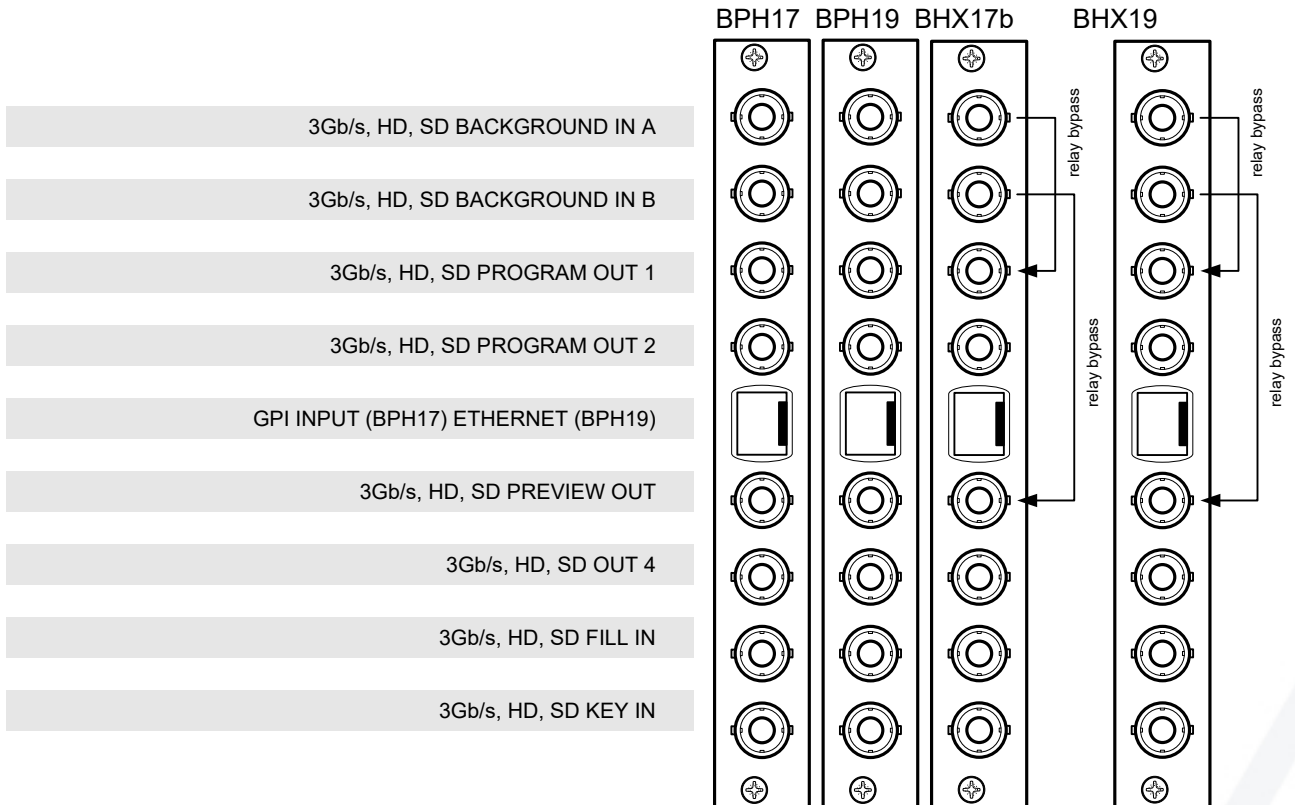
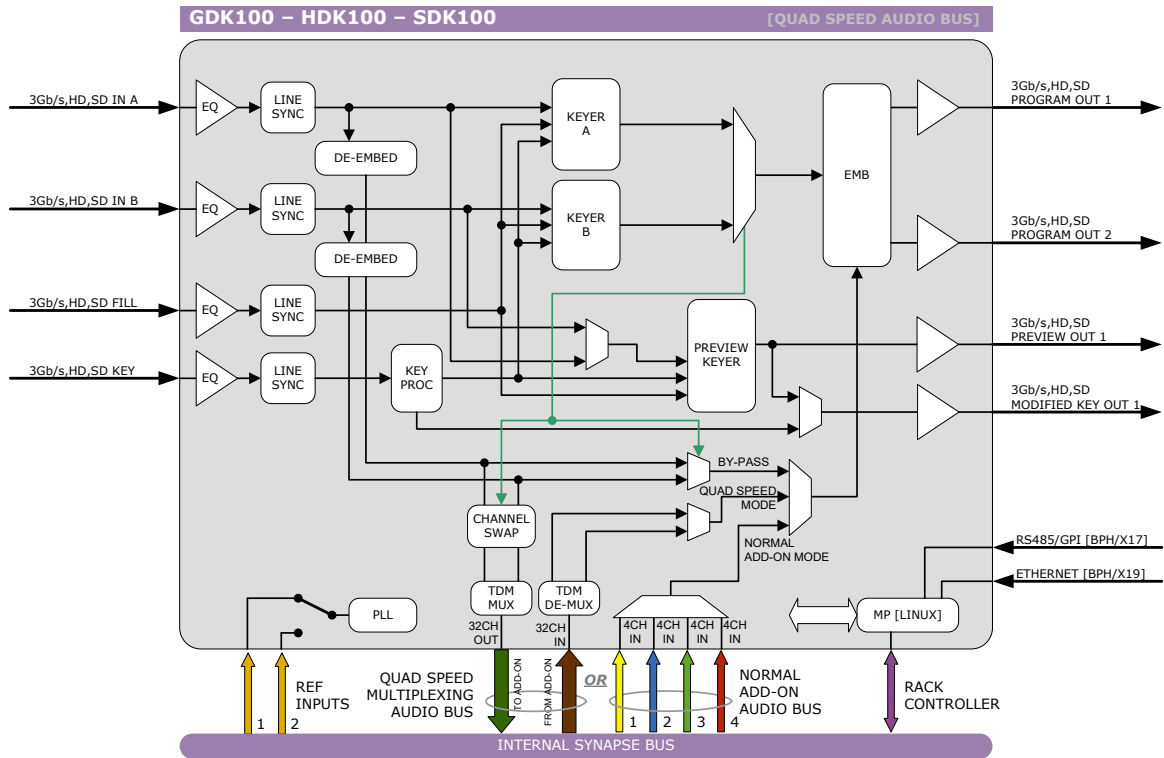
Dual background input 3Gb/s, HD, SD downstream keyer

