DIO88

Universal triple mode, 16 channel I/O card for quad speed ADD-ON applications

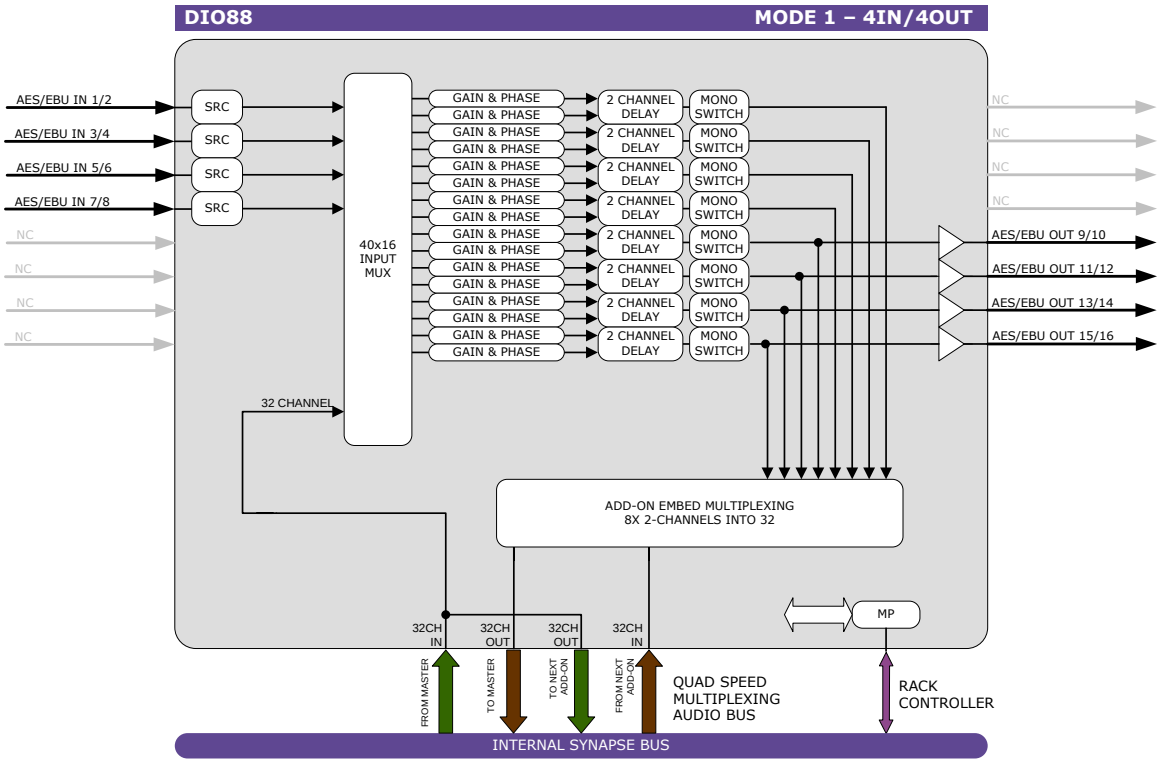
A Synapse® product

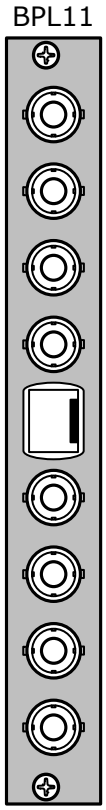
COPYRIGHT ©2017 AXON DIGITAL DESIGN BV

ALL RIGHTS RESERVED

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

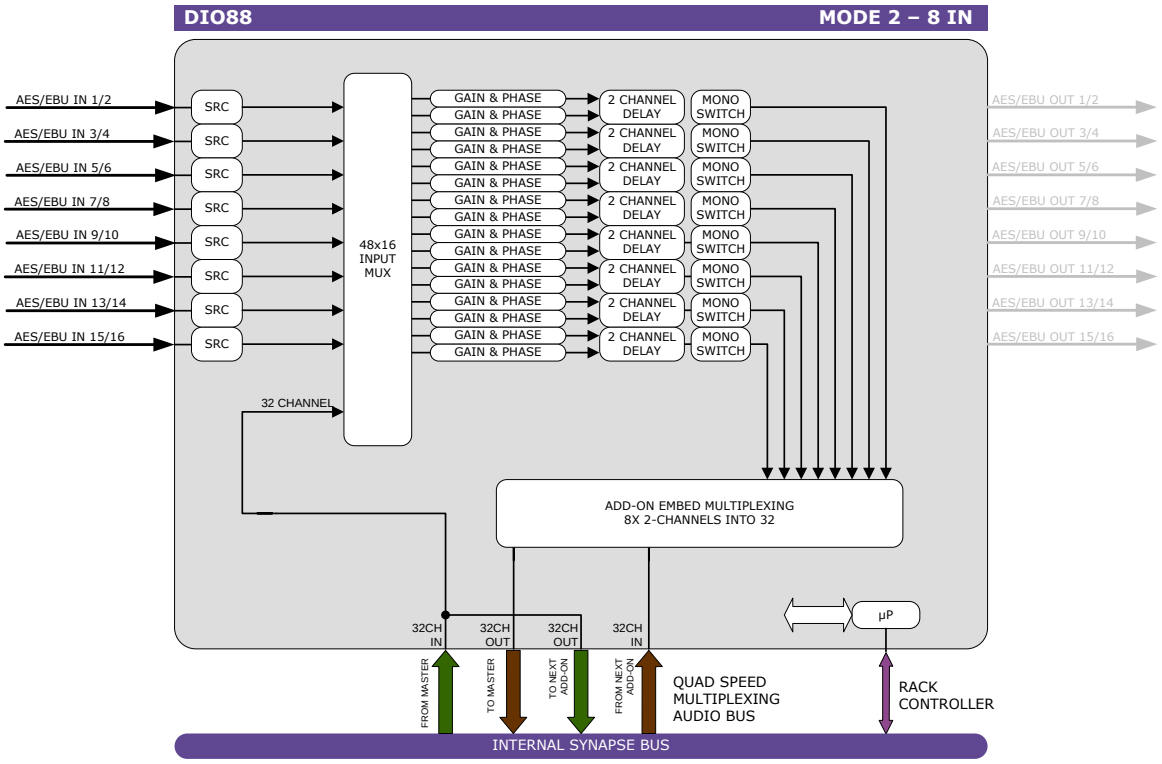
Block schematic & I/O panel [MODE 1]



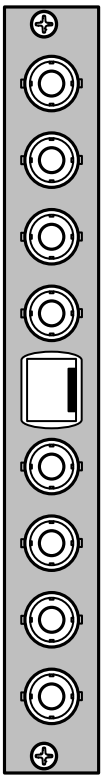


AES/EBU IN 1/2
AES/EBU IN 3/4
AES/EBU IN 5/6
AES/EBU IN 7/8
NC
AES/EBU OUT 9/10
AES/EBU OUT 11/12
AES/EBU OUT 13/14
AES/EBU OUT 15/16

Block schematic & I/O panel [MODE 2]

