

Quick Selection Guide

Model number	Analog Output				Analog Input				DIO	Timer/Counter
	No. of channels	Resolution	Update rate	Output range	No. of channels	Resolution	Sampling rate	Input range	No. of channels	No. of channels
PXI-2501	4	12 bits	1 MS/s	±10 V, 0 to 10 V	8	14 bits	400 kS/s	±10 V or 0 to 10 V	24-CH 8255 PIO	2-CH, 16-bit
PXI-2502	8	12 bits	1 MS/s	±10 V, 0 to 10 V	4	14 bits	400 kS/s	±10 V or 0 to 10 V	24-CH 8255 PIO	2-CH, 16-bit

Specifications

Model Number	PXI-2501	PXI-2502
Analog Output		
Number of channels	4	8
Resolution	12 bits	
Output ranges	0-10 V, ±10 V, 0-AOEXTREF, ±AOEXTREF	
Maximum update rate	1 MS/s	
Slew rate	20 V/μs	
Setting time	3 μs to ±0.5 LSB accuracy	
Offset error	±2 mV	
Gain error	±0.02% of max. output	
Driving capacity	±5 mA	
Stability	Any passive load, up to 1500 pF	
Trigger sources	Software, external digital/analog trigger, PXI trigger bus	
Trigger modes	Post-trigger, delay-trigger, and repeated trigger	
FIFO buffer size	8 k samples	16 k samples
Data transfers	Programmed I/O, scatter-gather DMA	
Analog Input		
Resolution	14 bits, no missing codes	
Number of channels	8 single-ended	4 single-ended
Maximum sampling rate	400 kS/s	
Gain	1	
Bipolar input ranges	±10 V	
Unipolar input ranges	0-10 V	
Offset error	±1 mV	
Gain error	±0.01% of FSR	
Input coupling	DC	
Overvoltage protection	Power on: continuous ±30 V, Power off: continuous ±15 V	
Input impedance	1 GΩ/6 pF	
Trigger sources	Software, external digital/analog trigger, PXI trigger bus	
Trigger modes	Pre-trigger, post-trigger, middle-trigger, delay-trigger, and repeated trigger	
FIFO buffer size	2 k samples	
Data transfers	Polling, scatter-gather DMA	
Digital I/O		
Number of channels	24-CH 8255 programmable input/output	
Compatibility	5 V/TTL	
Data transfers	Programmed I/O	
Timer/Counter		
Number of channels	2	
Resolution	16 bits	
Compatibility	5 V/TTL	
Base clock available	40 MHz, external clock up to 10 MHz	
Auto Calibration		
On-board reference	+5 V	
Temperature drift	±2 ppm/°C	
Stability	±6 ppm/1000 Hrs	
General Specifications		
Dimensions	160 mm x 100 mm (not including connectors)	
Connector	68-pin VHDCI female	
Operating temperature	0 to 55 °C	
Storage temperature	-20 to 80 °C	
Humidity	5 to 95 %, noncondensing	
Power requirements	+5 V 1.53 A typical	+5 V 2.12 A typical

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