Synapse

2AI48

Dual AES/EBU backup switcher with integrity checking

A Synapse® product

TWINS
TWINS

COMPATIBLE WITH
DOLBY. E

Block schematic & I/O panel

BPL01 BPL02 BPL04 BPL05D

AES/EBU INPUT 1/2

AES/EBU INPUT 3/4

AES/EBU INPUT 5/6

AES/EBU INPUT 7/8

AES/EBU OUTPUT 1/2

AES/EBU OUTPUT 3/4

AES/EBU OUTPUT 5/6

AES/EBU OUTPUT 7/8
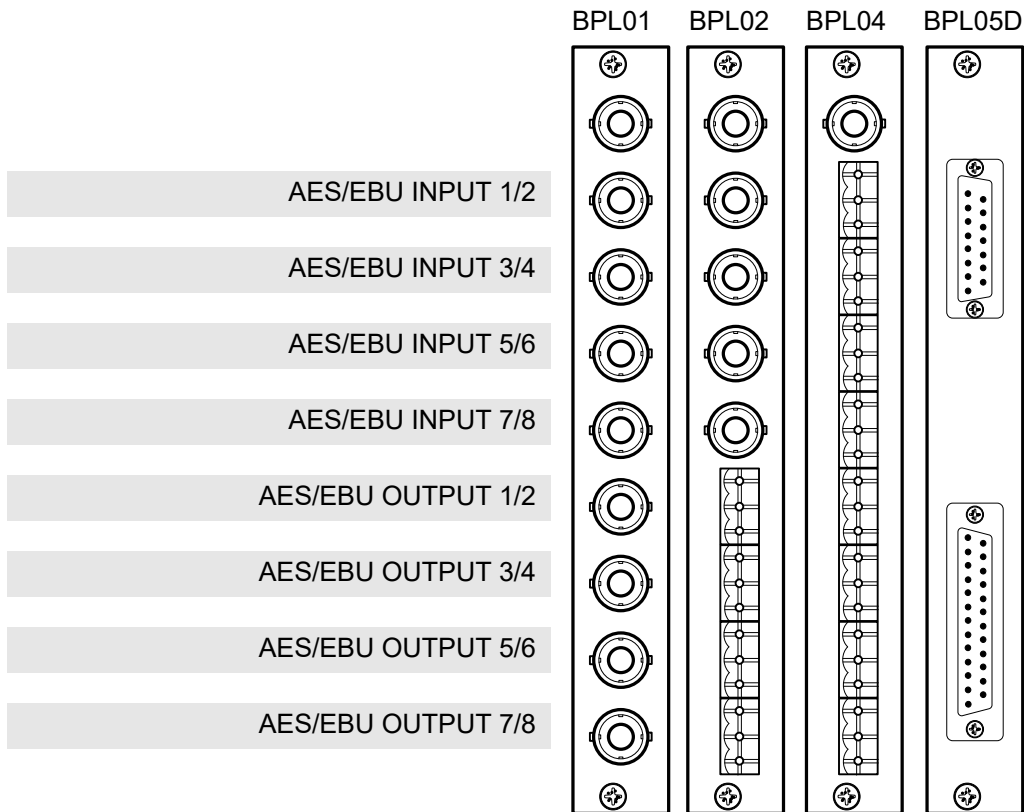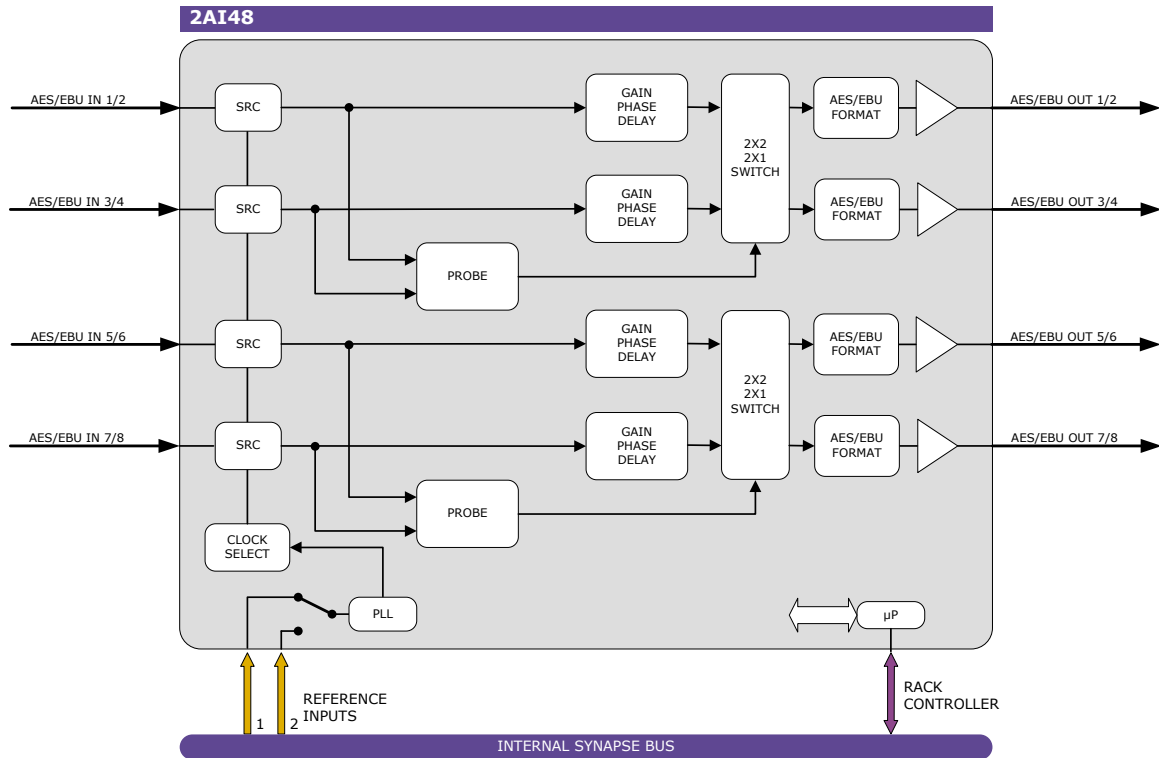
Features

