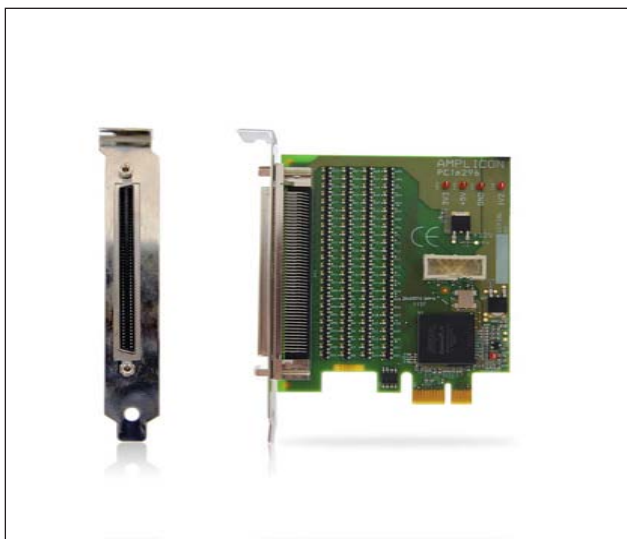


## AMPLICON PCIe296



### Features

- x 1 PCI Express Interface
- 96 line of TTL compatible digital I/O
- PCIe Bus Version 2.1 plug and play interface
- Interrupt controlled operation
- High density 100-way D connector
- Windows 2000, XP, 2003, Vista & 7 Support
- Drivers for C/C++, VB.NET, Delphi, VEE & LabVIEW

### Description

The PCIe296 card is a digital I/O board that provides 96 TTL compatible inputs and outputs, specially designed to meet stringent performance requirements and ideal for monitoring and control applications.

The digital I/O board features an FPGA configured to provide the function of four uncommitted 82C55 Programmable Peripheral Interface chips (PPI) giving up to 96 I/O lines which can be configured by user software to operate in a variety of modes .

Each of the PPIs (X1, X2, Y1 & Y2) provides 24 I/O lines on three 8 bit ports, labelled DIO port A0 - A7-DIO Port C0 - C7. These ports are further divided into two groups of 12 bits each, group A comprising the 8 bits of port A and the high order 4 bits of port C and group B comprising the 8 bits of the port B and the low order 4 bits of port C.

The PCIe296 has two 82C54 counter timers (CTCs) which occupy cluster Z1 and Z2. Each 82C54 provides three 16-bit counter/timers which can be independently programmed to operate in any one of the six modes with BCD or Binary Count functions as follows:- Interrupt on Terminal Count, Hardware Re-triggerable one-shot, Rate Generator, Square Wave, Software Triggered Mode and Hardware Triggered strobe (Re-triggerable).

The PCIe296 is supplied with an Amplicon DVD-ROM, this contains all of the software for the PCIe 296 card and is documented in the AMPDIO software manual. The manuals can be accessed when the software is installed from the DVD-ROM.

AMPDIO32 provides programs with source code which can be modified as required.

