



Synapse

GDK200

HDK200

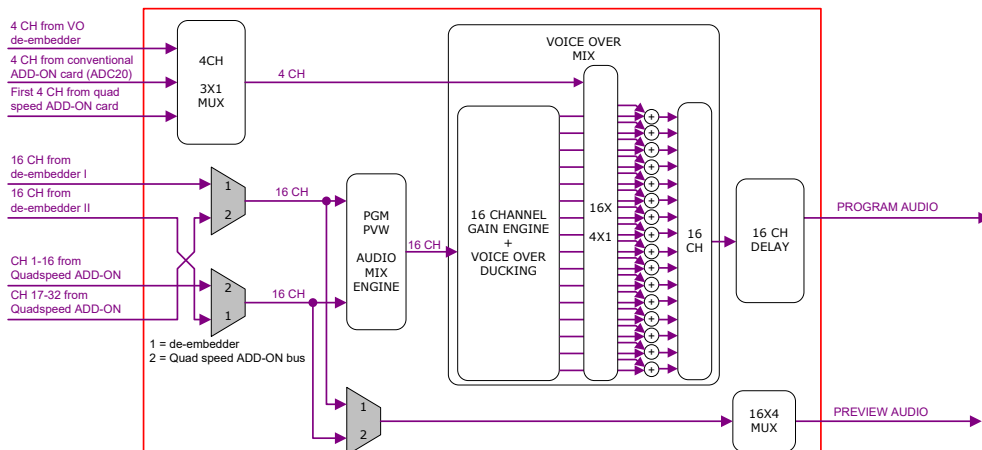
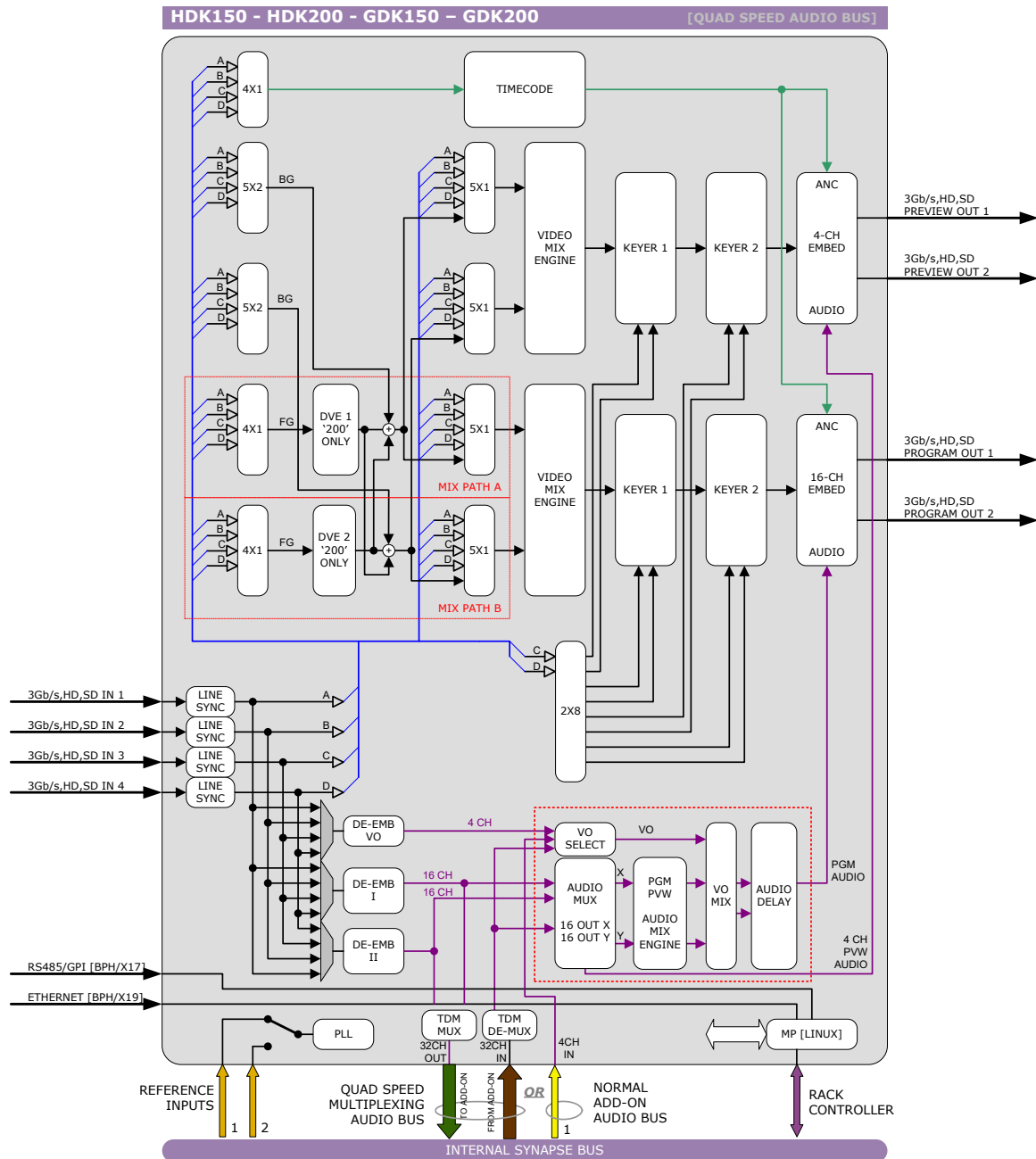
3Gb/s, HD Keyer, Mixer with dual 2D DVE

