



ASM08

**Analog to digital A/V converter with composite or
component input capability
A Synapse® product**

Synapse



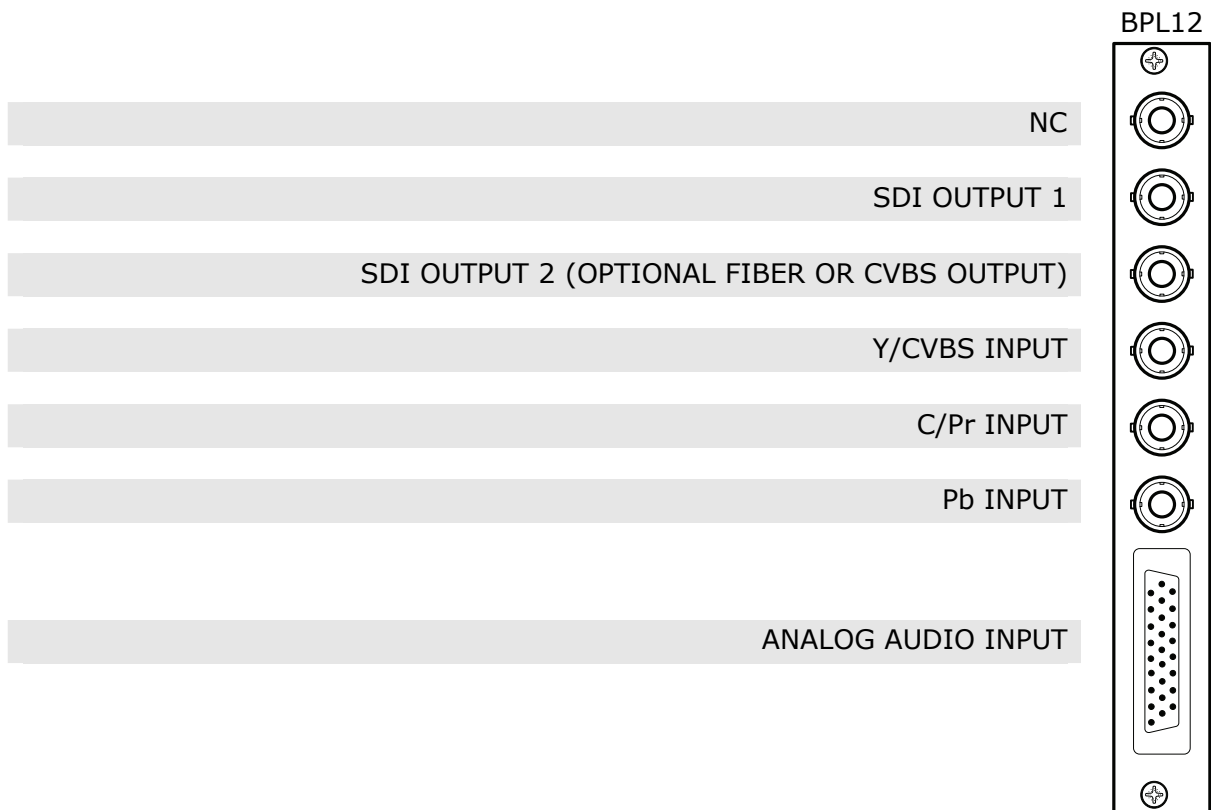
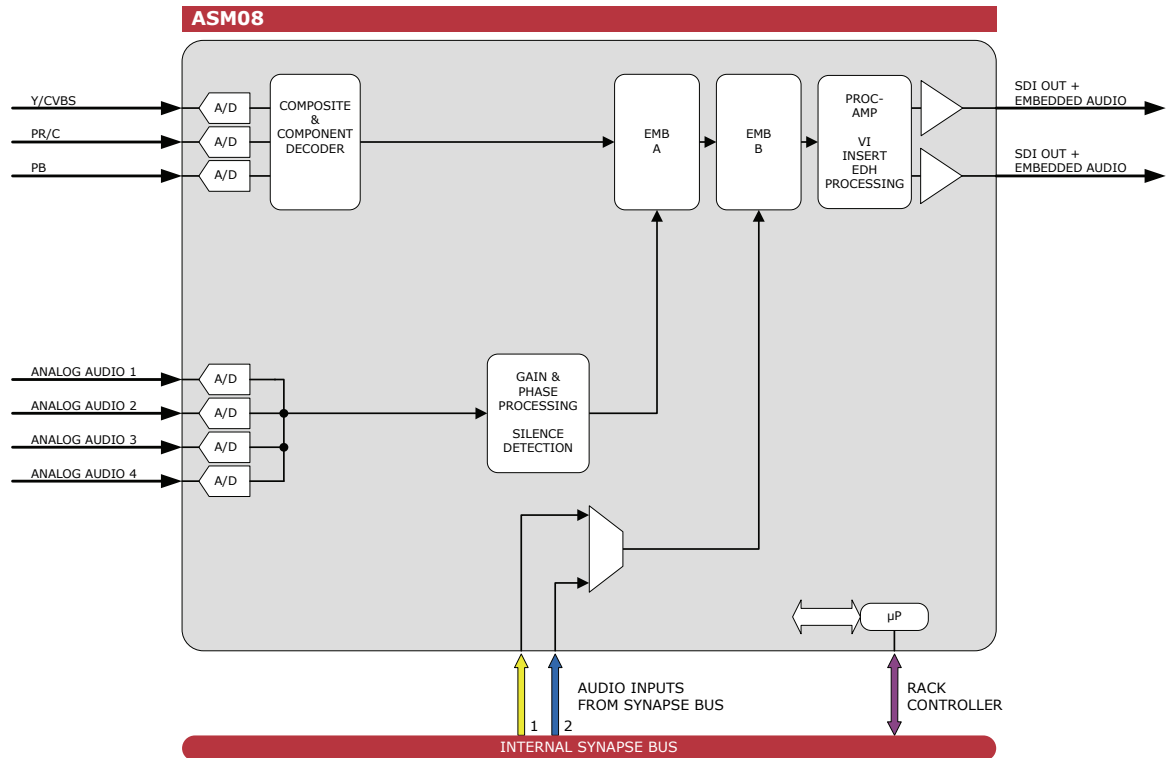
COPYRIGHT ©2010 AXON DIGITAL DESIGN BV

