



# Synapse

## DIO88

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

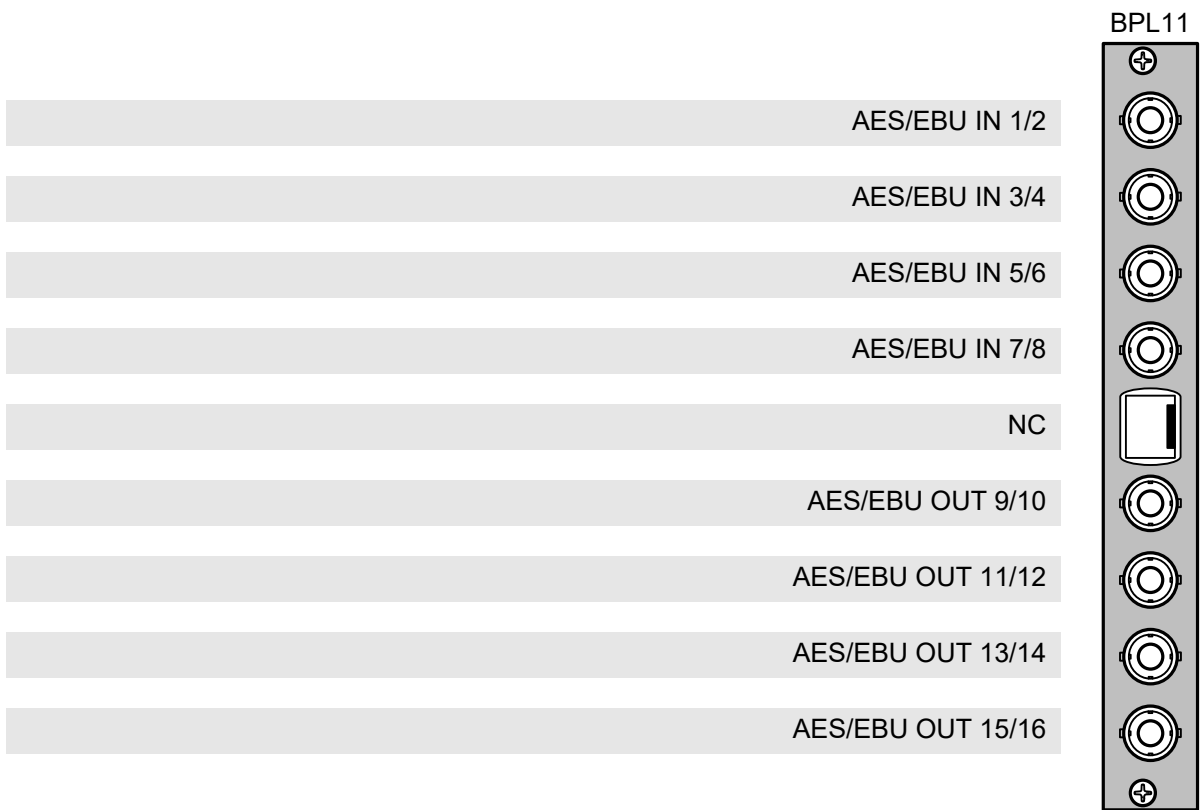
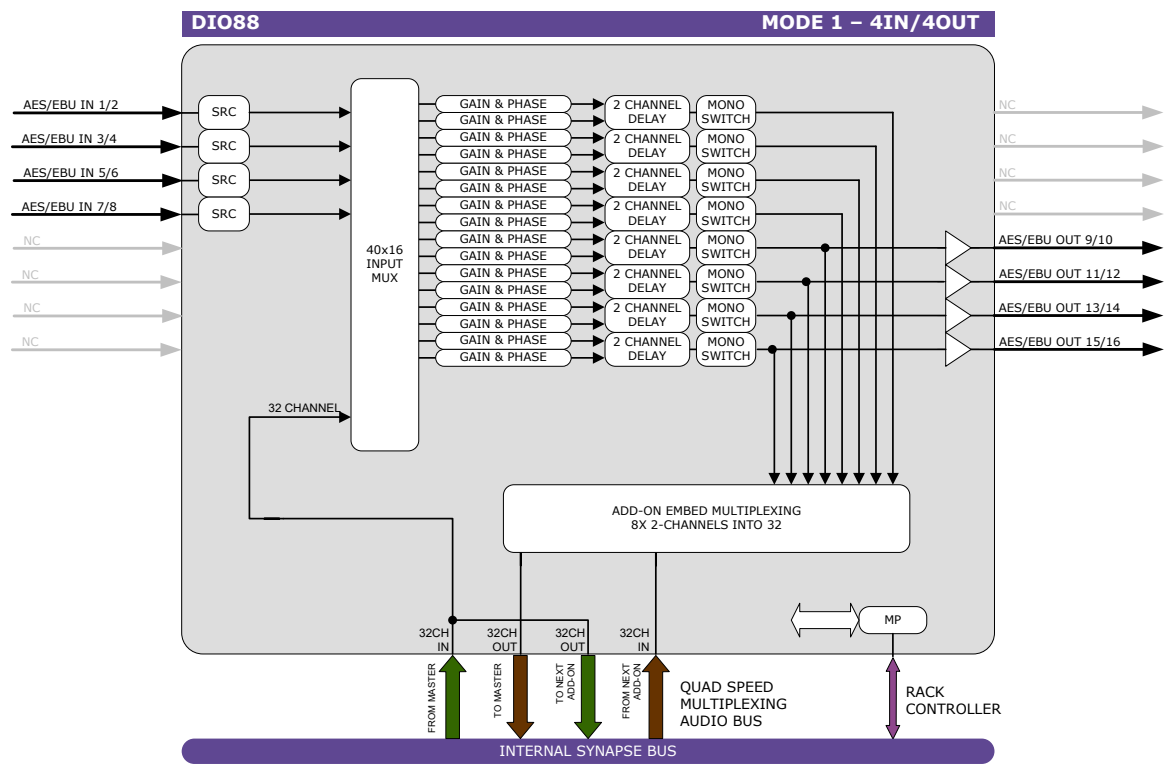
A Synapse® product