A Synapse® product



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Block schematic & I/O panel



Features

The GDK100, HDK100 and SDK100 are keyer modules for the Synapse system. The GDK100 has 4 triple rate (all SD, HD, 3Gb/s capable) inputs: 2 background inputs, 1 fill input and 1 key input. It also has 4 triple rate outputs: 2 program outputs, 1 preview output and a user definable output (program, preview or modified key output). Depending on the connector panel you have either Ethernet (for easy and fast card upgrading) or GPI control (over RJ45).

The following is a summary of the features the G/H/SDK100 offers:

- 2 selectable background inputs
- Key input
- Fill input
- Self key
- The 4th output can be software configured for any output task: program, preview or modified key output.
- Adjustable slice level and transparency (with definable modified key monitor output)
- Preview output ,with fade in/out functionality, for content verification prior to go on air
- Transparent for 16 channels of embedded audio
- Transparent for all ANC data
- Compatible with:
 - 270 Mb/s (SMPTE 259M) 50 and 59.94Hz
 - 1485 Mb/s (SMPTE 292M) 50 and 59.94Hz (HDK/GDK only)
 - 2970 Mb/s (SMPTE 424M) =3Gb/s 50 and 59.94Hz (GDK only)
- Locks to Tri-level or Bi-level syncs

Depending on the connector panel you have either Ethernet or GPI control.

- GPI with BPH17 or BHX17b
- Ethernet with BPH19 or BHX19 (for fast updates)

Complementary cards:

- DAC20, DAS24, DIO48, ADC20, ADC24, DIO24

Applications

- The G/H/SDK100 can be used as a downstream keyer for external logo generated keying and other graphical overlay keying.

Ordering information

Module:

- **GDK100:** 3Gb/s, HD, SD downstream keyer with dual background input
- **HDK100:** HD/SD downstream keyer with dual background input.*
- **SDK100:** SD downstream keyer with dual background input.**

Standard I/O:

- **BPH17_GDKxxx:** I/O-panel for G-H-SDK100 with GPI
- **BPH19_GDKxxx:** I/O-panel for G-H-SDK100 with Ethernet

Relay bypass I/O:

- **BHX17b_GDKxxx:** I/O-panel for G-H-SDK100 with GPI and relay bypass
- **BHX19_GDKxxx:** I/O-panel for G-HD-SK100 with Ethernet and relay bypass

Specifications

Video input

Standard	SD,HD and 3Gb/s SDI: SMPTE 292M, SMPTE 259M, SMPTE424
Number of inputs	4
Connector	BNC
Equalization	Typical maximum equalized length of Belden 1694A cable: 70m at 2.97Gb/s, 140m at 1.485Gb/s, and 350m at 270Mb/s
Return loss	> 15dB up to 3GHz

Serial video output

Number of outputs	4
Connector	BNC
Signal level	800mV nominal
DC offset	0V \pm 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. 250g
Operating temperature	0° C to +50° C
Dimensions	137 x 296 x 20 mm (HxWxD)

Electrical

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