



**2EB24**

**Dual 4 channel analog audio embedder**

**A Synapse ® product**

*Synapse*

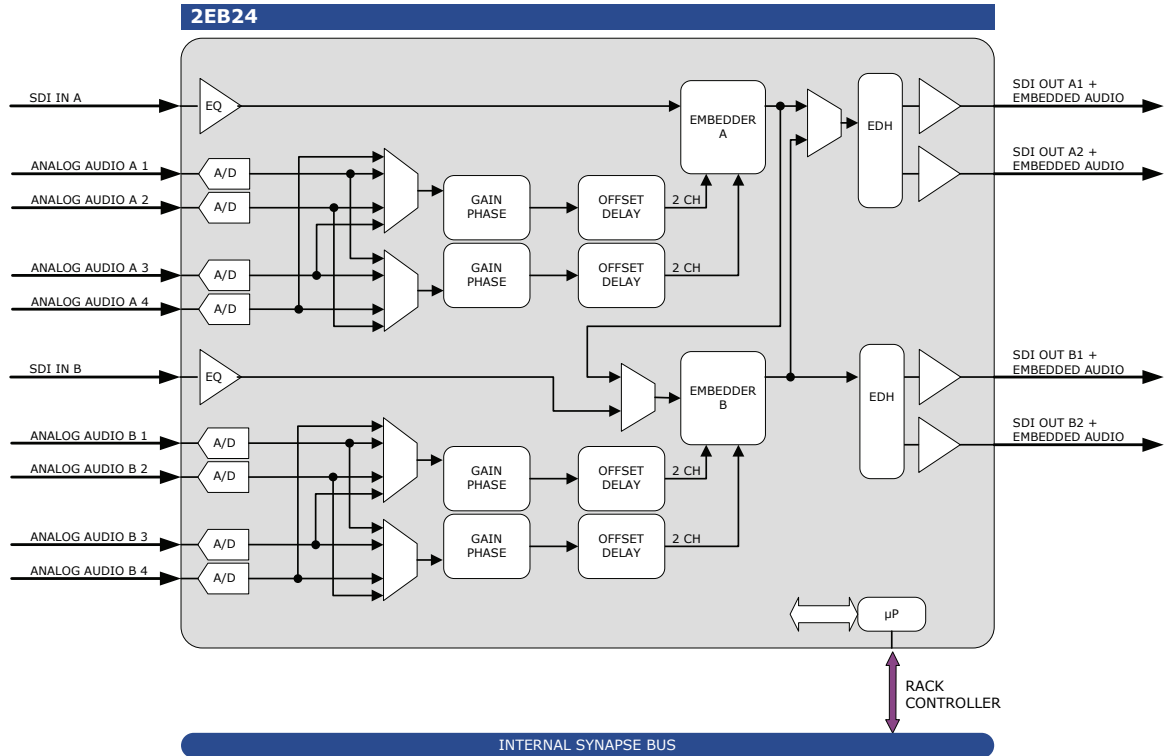


COPYRIGHT ©2010 AXON DIGITAL DESIGN BV

ALL RIGHTS RESERVED

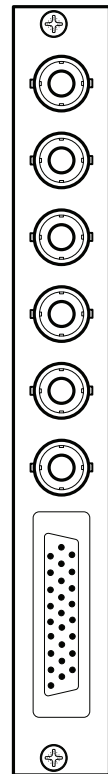
NO PART OF THIS DOCUMENT MAY BE REPRODUCED IN ANY FORM WITHOUT THE PERMISSION OF  
AXON DIGITAL DESIGN BV.

# Block schematic & I/O panel



- SDI INPUT A (OPTIONAL FIBER INPUT)
- SDI OUTPUT A-1 EMBEDDED
- SDI OUTPUT A-2 EMBEDDED (OPTIONAL FIBER OR CVBS OUTPUT)
- SDI INPUT B (OPTIONAL FIBER INPUT)
- SDI OUTPUT B-1 EMBEDDED
- SDI OUTPUT B-2 EMBEDDED (OPTIONAL FIBER OR CVBS OUTPUT)
- BALANCED ANALOG AUDIO INPUT

BPL12



For fiber connectivity see [www.axon.tv](http://www.axon.tv)

## Features

---

The 2EB24 contains two fully independent analog audio embedders. This card allows for 36 embedders in 4 Rack Units, and has its counterpart in the mirror image 2DB24.

