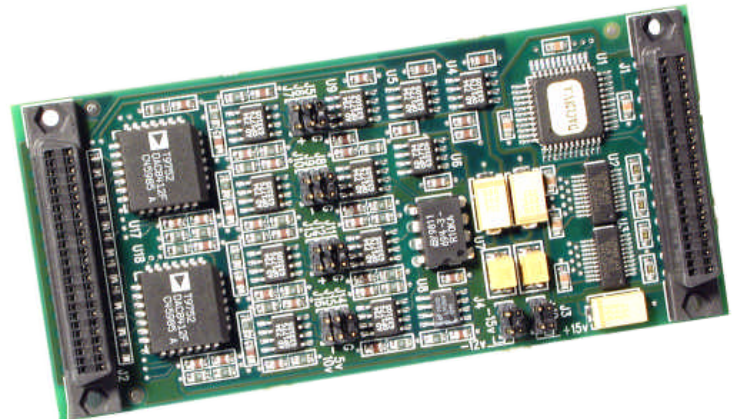


I/O Solutions™

IPack Modules — Analog Output

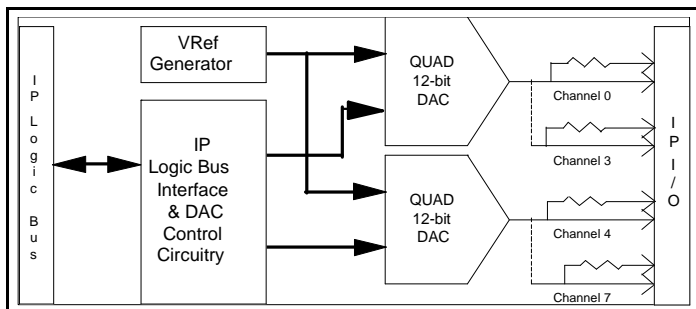
DAC128V — 8-Channel, 12-Bit, 8 Voltage Ranges, D-A Converter



This 8-channel, 12-bit, D-A converter has eight voltage ranges that can be selected in two groups of four. This allows the board to provide output range versatility that is not available on other DAC boards currently on the market. Its modular design provides up to 40 channels of high-performance D-A in a single VME slot using the VMESC5 carrier or up to 48 channels in a single PC slot using the ISASC6 carrier. The DAC128V can also be mixed with other IPack modules for a more customized, modular I/O system solution.

Application Features:

- ◆ Largest number of output ranges possible on an output board.
- ◆ Eight different ranges can be selected in 2 groups of 4 providing output range versatility not available on other DAC boards.
- ◆ Power option via the I/O connector allows you to use either the carrier power or an external power source.
- ◆ Direct and series-terminated outputs reduce signal ringing when using high-capacitance cables.
- ◆ Four different buffered reference outputs.
- ◆ Hard drive capability without adding an external buffer in most applications.
- ◆ No wait-states combined with write- and read-back accesses permit simpler system architectures running at maximum speeds.



Specifications:

- ◆ Physical Dimensions: 1.800 " x 3.900 " x 0.303 " (45.72 mm x 99.06 mm x 7.70 mm)
- ◆ Weight: 1.056 oz. (29.938 grams)
- ◆ Hardware Compatibility: IndustryPack Logic Interface Specification, Rev. 0.7.1
- ◆ Mechanical/Electrical Interface: Singlewide IP module
- ◆ IP Transfer Types: (memory and interrupt not supported)
 - I/O: 16-bit writes, 16-bit reads; No wait states, hold states supported
 - ID: 8-bit read only; No wait states, hold states supported

- ◆ Electrical Requirements: +5 Vdc @ 24 mA (typ., no load) +12 Vdc @ 24 mA (typ., no load) -12 Vdc @ 22 mA (typ., no load)
- ◆ Operating Temperature: 0° to +70° C (+32° to +158° F)
- ◆ Storage Temperature: -40° to +85° C (-40° to +185° F)
- ◆ Humidity (non-condensing): 5% to 95%
- ◆ Operating Vibration: 10 G's RMS, 10-55 Hz random
- ◆ Operating Shock: 50 G's max.
- ◆ Operating Altitude: 10,000 ft.
- ◆ MTBF: 2,683,123 hrs. per MIL-HDBK-217F
- ◆ Settling Time: 6 μ s (typ.)
- ◆ Slew Rate: 2.2 V/ μ s (typ.)
- ◆ Jumper Selectable Output Ranges: 0 \Rightarrow +5 V, 0 \Rightarrow +10V, -5 \Rightarrow 0 V, -5 \Rightarrow +5 V, -5 \Rightarrow +10 V, -10 \Rightarrow 0 V, -10 \Rightarrow +5V, -10 \Rightarrow +10 V
- ◆ Output Current: \pm 20 mA (max.) for \pm 10 V output (running on \pm 15 V)
- ◆ Jumper Selectable Analog Power Sources: (external power recommended for 10 V ranges)
 - From Carrier: \pm 12 V
 - From I/O Connector: \pm 15 V
- ◆ Integral and Differential Nonlinearities: \pm 1 LSB (max.)
- ◆ Straight Binary Coding
- ◆ All DACs Power-up to the Mid-Scale Voltage Defined by Code = 800 hex
- ◆ 18 Ω Series-termination Resistors in Auxiliary Outputs
- ◆ Typical Total Gain and Offset Error: \pm 5LSB, for all ranges over temperature
- ◆ 1 LSB = 4.88 mV/Bit for \pm 10 V F. S.
= 2.44 mV/Bit for 0 \Rightarrow +10 V
-5 \Rightarrow +5 V
-10 \Rightarrow 0 V
= 3.66 mV/Bit for -10 \Rightarrow +5 V
-5 \Rightarrow +10 V
= 1.22 mV/Bit for -5 \Rightarrow 0 V
0 \Rightarrow +5 V

Ordering Information:

BHAS-DAC128V: 8 Channel 12-bit Variable DAC IP Board

DAC128V PIN ASSIGNMENTS

50	GND	45	-15VIN	40	GND	35	GND	30	GND	25	2DAC08R	20	GND	15	DAC05	10	2DAC03R	5	GND
49	GND	44	GND	39	-5VOUT	34	GND	29	GND	24	DAC08	19	2DAC06R	14	GND	9	DAC03	4	2DAC01R
48	+15VIN	43	GND	38	GND	33	+10VOUT	28	GND	23	GND	18	DAC06	13	2DAC04R	8	GND	3	DAC01
47	GND	42	-10VOUT	37	GND	32	GND	27	GND	22	2DAC07R	17	GND	12	DAC04	7	2DAC02R	2	GND
46	GND	41	GND	36	+5VOUT	31	GND	26	GND	21	DAC07	16	2DAC05R	11	GND	6	DAC02	1	GND