Quad speed  
**ADD-ON**

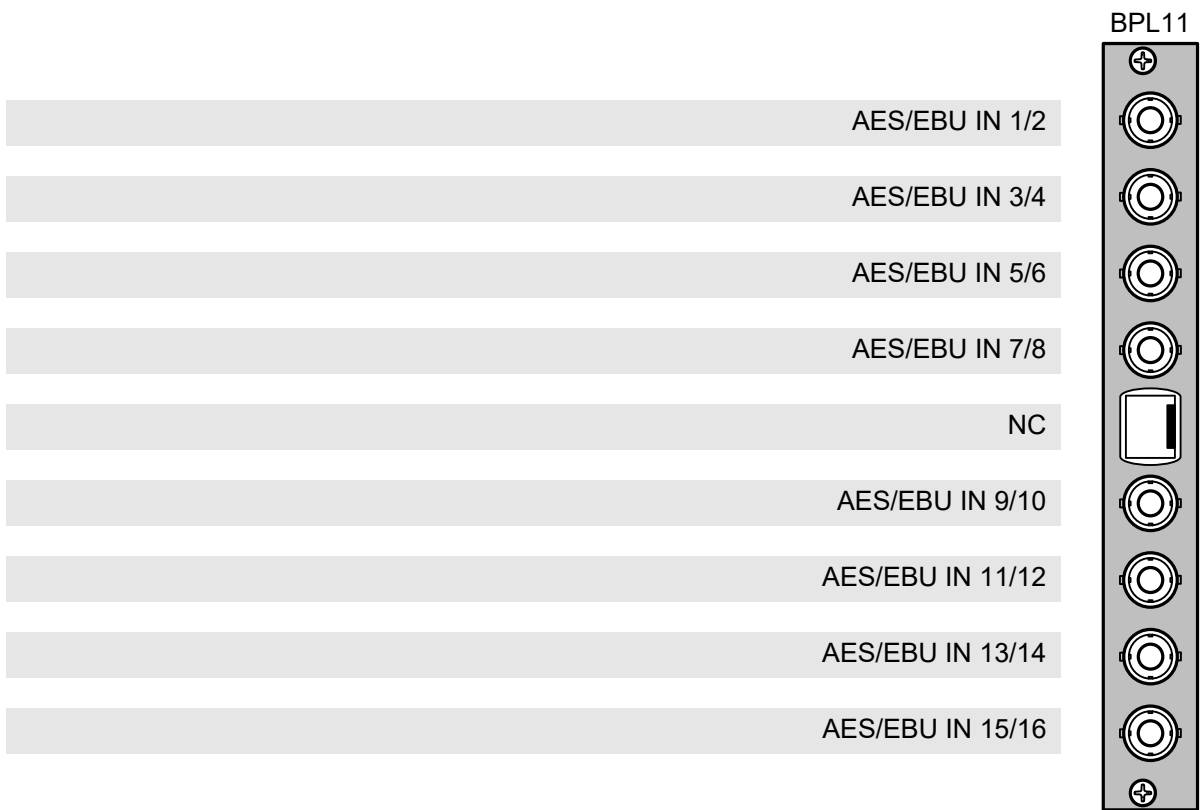
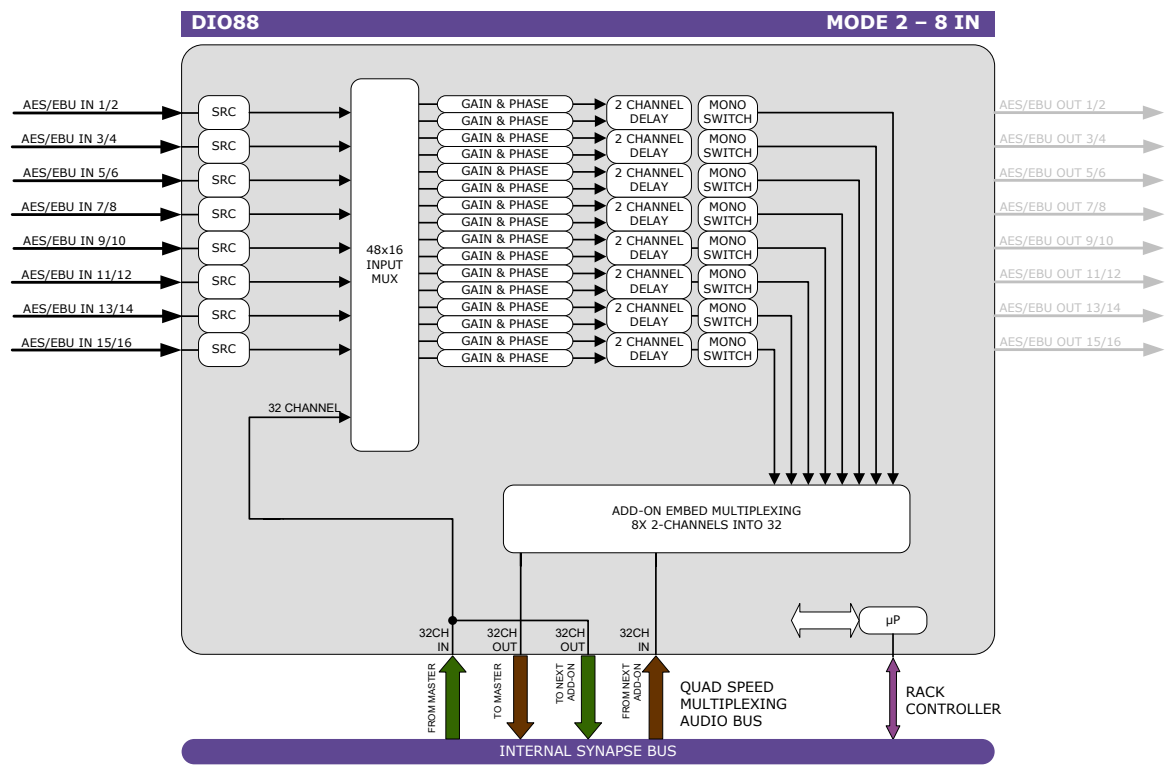