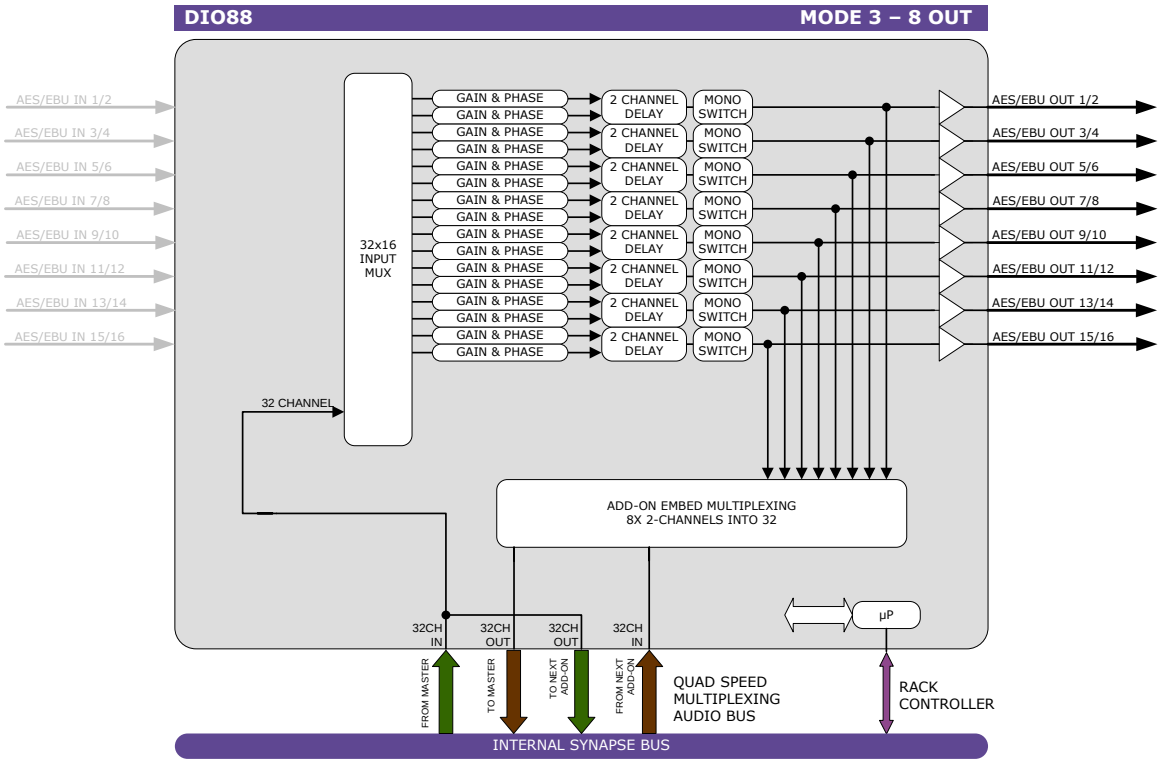


BPL11

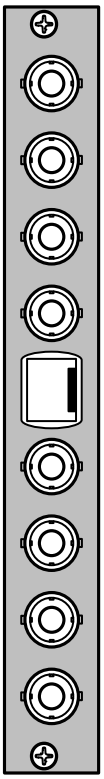


AES/EBU IN 1/2
AES/EBU IN 3/4
AES/EBU IN 5/6
AES/EBU IN 7/8
NC
AES/EBU IN 9/10
AES/EBU IN 11/12
AES/EBU IN 13/14
AES/EBU IN 15/16

Block schematic & I/O panel [MODE 3]

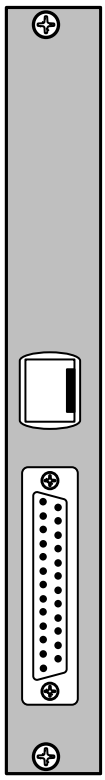


BPL11



AES/EBU OUT 1/2
AES/EBU OUT 3/4
AES/EBU OUT 5/6
AES/EBU OUT 7/8
NC
AES/EBU OUT 9/10
AES/EBU OUT 11/12
AES/EBU OUT 13/14
AES/EBU OUT 15/16

BPL11D



NC

BALANCED AES/EBU IN/OUT
OUTPUTLEVEL MAX. 1.7V

Features

The new Synapse quad speed audio bus enables up to 32 channels being transported from Master Card to ADD-ON card and simultaneously 32 channels from ADD-ON card(s) to Master Card.

The DIO88 can be used in 3 modes. The card only works as an add-on card and can therefore not be used without a master card. Mode one makes the card a universal 4 AES/EBU in and 4 AES/EBU output card. This gives the user a function to insert and extract up to 8 mono channels from any quad speed compatible Master Card.
Mode 2 turns the DIO88 into an 8 AES/EBU insert card, providing the insertion of up to 16 mono channels into any quad speed compatible Master Card.
Mode 3 is used to extract 8 AES/EBU (16 mono audio) channels from a quad speed compatible Master Card.

- Triple mode quad speed audio ADD-ON card (Cortex controllable, no reboot required)
  - Mode 1: 4x AES/EBU in and 4x AESEBU out.
  - Mode 2: 8x AES/EBU in.
  - Mode 3: 8x AESEBU out.
- Full audio swapping of all input channels allow for a selection of any AES/EBU input or any of the 32 channel bus input to be selected
- 16 channels of audio gain
- 16 channels of audio phase reversal
