AMPLICON LIVELINE

ISA Digital Input/Output with Counter Timers

PC212E, PC215E & PC218E

Registered ISO 9001 Company

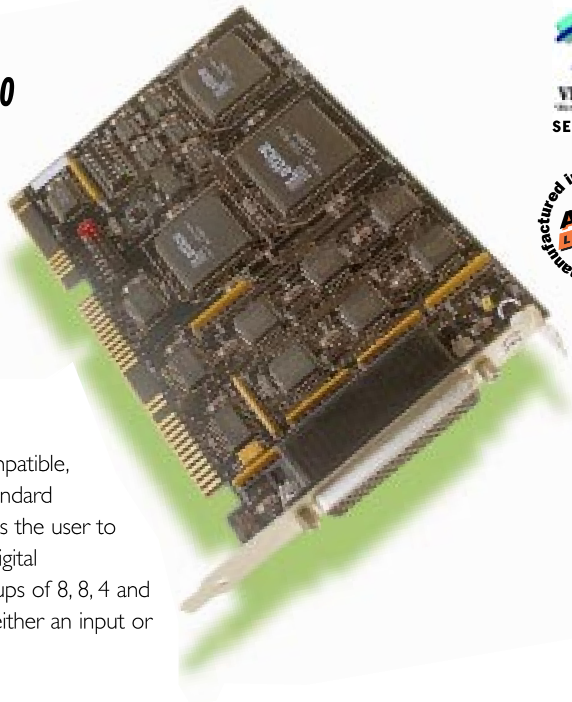
- Up to eighteen 16bit counter/timers
- Up to 48 digital I/O lines
- Full software configuration of the counter timer's clock, gate and interrupt sources
- Multiple interrupt sources with custom interrupt register
- Driver software for Windows 95/98 & NT gives speeds up to 100KHz
- Example programs in Visual Basic, Delphi and HP VEE
- Header file for C programmers

DOS, Windows 95/8 & NT/2000 drivers

VEE Pro

SEE PAGE 224

Designed & manufactured in the UK AMPLICON LIVELINE



PC218E, PC212E and PC215E are the most advanced of Amplicon's 200 Series digital I/O boards. Each board has a different combination of industry standard digital input/output lines and counter/timers using the same drivers and 78 way connector.

More flexibility and speed

These boards are more advanced than the PC214E and conventional digital input/output boards in the way the flexible interrupts and counter timers can be configured in software to perform useful tasks that normally require expensive test equipment.

The 16 bit counter/timers are individually programmable via control registers, this allows them to be 'set' as event or pulse counter, rate generator or software triggered strobe. With the new 32 bit Windows drivers, this can mean high speed digital input or output at up to 100KHz (PC dependant).

There are two 82C54 chips on the PC215E giving six 16bit counters, on the PC212E there are four giving a total of twelve 16bit counter timers, the PC218E simply has 18 counter timers.

The input and gate to each timer is software selected to be from either the outside world, the on-board 10MHz clock source or the output from another counter, allowing them to be cascaded in a wide variety of configurations. This software configuration feature lets you change hardware set-up during an application without moving jumpers or making external links. The same physical input could, for example, be a rate input in one application and then a gate for a frequency measurement in another. The maximum input frequency to any counter is 10MHz.

Industry standard I/O lines

The I/O lines are TTL compatible, and utilise the industry standard 82C55 PPI chip. This allows the user to divide each group of 24 digital input/outputs into subgroups of 8, 8, 4 and 4. Each subgroup can be either an input or an output.

Flexible interrupts

Interrupt levels 3,5,7,9,10,11,12 or 15 are jumper selected, it can be used with the digital I/O and any of the three counter/timers giving flexibility for interrupt controlled software.

For applications requiring multiple interrupt sources a special interrupt register and interrupt service routines in the software supplied allow several events to trigger the same hardware interrupt. The source or sources of the interrupt can easily be determined and serviced correctly.

Software

These boards are supplied with the same level of software as the PC214E on page 75, which provides useable functions not just access to the I/O devices. Additional routines assist with the configuration of the counter/timers and interrupts.

Functions include: simple up/down counting, selecting the clock and gate sources and counter interconnections, frequency measurement, period measurement, differential counting, ratiometric counting, monostable, and astable, digitally controlled oscillator, frequency multiplication and division.

The Windows DLL supplied has examples with source code for Delphi and Visual C++, Visual BASIC. DOS libraries for Borland and Microsoft C & C++ with examples and source code are also included.

DESCRIPTION	PRODUCT CODE
PC218E Software configured counter /timer board with 18 counters, software & manual	909 562 73
PC212E 24 line digital I/O board, 12 software configured counters, software & manual	909 562 53
PC215E 48 line digital I/O board, 6 software configured counters, software & manual	909 562 93
78 pin connector kit well screened	919 459 53
Software and manuals on CD ROM	

Termination & interfacing

See pages 78-80 for details of the new termination and I/O function panels. Alternatively a 78pin connector kit is available for you to make your own connection arrangements.

SPECIFICATION

Size & 5V power from PC bus - not loaded	218E 105x157mm, 60mA 212E 105x135mm, 50mA 215E 90x138mm, 30mA
On board clock source - software selected	10MHz, 1MHz, 100kHz, 10kHz, 1kHz
Compliance	CE EMC