A Synapse® product

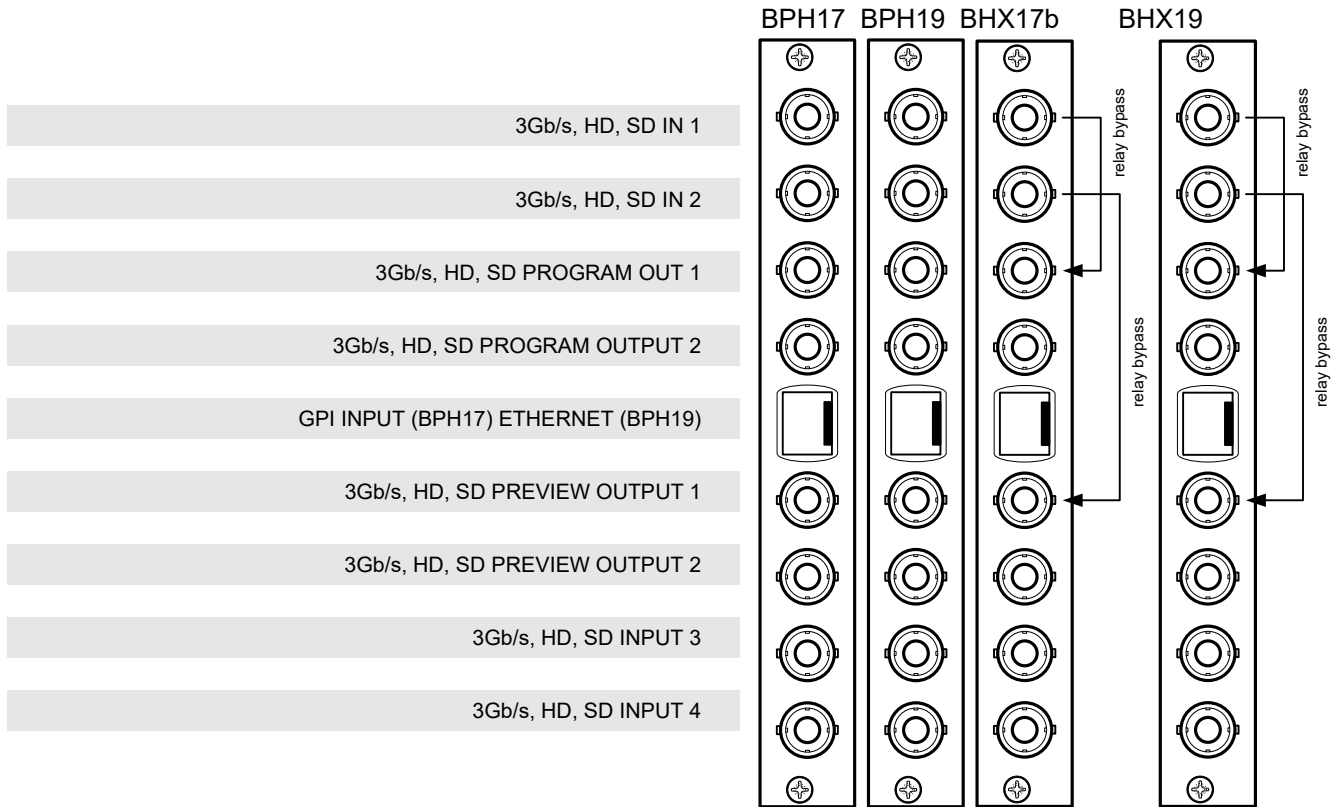


Due to constant product research and development all specifications are subject to change without notice. EVS does not warrant or assume any legal liability or responsibility for the accuracy, completeness, availability and/or delivery of the products and/or services listed in this datasheet. Copyright © 2021 EVS

Block schematic



I/O panel



Features

The GDK200 and HDK200 are advanced keyer platforms for use in transmission applications. Especially where a full master control unit is overkill these cards can be a cost and space saving alternative. These units have 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 and 2 preview outputs.

Depending on the connector panel you have either Ethernet (for easy and fast card upgrading) or GPI control (over RJ45).

The GDK200 and HDK200 are not designed for direct external 3rd party control protocols (i.e. M2100). Normal automation still is possible like on all Synapse cards. The units can be used with GPI's, and Cortex 'soft' control panels. Of course is 3rd party control via ACP possible.

The following is a summary of the features the GDK-HDK200 offers:

- 2 selectable background inputs
- Key input
- Fill input
- Self key
- 2x 2D DVE (in 200)
- Advanced routing capabilities for flexible program/production applications
- Mix engine with speed and transition adjustments
- Adjustable slice level and transparency
- Preview output with transition preview, for content verification prior to go on air
- Transparent for 16 channels of embedded audio
- Transparent for Time Code data
- Quad speed Synapse audio bus for enhanced external audio applications
- 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 Logo insertion)

Complementary cards:

- ADC24 and DIO24 for VO functions

Applications

- The GDK/HDK200 can be used as an entry level program output processor for basic program channels.
- Production (3Gb/s) mixer/2D-DVE for live applications like sports events

Ordering information

Module:

- **GDK200:** 3Gb/s, HD, SD keyer/mixer with 2D DVE
- **HDK200:** HD, SD keyer/mixer with 2D DVE.*

Standard I/O:

- **BPH17_GDKxxx:** I/O-panel for G/HDK150/200 with GPI
- **BPH19_GDKxxx:** I/O-panel for G/HDK150/200 with Ethernet

Relay by-pass I/O:

- **BHX17b_GDKxxx:** I/O-panel for G/HDK150/200 with GPI and relay bypass
- **BHX19_GDKxxx:** I/O-panel for G/HDK150/200 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 ±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