### PCIe296 100-way connector

X1C7	001	002	X2C7
X1C6	003	004	X2C6
X1C5	005	006	X2C5
X1C4	007	008	X2C4
X1C3	009	010	X2C3
X1C2	011	012	X2C2
X1C1	013	014	X2C1
X1C0	015	016	X2C0
X1B7	017	018	X2B7
X1B6	019	020	X2B6
X1B5	021	022	X2B5
X1B4	023	024	X2B4
X1B3	025	026	X2B3
X1B2	027	028	X2B2
X1B1	029	030	X2B1
X1B0	031	032	X2B0
X1A7	033	034	X2A7
X1A6	035	036	X2A6
X1A5	037	038	X2A5
X1A4	039	040	X2A4
X1A3	041	042	X2A3
X1A2	043	044	X2A2
X1A1	045	046	X2A1
X1A0	047	048	X2A0
+5V	049	050	GND
Y1C7	051	052	Y2C7 - Z1OUTOP1
Y1C6	053	054	Y2C6 - Z1CLKIO2
Y1C5	055	056	Y2C5 - Z1GATIP2
Y1C4	057	058	Y2C4 - Z1OUTOP2
Y1C3	059	060	Y2C3 - Z2EXTCLK
Y1C2	061	062	Y2C2 - Z2CLKIO0
Y1C1	063	064	Y2C1 - Z2GATIP0
Y1C0	065	066	Y2C0 - Z2OUTOP0
Y1B7	067	068	Y2B7 - Z2OUTOP0
Y1B6	069	070	Y2B6 - Z2CLKIO1
Y1B5	071	072	Y2B5 - Z2GATIP1
Y1B4	073	074	Y2B4 - Z2OUTOP1
Y1B3	075	076	Y2B3 - Z2CLKIO2
Y1B2	077	078	Y2B2 - Z2GATIP2
Y1B1	079	080	Y2B1 - Z2OUTOP2
Y1B0	081	082	Y2B0 - GND/ZB0
Y1A7	083	084	Y2A7 - Z1EXTCLK
Y1A6	085	086	Y2A6 - Z1CLKIO0
Y1A5	087	088	Y2A5 - Z1GATIP0
Y1A4	089	090	Y2A4 - Z1OUTOP0
Y1A3	091	092	Y2A3 - Z1OUTOP0
Y1A2	093	094	Y2A2 - GND/ZA2
Y1A1	095	096	Y2A1 - Z1CLKIO1
Y1A0	097	098	Y2A0 - Z1GATIP1
+5V	099	100	GND

Sales: +44 (0) 1273 570 220 Admin: +44 (0) 1273 608 331 Fax: +44 (0) 1273 570 215 Website: [www.amplicon.com](http://www.amplicon.com) Email: [sales@amplicon.com](mailto:sales@amplicon.com)

## AMPLICON PCIe296

### Specifications

Digital input/output		General	
<b>Digital I/O</b>	Four 82C55 chips with 24 TTL compatible lines	<b>Connector</b>	100-way female D-sub
<b>Digital inputs</b>	Low: -0.3V to +0.8V High: +2.2V to +50V	<b>Dimensions</b>	80 x 95mm (Length x Height)
<b>Digital outputs</b>	Low: +0.4V max at 2.5mA High: +3.0V min at -2.5mA	<b>PC interface</b>	PCIe bus version 2.1, 3.3V
<b>Interrupt sources</b>	6 interrupt sources available in total, two per 82C55 and one per 82C54	<b>Operating temp.</b>	0 to +60°C
<b>Counter/Timer</b>		<b>Storage temp.</b>	-20 to +70°C
<b>Counter/timer</b>	Two 82C54 counter/timers each with three 16-bit counters	<b>Humidity</b>	5 to 95% RH, non-condensing
<b>Counter/timer functions</b>	Interrupt control, count down, stopwatch, frequency/ period measurement, frequency generation, square wave output, PWM output and others	<b>Power requirements</b>	3.3Vdc @ 130mA, fully loaded
<b>Counter outputs</b>	Low output voltage: +0.4V max at +2.5mA. High output voltage: +3.0V min at -2.5mA	<b>MTBF</b>	331,627 hours
<b>Ext. clock/gate input</b>	Low: -0.3 to +0.8V High: +2.2 to +50.0V	<b>Compliance</b>	CE, EMC EN55022, EN55024

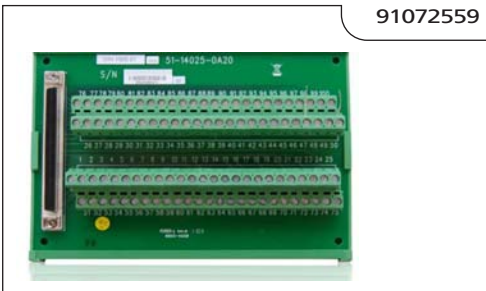
### Accessories and Ordering information

Images are for illustration purposes only

**96113243** PCIe296 digital I/O 96 channels and 6 counter timers board

**96003809** 100 pin SCSI-II Cable 1meter

**91072559** DIN-100S-01 Termination Board



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