ALL RIGHTS RESERVED

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

VIDEO A/D CONVERSION

Block schematic & I/O panel



Features

The ASM08 is an audio and video analog to digital converter. It accepts both component and composite analog video together with 4 channels of analog audio.

The ASM08 is the counter part of the SAM08

- 12-bit video A/D conversion and decoding
- 20-bit audio A/D conversion and processing
- Auto detecting of PAL, NTSC or SECAM with correct reference input selection (SFR8 + SFR18 only)
- Automatic input gain adjustment
- Video Proc amp
- Noise reduction
- Hue adjustment
- Decoder Y-shaping and Y-peaking adjustment
- Adjustable analog audio reference levels of +15, +18 and +24dBu for 0 dBFS
- Adjustable audio gain +12 db to -60 dB
- Adjustable audio phase 0 deg or 180 deg
- Individual selection local analog audio input or ADD-ON audio input
- Second group embedding through ADD-ON card
- VI and WSS insertion
- EDH insertion
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)
- Optional 1 fiber input (replacing 1 SDI input) or 1 fiber output (replacing 1 SDI output) on I/O panel
- Optional 1 CVBS output (replacing 1 SDI output) on I/O panel

Complementary cards:

- ADC20, ADC24, ADL24, DIO24, DIO48, DLA44, DLA43

Applications

- A/V bridge to digitize an analog tape machine (Beta SP)
- VHS digitizer (+ embedded audio)
- Analog set-top box or IRD digitizer (+embedded audio)

Ordering information

Module:

- **ASM08:** Analog to digital A/V bridge (12 bit) with SDI & embedded audio bypass / processing input

Standard I/O:

- **BPL12_ASM08:** I/O panel for ASM08

Fiber outputs:

- **BPL12T_FC/PC_ASM08:** I/O panel for ASM08 with fiber transmitter on FC/PC
- **BPL12T_SC_ASM08:** I/O panel for ASM08 with fiber transmitter on SC

Fiber inputs:

- **BPL12R_FC/PC_ASM08:** I/O panel for ASM08 with fiber receiver on FC/PC
- **BPL12R_SC_ASM08:** I/O panel for ASM08 with fiber receiver on SC

CVBS Output:

- **BPL12C_ASM08:** I/O panel for ASM08 with CVBS output

Specifications

Video Input

Standard	PAL (ITU624-4), NTSC (SMPTE 170M)
Number of Inputs	1
Impedance	75 Ohms
Return Loss	> 35dB up to 10MHz
Frequency Response	< ±0.25dB (100KHz to 4.2MHz)
Differential Gain	< ±0.5% typical
Differential Phase	< ±0.2° typical
Noise Floor	< -57dB RMS (black video, 15KHz to 5MHz)
C/L Gain	< ±0.5%
C/L Delay	< ±9ns
Minimum Delay	3 lines
Maximum Delay	1 frame

Analog Audio Input

Type	Balanced analog audio
Number of Inputs	4
Connector	Removable terminal strip or female sub-D
Impedance	10k Ohms nominal (differential)
Sampling Rate	48KHz
Signal Level	0dB FS => 12dBu, 15dBu, 18dBu or 24dBu
Level Control Range	+12dB to -60dB 0.25dB increments
Frequency Response	< ±0.1dB, 20Hz to 20kHz (broadcast quality)
Dynamic Range	100dB @-60 dBFS
THD+N	< 0.002% (>96dB) @ 1kHz, -1dB FS < 0.002% (> 96dB) @ 20Hz to 20kHz, -1dB FS
CMRR	> 60dB at 1kHz

Serial Video Output

Standard	SMPTE 259M 525/59.95 or 625/50
Number of Outputs	2
Connector	BNC
Signal Level	800mV nominal
DC Offset	0V ±0.5V
Rise/Fall Time	900ps nominal
Overshoot	< 10% of amplitude
Return Loss	> 15dB to 270MHz
Jitter	< 0.1UI

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	9 Watts