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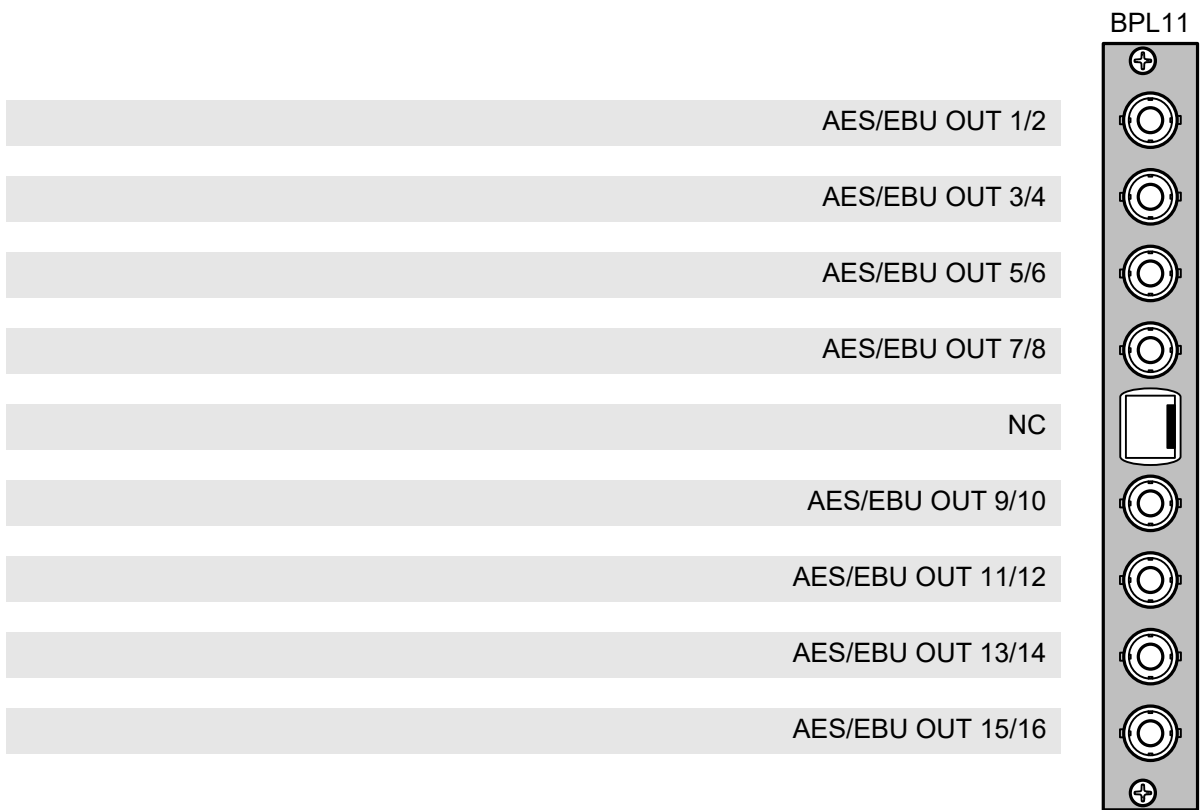
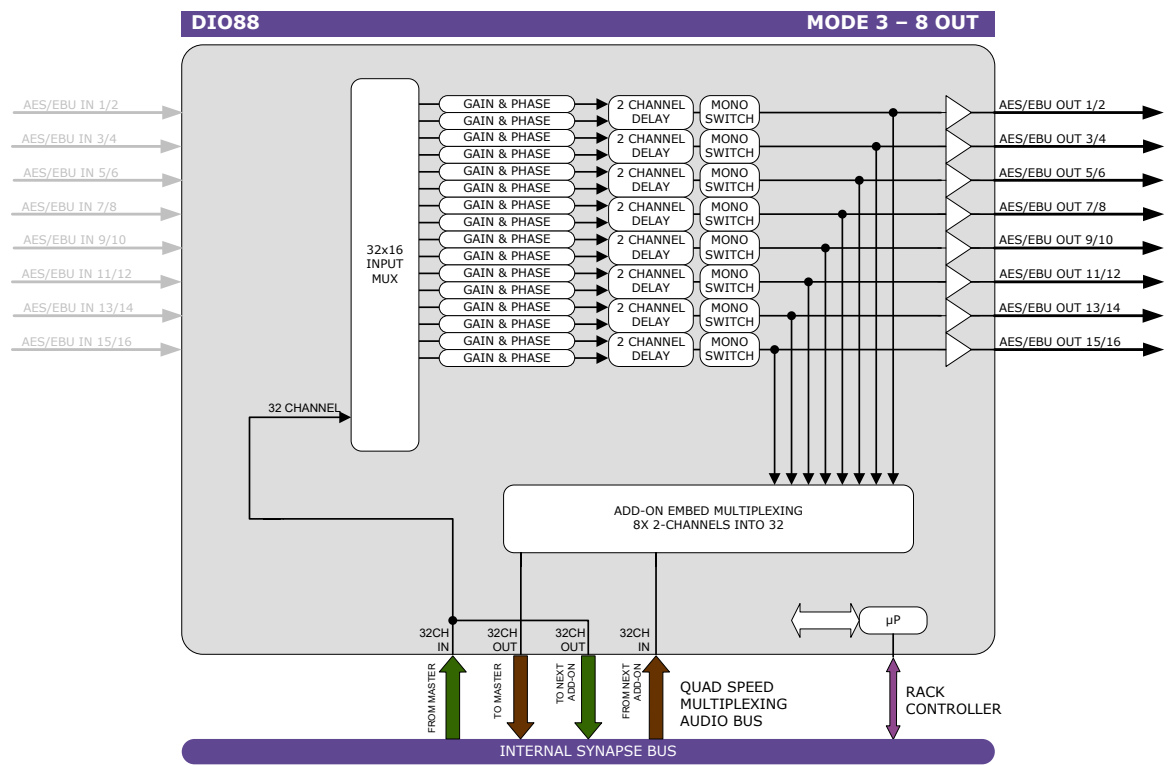
Block schematic & I/O panel [MODE 1]

