

DAC6800+BCA4D

# AES Digital-to-Analog Audio Converters

The DAC6800+ series is a family of high-precision AES digital-to-analog audio converters for the 6800+™ processing platform that can accept one or two AES inputs, either balanced or unbalanced, and convert to two or four analog audio outputs respectively.

High-quality, 24-bit conversion is supported, along with a variety of other flexible features. Two versions of this module are available:

- DAC6800+BCA4D: converts two AES inputs to four analog audio outputs (66 ohms)
- DAC6800+BCA4ZD: same as above, except provides 600 ohms output impedance

Designed for use in any professional/broadcast installation needing to integrate both AES digital and analog audio sources, these modules are ideally suited for converting AES into analog audio for recording on VTRs, or for input to other devices only supporting analog audio. Another application is cost-effectively monitoring AES feeds by converting them to analog for use with existing analog speakers.

The DAC6800+ modules can be controlled at the card edge, or controlled and monitored via the CCS Navigator™ software applications, HTTP web browser, or third-party SNMP-based control applications.

## Features

- Two AES audio inputs with auto-detect and input status feedback (card-edge and CCS Navigator)
- Balanced or unbalanced AES inputs available
- Four analog audio outputs (two stereo pairs)
- 16-, 20- or 24-bit audio conversion for high-quality audio performance
- Supports audio sample rates on AES inputs from 32 to 96 kHz
- Output muted when errors detected on AES input to prevent passing bad audio
- Choice of 66 ohms or 600 ohms high-impedance analog output module versions
- User selection of analog audio output level from 16 dBu (10 dBm) to 28 dBu (22 dBm), in 2 dBu (2 dBm) increments
- Supports card-edge and remote control of module (via CCS Navigator, web browser and third-party SNMP-based control systems)

## Specifications

Specifications and designs are subject to change without notice

BALANCED AES INPUTS	
Number of Inputs	2
Standard	AES3-1992 (r1997)
Connector	3-pin connector (male)
Impedance	110 ohms ±20%
Signal Level	2 to 7 V pk-pk
Minimum Signal Level	200 mV as per AES3
Sampling Frequency	Supports 32 to 96 kHz

<b>UNBALANCED AES INPUT</b>	
Standard	AES3-1992 (r1997), AES3-id-2001, SMPTE 276M
Connector	BNC (IEC 169-8)
Number of Inputs	2
Impedance	75 ohms
Signal Level	1 V pk-pk, $\pm 10\%$
Minimum Signal Level	100 mV as per SMPTE 276M
Return Loss	>25 dB, 0.1 to 6 MHz
Sampling Frequency	Supports 32 to 96 kHz
<b>ANALOG AUDIO OUTPUTS (66 OHMS)</b>	
Type	Electronic, balanced
Connector	3-pin connector (male)
Output Level Setting Range	+15 to +28 dBu
Maximum Output Level	0 dBFS = +28 dBu
Output Impedance	66 ohms
THD+N	<-85 dB @ 1 kHz, -1 dBFS = +23 dBu
Cross Talk	<-95 dB, 20 Hz to 20 kHz, typical
Frequency Response	< $\pm 0.05$ dB @ 0 dBFS, 20 Hz to 20 kHz, typical
Signal to Noise Ratio	>100 dB @ 0 dBFS
Linearity	< $\pm 0.3$ dB up to -100 dBFS, typical
<b>ANALOG AUDIO OUTPUTS (600 OHMS)</b>	
Type	Electronic, balanced
Connector	3-pin connector (male)
Output Level Setting Range	+10 to +22 dBm
Maximum Output Level	0 dBFS = +22 dBm
Output Impedance	600 ohms
THD+N	<-85 dB @ 1 kHz, -1 dBFS = +17 dBm
Cross Talk	<-95 dB, 20 Hz to 20 kHz, typical
Frequency Response	< $\pm 0.05$ dB @ 0 dBFS, 20 Hz to 20 kHz, typical
Signal to Noise Ratio	>100 dB @ 0 dBFS
Linearity	< $\pm 0.3$ dB up to -100 dBFS, typical
<b>POWER AND TEMPERATURE</b>	
Power Consumption	10.5 W
Operating Temperature	41° to 113° F (5° to 45° C)

## Ordering Information

DAC6800+BCA4D	2-input AES (balanced or coaxial) to 2-channel analog audio converter with double-slot rear connector, for FR6802+ series frames
DAC6800+BCA4ZD	2-input AES (balanced or coaxial) to 2-channel analog audio converter (600 ohms) with double-slot rear connector, for FR6802+ series frames

# Images/Diagrams

