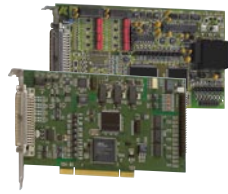


# PCI measurement

## Overview of the analog I/O boards

Multifunction, analog input and analog output boards for 3.3 V or 5 V PCI







	Multifunction boards				Analog input boards					Analog output boards		
	APCI-3120 CPCI-3120	APCI-3110	APCI-3116	APCI-3122	APCI-3010	APCI-3016	APCI-3002	APCI-3003	APCI-3001 CPCI-3001	APCI-3504	APCI-3504C	APCI-3501
<b>32-bit PCI bus</b>	3.3/5 V	3.3/5 V	3.3/5 V	5 V	3.3/5 V	3.3/5 V	3.3/5 V	3.3/5 V	3.3/5 V	5 V	5 V	3.3/5 V
<b>CompactPCI bus</b>	3.3/5 V								3.3/5 V			
Simultaneous acquisition								✓				
<b>Analog inputs</b>												
Single Ended	16/8	16/8	16/8		16/8/4	16/8/4			16/8/4			
Differential	8/4	8/4	8/4		8/4/2	8/4/2	16		8/4			
Diff. separated from each other								4				
Resolution (-bit)	16	12	16		12	16	16	16	12			
Optical isolation	500 V	✓	✓		✓	✓	✓	✓	✓			
Throughput (kHz)	100	200	200		200	200	200	400/ channel	100			
Voltage range												
0-10 V; ± 10 V / 0-5 V; ± 5 V 0-2 V; ± 2 V / 0-1 V; ± 1 V	✓	✓	✓		✓	✓	✓	✓	✓			
Other ranges (optional)	0-20 mA	0-20 mA	0-20 mA		0-20 mA	0-20 mA	0-20 mA	0-20 mA	0-20 mA			
Gain 1, 2, 5, 10	✓	✓	✓		✓	✓	✓	✓	✓			
FIFO (value)	256	512	512		512	512	512	1024	256			
<b>Functions of the analog inputs</b>												
DMA (scatter gather, single, continuous, Sequence)		✓	✓		✓	✓	✓	✓				
DMA (single, continuous, Sequence)	✓								✓			
Auto Refresh		✓	✓		✓	✓	✓	✓				
Interrupt	✓	✓	✓		✓	✓	✓	✓	✓			
Programmed I/O	✓	✓	✓		✓	✓	✓	✓	✓			
<b>Trigger:</b>												
Software	✓	✓	✓		✓	✓	✓	✓	✓			
TTL input	-	-	-		-	-	-	-	-			
24 V input	✓	✓	✓		✓	✓	✓	✓	✓			
Sequence RAM	✓	✓	✓		✓	✓	✓	✓	✓			
<b>Analog outputs</b>	4 or 8	4	4	4						4	4	4 or 8
Resolution (-bit)	14	12	12	12						12	12	14
Optical isolation	✓	✓	✓	✓						✓	✓	✓
0-10 V ± 10 V	✓	✓	✓	✓						✓	✓	✓
Current outputs											0-20 mA	
Setup time	30 µs	15 µs	15 µs	15 µs						15 µs	70 µs	30 µs
<b>Digital I/O</b>												
24 V inputs, optically isolated	4	4	4	10	4	4	4	4	4			2
24 V outputs, optically isolated	4(OpenC)	4(50mA)	4(50mA)	12(500mA)	4(50mA)	4(50mA)	4(50mA)	4(50mA)	4(OpenC)			2(OpenC)
TTL I/O		24	24		24	24						
<b>Timer/Counter/Watchdog</b> (depth) and/or	1 / - / 1 24-bit	3 / 3 / 2 16-bit	3 / 3 / 2 16-bit		3 / 3 / 1 16-bit	3 / 3 / 1 16-bit	1 / - / - 16-bit	1 / - / - 16-bit	1 / - / - 16-bit	1 / - / - 12-bit	1 / - / - 12-bit	1 / - / - 12-bit
Software	Drivers for Windows Vista (32-bit)/XP/2000; Linux; LabView; LabWindows CVI + Samples Current driver list on the web: <a href="http://www.addi-data.com">www.addi-data.com</a>											

# PCI measurement

## Overview of the analog I/O boards

Temperature, pressure and length measurement

	Temperature measurement	Pressure measurement	Length measurement	
				
	<b>APCI-3200</b>	<b>APCI-3300</b>	<b>APCI-3702</b>	<b>APCI-3701</b>
<b>64-bit or 32-bit PCI-Bus</b>	<b>3.3 V / 5 V</b>	<b>3.3 V / 5 V</b>	<b>3.3 V / 5 V</b>	<b>3.3 V / 5 V</b>
Thermocouples J,K,T,E,R,S,B,N Pt100, Pt1000	✓			
Strain gauges		✓		
Inductive transducers			Half Bridge, LVDT	Half Bridge, LVDT
Signal conditioning				
Analog inputs	4 groups 4 channels	4 groups 4 channels		
Single Ended (SE)/ differential (diff.)	16 thermo/8 RTDs 8 thermo/4 RTDs 4 thermo/2 RTDs	8/4 inputs for strain gauges	5 channels <i>simultaneous</i> acquisition for induct. displacement transducers	16/8/1 channels for inductive displacement transducers
Resolution (-bit)	18	18	16	16
Optical isolation	✓	✓		
Throughput	20-160 Hz	20-160 Hz	depends on transducer type	depends on transducer type 2-20 kHz (50 kHz opt.)
Voltage ranges	+ 1.25 V	+ 1.25 V		
Gain	1, 2, 4, 8, 16, 32, 64, 128	1, 2, 4, 8, 16, 32, 64, 128	depends on transducer type	depends on transducer type
FIFO (Values)				
<b>Functions of the analog inputs</b>				
DMA (scatter gather; single; continuous; Sequence)			✓	✓
Auto Refresh			✓	✓
Interrupt	✓	✓	✓	✓
Programmed I/O	✓	✓	✓	✓
<b>Trigger:</b> Software 24 V input	✓ ✓	✓ ✓	✓ ✓	✓ ✓
Sequence RAM			✓	✓
<b>Analog outputs</b>				
Resolution (-bit)				
Optical isolation				
0-10 V ± 10 V				
Chronometer inputs Gate inputs				
<b>Timer/Watchdog</b> (depth) in combination, and/or	- / -	- / -	1 / - 16-bit	1 / - 16-bit
<b>Digital I/O</b> Inputs 24 V, optically isolated Outputs 24 V, optically isolated	4 3 (Open Collector )	4 3 (Open Collector )	8 8 (125 mA)	8 8 (125 mA)
Software	Current driver list on the web: <a href="http://www.addi-data.com">www.addi-data.com</a>			