AXON

GXG200-HXH200

3Gb/s, HD, SD High Quality up/down/cross converter and synchronizer with MAD technology

A Synapse® product

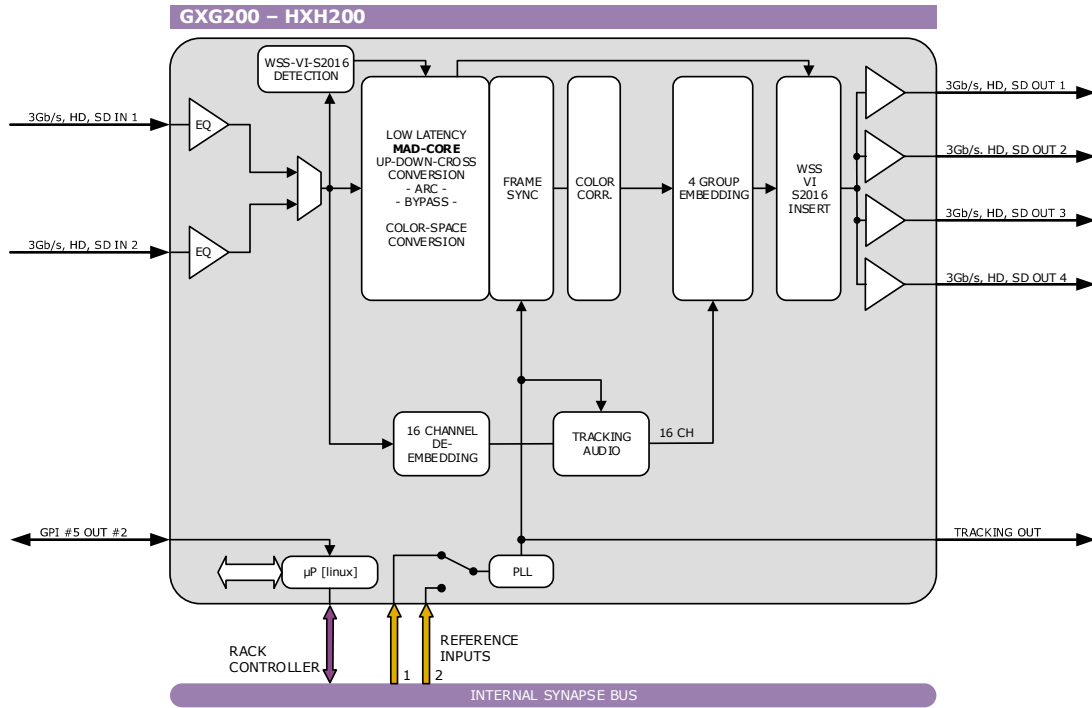**3** TRIPLE RATE
GB/s, HD, SD

Powered by **LINUX**

Upgradable to
3Gb/s

AFD ready
S2016

Block schematic & I/O panel

GXG200 – HXH200

3Gb/s, HD, SD INPUT 1 (OPTIONAL FIBER INPUT)

3Gb/s, HD, SD OUTPUT 1 (OPTIONAL FIBER OUTPUT)

3Gb/s, HD, SD OUTPUT 2

GPI INPUT/OUTPUT, TRACKING OUT

3Gb/s, HD, SD OUTPUT 3

3Gb/s, HD, SD OUTPUT 4

BPH17   BHX17b
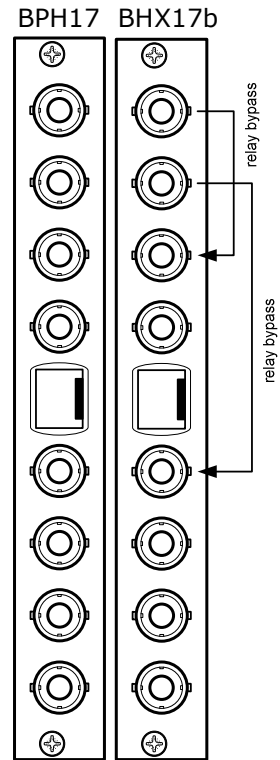
Features

The GXG200 and HXH200 are high-quality up/down/cross converters with Axon's propriety Motion Adaptive De-interlacing technology. This technology ensures fewer artifacts because of the selective combination of weaving and blending de-interlacing methods.

The optimized scaling and filter algorithms ensure crisp broadcast ready pictures from a native HD or SD source, by use of a 64 tap FIR filters. The appropriate aspect ratio can be applied by control of S2016 and GPI inputs by use of 8 presets per output that can store the aspect ratio conversions.

