



2GM100-2HM100

Dual channel VANC data (eg OP47, SCTE104, TC, 2020, 2016) analyzer for OSD applications

A Synapse® product

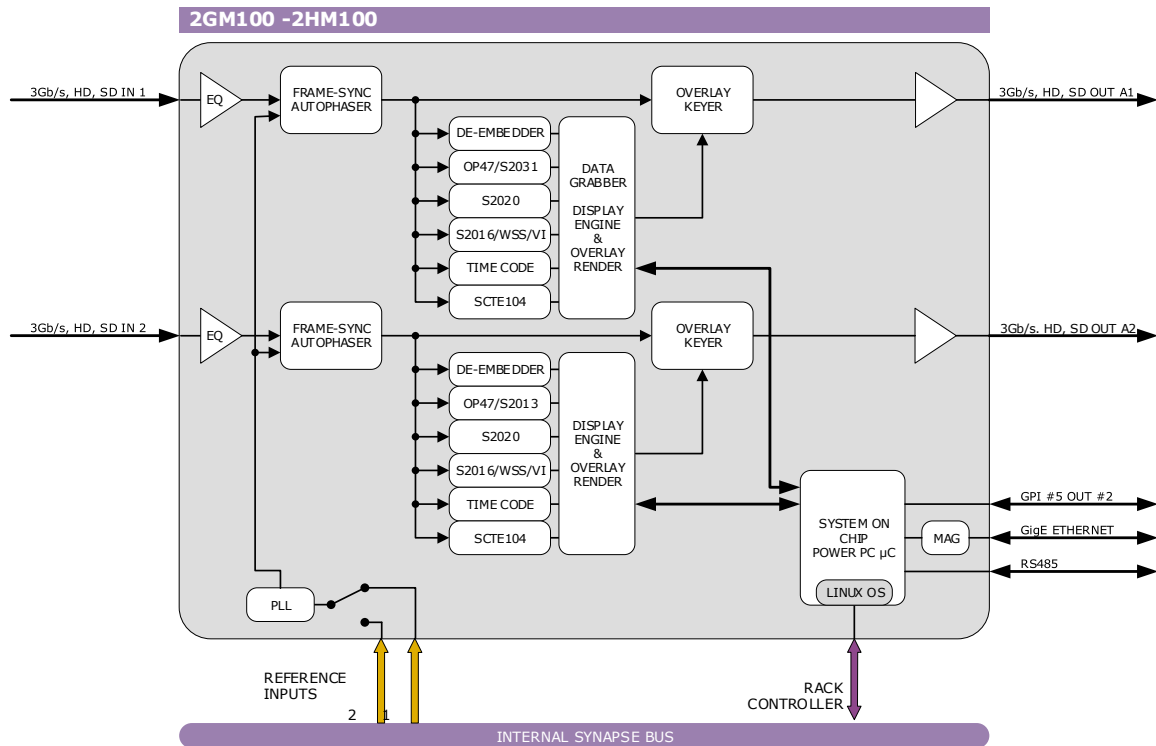
Synapse

COPYRIGHT © 2017 AXON DIGITAL DESIGN BV

ALL RIGHTS RESERVED

NO PART OF THIS DOCUMENT MAY BE REPRODUCED IN ANY FORM WITHOUT THE PERMISSION OF AXON DIGITAL DESIGN BV.

Block schematic & I/O panel



BHX27

HD, SD INPUT 1

HD, SD INPUT 2

HD, SD OUTPUT 1

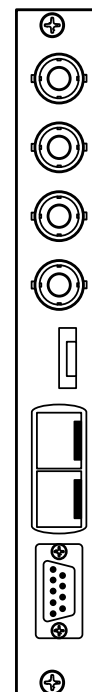
HD, SD OUTPUT 2

USB

Gig-Ethernet control

Gig-Ethernet control

RS485 - LTC - GPI I/O



Features

The 2GM100 and 2HM100 are VANC data analyzers with an application in mind where the data is monitored on screen in the SDI domain.

Monitoring the data through ACP is also possible.

The different VANC signals are decoded and displayed as an overlay on the SDI output. Audio is also decoded and monitored for presence and format.

The layout of the OSD is defined into groups and can be switched on or off by menu selection. All OSD ANC data is displayed timed correctly on their original frame. OP47 and s2031 data need to be decoded and rendered and will take a finite time to process. This offset can be compensated by additional video delay.

- Two individual channels with autophaser, Framesync and offset delay
- OSD monitoring of the following data
 - Embedded audio of all 4 groups presence, of PCM with Clip and silence detection, Dolby E presence detection
 - S2031 Subtitles
 - Line number
 - Subtitle Page number
 - Subtitle text (position & color)
 - OP47 Subtitles
 - DID/SDID
 - Line number
 - Subtitle Page number
 - Subtitle text (position & color)
 - Audio metadata S2020
 - DID/SDID
 - Line number
 - Program configuration
 - Program id
 - Program description
 - Coding mode
 - Bitstream mode
 - Dialogue normalization
 - LFE flag
 - ...Etc
 - AFD (s2016), WSS and VI
 - Timecode
 - ANC VITC decoded
 - ANC LTC decoded
 - Drop/non drop
 - Frames per second
 - SCTE104
 - WHP296 extension to SCTE104
 - Subtitle timing (delay/not delay)
 - Subtitle mode (live/not live)
 - DOG Logo insert mode
- Locks to SDI input, or external reference
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

Applications

- The 2HM100/2GM100 can be used as active probe in ingest or lines center.

Ordering information

Module:

- **2HM100:** HD, SD-SDI Dual channel VANC data analyzer for OSD applications
- **2GM100:** 3Gb/s, HD, SD-SDI Dual channel VANC data analyzer for OSD applications

Relay bypass I/O:

- **BHX27_2GM100:** I/O panel for 2GM100 or 2HM100 with relay bypass

Specifications

Serial Video Input (SDI)

Standard	3Gb/s, HD and SD SDI: 424M, SMPTE 425M (3Gb/s), SMPTE 274M, SMPTE 296M, SMPTE 259M
Number of Inputs	3
Equalization	Typical maximum equalized length of Belden 1694A cable: 90m at 2.97Gb/s, 120m at 1.485Gb/s, and 250m at 270Mb/s
Return Loss	> 15dB up to 270MHz

Serial Video Output

Standard	3Gb/s, HD and SD SDI: 424M, SMPTE 425M (3Gb/s), SMPTE 274M, SMPTE 296M, SMPTE 259M
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 to 1,5Gb/s
Jitter	< 0.2UI

Ethernet

Standard	10Base-T, 100Base-Tx IEEE 802.3
Connector	8P8C

VANC Standards

Standard	SCTE104 - 2014 SMPTE2010
-----------------	-----------------------------

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