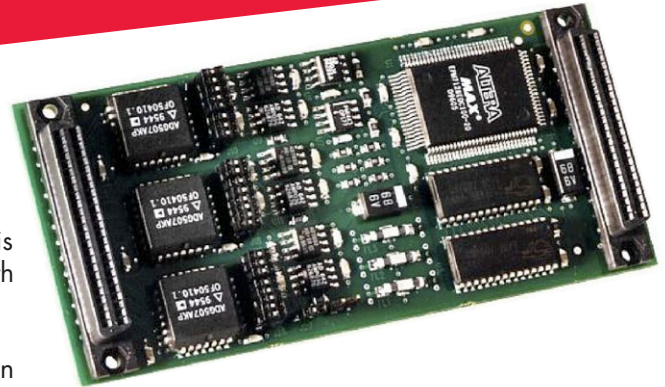




ADM1224F

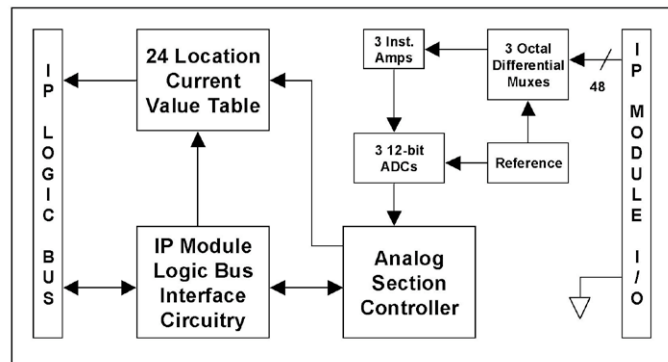
24-Channel, Differential-Input, $\pm 10V$, A-D Converter



Application Features

- ◆ Complete deterministic sampling of all channels
- ◆ A 4-bit frame counter value for determining sampling sequences is provided with all ADC data from the current value table
- ◆ Differential signals provide high-resolution and increased accuracy of the input signal
- ◆ True "on-the-fly" access to the current value table gives you the latest ADC data
- ◆ There are three sets of multiplexers, instrumentation amplifiers, and ADCs (one set per eight channels)
- ◆ High-common mode rejection provided by differential ended inputs
- ◆ Analog reference jumpers for all channels allow the option to drive either differential or single ended inputs (on a per channel basis)
- ◆ Gray Code Sequence Engines minimize on board digital noise
- ◆ Embedded ground plane provides "quiet" operation for sensitive analog events
- ◆ All on-board filtered power is obtained from the host carrier

The ADM1224F is equipped with differential signals for high-resolution and increased accuracy of input signals. Its modular design provides up to 120 channels of high-performance ADCs in a single VME slot using the VMESC5 carrier, or up to 144 channels in a single PC slot using the ISASC6 carrier. The ADM1224F can also be mixed with other IndustryPack[®] Modules for a more customized, modular I/O system solution.



Learn More

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ADM1224F

Table 1: Specifications

General Specifications		
Physical Dimensions	1.800" x 3.900" x 0.303" (45.72 mm x 99.06 mm x 7.70 mm)	
Hardware Compatibility	American National Standard for IP Modules (ANSI/VITA 4-1995)	
Mechanical/Electrical Interface	Single-wide IP Module	
IP Transfer Types (memory & interrupt not supported)	I/O: 16-bit reads from 24 locations of ADC and Frame Counter data; No writes and no wait states inserted, hold states supported	
	ID: 8-bit reads from 12 locations of identification information upper byte zero-filled; No writes and no wait cycles inserted, hold states supported	
Environmental Specifications		
Temperature Range	Operating	0° to +70° C (+32° to +158° F)
	Storage	-40° to +85° C (-40° to +185° F)
Humidity (non-condensing)	5% to 95%	
Vibration	10G's RMS, 10-55Hz random	
Shock	50G's max., all axes (no jumper shunts installed)	
Altitude	10,000 ft	
Sampling Rate	Of All Channels	14,285 samples/second/channel
	Board Total	342,857 samples/second
ADCs' Relative and Differential Non-linearity	±1 LSB (max.)	

Table 2: ADM1224F PIN Assignments

50	VIN + #24	25	GND
49	VIN - #24	24	VIN + #23
48	VIN + #22	23	VIN - #23
47	VIN - #22	22	VIN + #21
46	VIN + #20	21	VIN - #21
45	VIN - #20	20	VIN + #19
44	VIN + #18	19	VIN - #19
43	VIN - #18	18	VIN + #17
42	VIN + #16	17	VIN - #17
41	VIN - #16	16	VIN + #15
40	VIN + #14	15	VIN - #15
39	VIN - #14	14	VIN + #13
38	VIN + #12	13	VIN - #13
37	VIN - #12	12	VIN + #11
36	VIN + #10	11	VIN - #11
35	VIN - #10	10	VIN + #9
34	VIN + #8	09	VIN - #9
33	VIN - #8	08	VIN + #7
32	VIN + #6	07	VIN - #7
31	VIN - #6	06	VIN + #5
30	VIN + #4	05	VIN - #5
29	VIN - #4	04	VIN + #3
28	VIN + #2	03	VIN - #3
27	VIN - #2	02	VIN + #1
26	GND	01	VIN - #1

Ordering Information

BHAS-ADM1224: 24 MUX ±10V 12-BIT ADC IP Board