

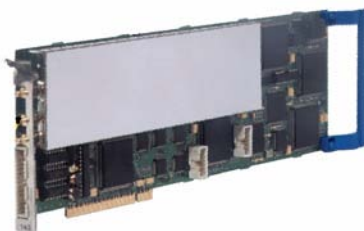


**SOCOMATE**  
INTERNATIONAL

# USPC3200P



**LOW COST ALL-IN-ONE ULTRASONIC PLUG & PLAY PCI CARD  
FOR SINGLE CHANNEL APPLICATIONS  
IN BATTERY POWERED PORTABLE PC FOR MANUAL CONTROL  
DESKTOP OR INDUSTRIAL PC FOR LOW SPEED CONTROL  
A,B&C-SCAN DATA TRANSFER AT DISPLAY UPDATE RATE**



**USPC3200P KIT WITH STANDARD LABVIEW API SOFTWARE  
OR TAKE ADVANTAGE OF THE FULLY DOCUMENTED SDK  
WITH FRIENDLY DLL AND ACTIVE-X TO CUSTOMIZE YOUR  
OWN API UNDER LABVIEW, VISUAL B&C, DELPHI, BORLAND..**

# MAIN SPECIFICATIONS

## USPC3200P

### SQUARE WAVE PULSER

Voltage : 125/250 Volts (50 Ohms)  
Fall-time & Decay : 5 ns  
PRF : 20 to 2,000 Hz Internal  
0 to 2,000 Hz External  
Pulse width : 25 ns to 1,000 ns  
Post-trigger : External mode

### RECEIVER/AMPLIFIER

Impedance : 50 Ohms  
Bandwidth : 0.5 to 20 MHz (-3dB)  
Main Gain : 70 dB (.1dB step)  
Back echo Gain :  $\pm 70$  dB (.1dB step)  
Input Attenuator : 0/15dB  
Attenuator : 0/20dB  
Dynamic Range : 105dB  
Mode : Pulse-Echo/Transmission  
Filters : 0.5/1/2.25/5/10/15/WB MHz  
Rejection : 0 to 50%  
RF Output : 2.0Vpp (50 Ohms)  
1.5Vpp FSH

### DAC

Triggers: Initial Pulse or Interface  
Dynamic Range : 70 dB  
Slope : +/- 40 dB/ $\mu$ s  
Segments : 30  
Auto Slope Adjustment

### GATES

1 Interface (yellow) : Coupling Alarm  
2 Flaw & TOF : fully independent  
Gate 1 (red) and Gate 2 (blue)

### INTERFACE GATE

Start : 80ns to 655 $\mu$ s  
Width : 20ns to 655 $\mu$ s  
Level : 10% to 90% -1% step  
Triggers : Not active/ Initial Pulse  
Alarm : Positive/Negative  
Noise suppression : 0 to 30 Violations  
TOF Origins : Peak, Flank, Zero crossing  
Gating Mode : HW +, HW -, FW & RF  
with 2 symmetrical Gates.

### FLAW & TOF GATES

Start: 80ns to 655 $\mu$ s - 20ns step  
Width: 20ns to 655 $\mu$ s - 20ns step  
Level : 10% to 90% -1% step  
Triggers : not active/ Initial Pulse/ Interface/  
Gate to gate (Gate 2 only)  
Alarm : Positive/Negative  
Noise suppression : 0 to 30 violations  
Flaw/TOF Mode : on Max. or First Echo  
Peak Amplitude measurement & Alarm  
TOF measurement  
TOF Min. & Max. Alarms  
TOF Origins : Peak, Flank, Zero crossing  
Gating Mode : HW +, HW -, FW & RF with  
2 symmetrical Gates.

### EVALUATION

Converter : 100MS/s, 10-bits  
Amplitude Resolution : 1% FSH  
TOF Resolution : 1 $\mu$ m at Pulse Rep. Rate

### MEMORY

FIFO Memory : allow to transfer Parameter settings, A-Scan Scope, Peak amplitude & TOF measurements & Alarm to DLL RAM Memory.  
Transfer speed at PC Display update rate.

### A-SCAN DISPLAY

Mode : HW+, HW-, FW & RF  
Gates : Yellow (IF), Red (G1) & Blue (G2)  
DAC Curve : 0% to 70% FSH (0-70dB Dyn.)  
Delay : 0 to 655 $\mu$ s -20ns step  
Range : 1 $\mu$ s to 1.3ms -20ns step  
Trigger : Initial Pulse/Gate 1 Start/Gate2 Start  
Gate 1 Trigger/Gate 2 Trigger  
Displayed Peak : Snapshot or Max. Peak  
A-Scan length : 100 to 512 Points  
Units :  $\mu$ s/mm/inch

### IN/OUTPUT TRIGGERS

PRF In : Slaved to External trigger  
PRF Out : trigger Output

### ANALOG OUTPUTS

Amplitude, TOF :  
5 Volts Full Scale (8-bits)  
Selectable Offset & Range  
Update Rate : at Pulse Repetition Rate

### ON/OFF ALARM OUTPUTS

Loss of IF, Flaw detection, TOF Min. & Max. :  
Pull-up to Max. 30 Volts  
Update Rate : at Pulse Repetition Rate

### PC CARD FEATURES

Bus : PCI  
Size : 1/1 full size  
TX, RX, RF : SMB Connectors

In/Outputs : 26-Pin HE10 Connector

8 Analogue Outputs  
9 On/Off Alarm Outputs  
+5 Volts, Ground  
Triggers

### Consumption:

+12. V. / 0.5Amp.  
+ 5. V./ 1.0Amp.  
+3.3 V./ 1.5Amp.  
-12. V./ 0.1Amp.

Operating temperature : 0°-50°C (32°-122°F)

### SOFTWARES

DSP : 2 very fast DSPs allowing real time  
Stand alone running (Socomate Property)  
Standard API (LabVIEW): uspc.Exe+Source  
API Tutorial Software : Help!  
Single channel operation : max. 1 board per PC

### SDK

Drivers for Windows :  
2000/NT/XP  
DLL with Help!  
Active X control with Help!  
LabVIEW, VB, VC, Delphi, Borland Examples

SOCOMATE maintains the right to modify the specifications of their equipments,  
at any time and in whatever manner, in order to improve their performances.

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