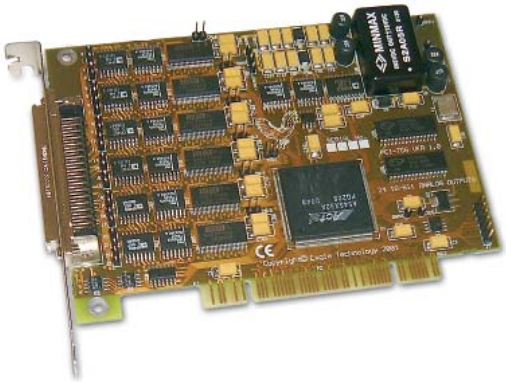
PCI-766

Extra Low Noise | High Accuracy



DESCRIPTION

The **PCI-766** is an advanced multi-channel analog output board with optimized 8, 16 or 24 channels with full 16-bit resolution.

Up to 24 channels of analog output can be streamed at a maximum speed of 100KHz. The PCI-766 has 2 different operation modes, FIFO and loop mode. FIFO is used to stream data from software to hardware. Loop mode continuously streams data saved in the board's hardware buffer.

Other features include 6 digital inputs which can be used as digital inputs or clock and trigger source.

FEATURES

- 8/16/24 Analog output channels (±10V)
- Maximum update rate of 100kHz per channel
- On card 128K x16 FIFO for channel list configuration
- Channels programmable to operate under programmed I/O or channel list mode
- Under channel list mode number of channels configured between 4/8/12/16/20/24
- Channel list timing can be synchronized to an external clock or to an internal 16-bit programmable counter
- 6x Over-voltage protected digital inputs are provided (can be programmed as digital inputs or counter/timer functions)
- 2x 16-bit 82C54 compatible counter/timers
- Windows98/ME/2000/XP OS Support (NT on request)
- WaveView for Windows Data Acquisition & Logging Software
- Labview, Testpoint and VEE Pro Drivers
- Modules are 3.3V or +5V PCI slot compatible

SCSI DSub 68M

AGND	35	1	AGND
AOCH0	36	2	AREF0
AOCH1	37	3	AREF1
AOCH2	38	4	AREF2
AOCH3	39	5	AREF3
AGND	40	6	AGND
AOCH4	41	7	AREF4
AOCH5	42	8	AREF5
AOCH6	43	9	AREF6
AOCH7	44	10	AREF7
AGND	45	11	AGND
AOCH8	46	12	AREF8
AOCH9	47	13	AREF9
AOCH10	48	14	AREF10
AOCH11	49	15	AREF11
AGND	50	16	AGND
AOCH12	51	17	AREF12
AOCH13	52	18	AREF13
AOCH14	53	19	AREF14
AOCH15	54	20	AREF15
AGND	55	21	AGND
AOCH16	56	22	AREF16
AOCH17	57	23	AREF17
AOCH18	58	24	AREF18
AOCH19	59	25	AREF19
AGND	60	26	AGND
AOCH20	61	27	AREF20
AOCH21	62	28	AREF21
AOCH22	63	29	AREF22
AOCH23	64	30	AREF23
DI5	65	31	DI4
DI3	66	32	DI2
DI1/EXT_CLK	67	33	DI0
DGND	68	34	+5V_FUSED

Specifications

ANALOG outputs	
Operating Modes	
Programmed I/O:	Host writes data directly to DAC channel
FIFO output using timer source:	Data is cycled out of FIFO using timer
FIFO output using external timer input (one of the digital input channels)	
Conversion Characteristics	
Resolution:	16-bit
Full Scale Error (Calibrated):	.005% Full scale
Maximum update rate:	100 kHz to 0.035% full scale;
	50 kHz to 0.025%
FIFO Buffer Size:	64K x 16 and Pattern Length (Programmable)
Data Transfer:	Triggered interrupts, DMA or programmed IO
Update Mode:	In channel list mode, channels are
	synchronously updated
Voltage Output Characteristics	
Range:	± 10 V
Output Settling Time:	10 µS to 0.03% Full scale
Accuracy:	± 3 LSB (Including Gain and offset errors)
Noise:	± 2 LSB
Output Coupling:	DC
Output Impedance:	0.2 Ohm
Output Drive:	±5 mA
Power-on state:	0V
DIGITAL INPUTS	
No. of Digital Inputs:	6
Min input voltage (logic '1'):	+2.5 V (Relative to DGND)
Max input voltage (logic '0'):	+1.0 V (Relative to DGND)
Max Continuous Input Voltage:	± 32 V (Relative to DGND)
Max Input Voltage Spike < 100 ms:	± 80 V (Relative to DGND)
Max Timer Input Frequency:	100 kHz (Used as a sync DAC clock)
Max Timer Input Frequency:	8 MHz (Used as a counter/timer clock source)
Min Positive Pulse Width:	120ns
Min Low time between positive pulses:	120ns
TIMERS	
Number:	2x 82C54 compatible (16 bits wide)
	1x programmable divider
Timer Clock:	20 MHz internal or external
	input via the programmable I/O
EXTERNAL	
Dimensions:	143 mm x 98,5 mm

Optional Accessories: PCI-703-16/16A

ADPT-6868SCD	SCSI-II 68 (F) Centronics & SCSI-II 68 (F) DSub to 69way Screw Terminal Adaptor
SCSI-D68M/F	68-way SCSI-II D-Sub(M) to (F) multi-core screened cable (1m length)

Ordering Information

Supplied with EDR Enhanced Software Development Kit

PCI-766-8	8 Channel 16-bit Analog Output Board
PCI-766-16	16 Channel 16-bit Analog Output Board
PCI-766-24	24 Channel 16-bit Analog Output Board

Optional Accessories Diagram