The analog inputs can handle up to +24dBu and are converted to digital through 24-bit high quality A/D converters.

- 2 x 4 analog audio inputs
- Analog audio on sub-D
- 2 x 2 embedded SDI output
- Single channel mode for embedding 8 analog audio signals on a single SDI
- Audio level and phase control
- +24 dBu, +18 dBu, + 15 dBu and +12 dBu analog input levels for 0 dBFS
- Append and overwrite modes
- Individual audio channel delay up to 2600ms in 1 ms intervals
- Locks to SDI input
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)
- Optional 2 fiber inputs (replacing 2 SDI inputs) or 2 fiber outputs (replacing 2 SDI outputs) on I/O panel
- Optional 2 CVBS outputs (replacing 2 SDI outputs) on I/O panel

## Applications

---

- Generic multi channel analog audio embedding
- 2 group (8 x analog audio) embedding
- High density applications as in OB-Trucks

## Ordering information

---

### Module:

- **2EB24:** Dual 4 channel analog audio embedder

### Standard I/O:

- **BPL12\_2EB24:** I/O panel for 2EB24

### Fiber outputs:

- **BPL12T2\_FC/PC\_2EB24:** I/O panel for 2EB24 with 2 fiber transmitters on FC/PC
- **BPL12T2\_SC\_2EB24:** I/O panel for 2EB24 with 2 fiber transmitters on SC

### Fiber inputs:

- **BPL12R2\_FC/PC\_2EB24:** I/O panel for 2EB24 with 2 fiber receivers on FC/PC
- **BPL12R2\_SC\_2EB24:** I/O panel for 2EB24 with 2 fiber receivers on SC

### CVBS outputs:

- **BPL12C2\_2EB24:** I/O panel for 2EB24 with 2 CVBS outputs

## Specifications

---

### Serial Video Input

---

<b>Standard</b>	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio
<b>Number of Inputs</b>	2 (1 per channel)
<b>Equalization</b>	Automatic to 300m @ 270Mb/s with Belden 1694A or equivalent cable
<b>Return Loss</b>	> 15dB up to 270MHz

### SD Serial Video Output

---

<b>Standard</b>	625/50 or 525/59.94 SMPTE 259M-C (270Mb/s) with SMPTE 272M embedded audio
<b>Number of Outputs</b>	4 (2 per channel)
<b>Signal Level</b>	800mV nominal
<b>DC Offset</b>	0V $\pm$ 0.5V
<b>Rise/Fall Time</b>	800ps nominal
<b>Overshoot</b>	< 10% of amplitude
<b>Return Loss</b>	> 15dB up to 270MHz

### Analog Audio Input

---

<b>Type</b>	Balanced analog audio
<b>Number of Inputs</b>	4 per SDI input (8 in single channel mode)
<b>Connector</b>	26 pins female Sub-D
<b>Impedance</b>	10 Ohms nominal (differential)
<b>Sampling Rate</b>	48KHz
<b>Signal Level</b>	0dB FS => 12dBu, 15dBu, 18dBu or 24dBu
<b>Level Control Range</b>	+12dB to -60dB 0.25dB increments
<b>Frequency Response</b>	< $\pm$ 0.1dB, 20Hz to 20kHz (broadcast quality)
<b>Dynamic Range</b>	100dB @ -60 dBFS
<b>THD+N</b>	< 0.002% (>96dB) @ 1kHz, -1dB FS
<b>CMRR</b>	< 0.002% (> 96dB) @ 20Hz to 20kHz, -1dB FS
	> 60dB at 1kHz

### Miscellaneous

---

<b>Weight</b>	Approx. 250g
<b>Operating Temperature</b>	0 °C to +50 °C
<b>Dimensions</b>	137 x 296 x 20 mm (HxWxD)

### Electrical

---

<b>Voltage</b>	+24V to +30V
<b>Power</b>	<12 Watts