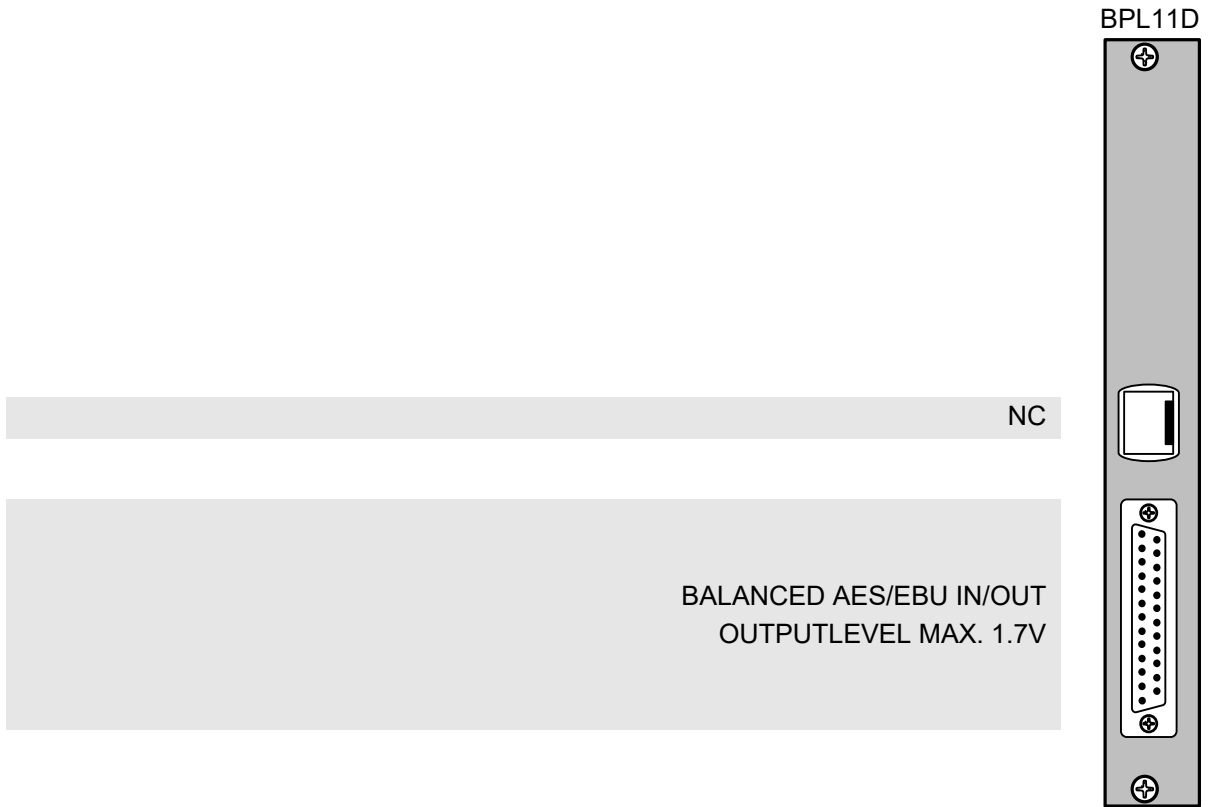


Block schematic & I/O panel [MODE 2]



Block schematic & I/O panel [MODE 3]





### Features

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

### Applications

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

### Ordering information

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**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

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### AES Audio Input

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

### AES Audio Output

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

### Miscellaneous

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<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

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<b>Voltage</b>	+24V to +30V
<b>Power</b>	<7 Watts