

# PCUS<sup>®</sup> pro Multi

## *Multi-Channel Ultrasonic Frontend*

### General

- USB 2.0 High-Speed with a maximum of 40MB/sec data transfer rate
- Cabled PCI Express x1 interface; maximum of 200MB/sec data transfer rate
- Dimensions: 190mm x 150mm x 65mm (L, W, H)
- Near-transducer setup

### Transmitters

- Maximum of 16 independent transmitters
- Transmitter pulse voltage: up to -380V, adjustable in 1V increments for all channels simultaneously
- Negative rectangle pulse
- Output impedance: 50Ω
- Pulse delay: 0μs to 40μs, adjustable in 5ns increments
- Pulse width: 10ns to 500ns, adjustable in 2.5ns increments
- Pulse repetition frequency: up to 2kHz, depending on recording length, pulse width, sampling rate and transmitter voltage

### Receivers

- Maximum of 16 independent receivers
- Pulse/Echo or Transmit/Receive mode (1 x P/E or 1 x T/R per channel)
- Frequency range: 500kHz to 20MHz (-3dB)
- Receiver filter: two analog band filters per channel (user defined)
- Attenuation/amplification: >100dB, adjustable in 0.1dB increments
- TGC with 80dB dynamic range, adjustable in 0.1dB increments; 256 points, slope ≤40dB/μs
- Receiver delay: 0μs to 655μs, adjustable in 5ns increments
- Input sensitivity: 100μVss

### Signal Path

- Transducer delay: 0 $\mu$ s to 655 $\mu$ s, in 10ns increments
- Maximum recording length: 65,535 samples per channel
- A/D Converter: 14bit (13bit + sign), up to 100MS/sec
- One start gate and four measurement gates
- RF-Data or compressed TD-Data recording
- Rectification: positive-, negative-, or full-wave
- Trigger delay per channel: 0 $\mu$ s to 655 $\mu$ s, adjustable in 10ns increments

### Interface and Connectors

- Transducer connectors: Lemo 00
- USB 2.0 High-Speed: Bulgin Connector PX0443
- Molex 74150-001 PCI Express connector
- Power consumption: max. 12VDC, max. 48W (30W typical); Bulgin Connector PX0419
- Trigger IN: TTL high or low active, pulse width >100ns, opto-coupled (Lemo 00)
- Trigger OUT: LVTTTL high active, pulse width >2.5 $\mu$ s (Lemo 00)

### Software

- Digitally signed device driver for Windows XP (SP2 or higher), Windows Vista and Windows 7 (32 bit and 64 bit)
- Managed Windows API (based on .NET 4.0 framework)

### System Conformity

The PCUS<sup>®</sup>*pro* Multi system meets all relevant requirements of DIN EN 12668, Part 1.

#### **Contact:**

Michael Dalichow  
Quality Network Inc.  
11 Main St  
Sparta NJ 07871-1979  
Phone: (973) 726-8399  
E-mail: md@qnetworld.com