The GXG200 is compatible with SD, HD and 3Gb/s SDI (for full 1080p50 or 1080p59.94 use). The HXH200 is compatible with SD and HD SDI and can be future upgraded to 3Gb/s compatibility

- Low latency 'MAD' conversion process (Motion Adaptive De-interlacing)

- Compatible with the following input (auto selecting) and output formats (1080p50/60 only for GXG200):
    - 1080p/59.94
    - 1080p/50
    - 1080i/59.94
    - 1080i/50
    - 1080p/29.97
    - 1080p25
    - 1080p24
    - 1080psf23.98
    - 720p/59.94
    - 720p50
    - 720p30
    - 720p25
    - 720p24
    - SD525
    - SD625

- Frame sync with output phase control in Lines and pixels with respect to reference.
- All ARC modes contain:
    - Anamorphic
    - Center Cut
    - V-Zoom
    - LBox-16:9
    - LBox-14:9
    - PBox-4:3
    - PBox-14:9 (not for cross and trans)
    - Variable H and V (67—133%)
- 16 Free individual programmable presets banks for:
    - Up converter ARC
    - Down converter ARC
    - Cross converter ARC
    - Transparent ARC
    - VI/WSS/S2016 insertion
- 5 GPI inputs assignable to different preset banks
    - Up conversion aspect ratio
    - Down conversion aspect ratio
    - Cross conversion aspect ratio
    - Transparent aspect ratio (equal in-output)
    - Insertion of VI, WSS, AFD (S2016)
- ARC triggers by VI, WSS, WSSext and S2016 (AFD)
- Transparent for 16 channels of embedded audio
- Color corrector (RGB and total gain, RGB and total black)
- Hue control for NTSC inputs
- Locks to Tri-level, Bi-level or SDI input
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

Conversion abilities

The GXG-HXH200 cards are able to convert the following video formats:

CONVERSION	1080p29.97	1080p25	1080p23.97	1080psf23.98	1080p50*	1080p59.94*	1080i59.94	1080i50	720p59.94	720p50	720p29.97	720p25	720p23.98	480i59.94(525)	576i50(625)
1080p29.97	x		x	x			x				x		x	x	
1080p25		x			x			x		x		x			x
1080p23.97	x		x	x							x		x		
1080psf23.98	x		x	x		x	x		x				x	x	
1080p50*		x			x				x	x		x			x
1080p59.94*	x		x	x		x	x		x		x		x	x	
1080i59.94	x		x	x		x	x		x		x		x	x	
1080i50		x			x			x		x		x			x
720p59.94	x		x	x		x	x		x		x		x	x	
720p50		x			x			x		x		x			x
720p29.97	x		x	x		x			x		x		x	x	
720p25		x			x					x		x			x
720p23.98	x		x	x		x			x		x		x	x	
480i59.94(525)	x		x	x		x	x		x		x		x	x	
576i50(625)		x			x				x	x		x			x

(Input 1 or 2; Output)

* = GXG models only

Applications

- General System input up/down/cross converter/synchronizer
- Infra structure up/down/cross conversion

Ordering information

Module:
- **GXG200:** 3Gb/s, HD, SD-SDI up/down/cross converter
- **HXH200:** HD, SD-SDI up/down/cross converter

Standard I/O:
- **BPH17_GXG200:** I/O-panel for GXG-HXH200

Relay bypass I/O:
- **BHX17b_GXG200:** I/O-panel for GXG-HXH200 with relay bypass

Fiber outputs:
- **BPH17T_FC/PC_GXG200**: I/O panel for GXG-HXH200 with one fiber transmitter on FC/PC
- **BPH17T_SC_GXG200**: I/O panel for GXG-HXH200 with one fiber transmitter on SC

Fiber inputs:
- **BPH17R_FC/PC_GXG200**: I/O panel for GXG-HXH200 with one fiber receiver on FC/PC
- **BPH17R_SC_GXG200**: I/O panel for GXG-HXH200 with one fiber receiver on SC

Specifications

Serial Video Input

Standard	SD,HD and 3Gb/s SDI: SMPTE 292M, SMPTE 259M, SMPTE424
Number of Inputs	2
Connector	BNC
Equalization	Typical maximum equalized length of Belden 1694A cable: 130m at 2.97Gb/s, 120m at 1.485Gb/s, and 250m at 270Mb/s
Return Loss	> 15dB up to 1.5GHz

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. 450g
Operating Temperature	0 °C to +40 °C
Dimensions	137 x 296 x 20 mm (HxWxD)

Electrical

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