- 8x 2channel audio delay up to 1300ms
- 8 stereo>mono switches
- 16x 2 channel audio insertion into 32 channel Quad speed audio bus (allows for duplicates)
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

Compatible Master Cards:

G/HDK100, G/HXT110, G/HEP100, G/HPD100, G/HED100 and all future Quad Speed Audio bus enabled Master Cards

Applications

- 16 channel insertion to QUAD SPEED audio Master card
- 16 channel extraction from QUAD SPEED audio Master card

Ordering information

Module:
- **DIO88:** Universal triple mode, 16 channel I/O QUAD-SPEED ADD-ON card

Standard I/O:
- **BPL11_DIO88:** I/O panel for DIO88 with unbalanced AES/EBU in and out
- **BPL11D_DIO88:** I/O panel for DIO88 with balanced AES/EBU in and out

Specifications

AES Audio Input

Connector BPL11	BNC 75 Ohm
Connector BPL11D	25P D-SUB FEMALE 110 Ohm
Standard	AES-1992 for synchronous or asynchronous PCM/AES, SMPTE 276M for single ended synchronous or asynchronous PCM/AES
Number of physical Inputs	Up to 8 depending on mode
Sampling Rate	32 kHz to 192 kHz converted to 48kHz internally or Synchronous 48 kHz in SRC b transparent mode (Dolby E compatible)
Resolution	24 bits when AES inputs selected, 20 bits in SD Master/ADD-ON mode
Minimum Input/Output Delay	1 ms
Impedance BPL11	75 Ohms
Impedance BPL11D	110 Ohms balanced
Level	0.2V to 1V nom

AES Audio Output

Number of physical Outputs	Up to 8 depending on mode
Connector BPL11	BNC 75 Ohm
Connector BPL11D	25P D-SUB FEMALE 110 Ohm
Resolution	24 bits
Sampling Rate	48KHz synchronous
Minimum Input/Output delay	1ms
Maximum Input/Output offset delay	1300 ms
Level	0V to 1.7V

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	<7 Watts