The 2AI48 is a dual AES/EBU back-up switcher. It contains 2 completely individual paths with main and backup inputs. The unit can be triggered by our ACP control protocol or automatically by several input triggers. These triggers are loss of input, audio silence, clipping and crc errors.

- 2x1 or 2x2 function
- Automatic backup triggerd by:
    - Loss of input (carrier detect)
    - Silence with threshold and time adjustment
    - Audio Clip with time adjustment
    - CRC errors
- AES/EBU inputs with optional SRC (32 to 192kHz sampling)
- 48kHz sample clock locked to: B&B ref or word clock ref.
- 48kHz sample clock in free running mode
- Available with 110 Ohms (phoenix or sub-D) or 75 Ohms (BNC) AES/EBU in- and outputs
- Adjustable audio gain (in 0.25dB) and phase (0-180 deg)
- Adjustable audio delay offset up to 1300ms in 1ms increments
- Locks to Bi-level sync or word clock
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

Applications

- High density AES/EBU backup switching in lines areas

Ordering information

Module:
- **2AI48:** Dual AES/EBU backup switcher with integrity checking

Standard I/O:
- **BPL01_2AI48:** I/O panel for 2AI48 with unbalanced AES/EBU in and out
- **BPL02_2AI48:** I/O panel for 2AI48 with unbalanced AES/EBU in and balanced AES/EBU out
- **BPL04_2AI48:** I/O panel for 2AI48 with balanced AES/EBU in and balanced AES/EBU out
- **BPL05D_2AI48:** I/O panel for 2AI48 with balanced AES/EBU in and balanced AES/EBU out on sub-D

Specifications

AES Audio Input

Connector	BNC, Screw terminal or female sub-D (balanced)
Standard	AES-1992 for balanced synchronous or asynchronous PCM/AES, SMPTE 276M for single ended synchronous or asynchronous PCM/AES
Number of Inputs	4
Sampling Rate	32 kHz to 192 kHz Synchronous 48 kHz in Master/ADD-On mode
Resolution	24 bits when AES inputs selected
Minimum Input/Output Delay	1 ms
Impedance	110 Ohms or 75 Ohms
Level	0.2V to 1V nom for BNC, 2V to 7V for balanced operation

AES Audio Output

Number of Outputs	4
Connector	BNC, Screw terminal or female sub-D (balanced)
Resolution	24 bits
Sampling Rate	48KHz synchronous
Minimum Input/Output Delay	2.5ms
Maximum Input/Output Delay	1300 ms

Reference Input through RRC

Number of Inputs	2 on SFR18, 2 on SFR08 and 1 on SFR04
Bi-level	PAL Black Burst ITU624-4/SMPTE318, Composite NTSC SMPTE 170M
	1Vp-p nominal, 75 Ohms terminated through loop
Word clock	AES11-2003 Annex B, not terminated on loop
	48kHz

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	<4 Watts