



FEATURES

- PCI pulser/receiver board for the new generation of computers
- Single board 4-channel pulser/receiver
- On-board microprocessor for various custom applications
- On-board encoder counters for on-position triggering
- Pulser switch-off while acquiring data for low pulser noise
- Rectifier with RF, full wave, -half, or +half options
- Wide-range dynamic gain
- Adjustable DC offset
- Selectable low-pass and high-pass filters
- Control software for Windows 95/98/2000/NT
- Optional distance amplitude correction (DAC)
- Optional logarithmic amplifier
- Optional Windows 95/98/2000/NT software development kits for C/C++, Visual BASIC, or LabView

DESCRIPTION

PRM is a 4-channel pulser/receiver board for the PCI bus. It generates an electrical pulse with a user-defined pulse voltage and pulse width through one of the 4 channels. The pulse is transmitted to an ultrasonic transducer, which converts the electrical excitation pulse to an ultrasonic pulse. The pulse is then propagated into either couplant or the material to be tested. The transducer also receives the echoes reflected from the interface and converts the ultrasonic pulse back into an electrical signal. The on-board receiver processes the signal with the user-defined parameters. The signal from the Signal Out connector can be displayed by an oscilloscope or digitized by an analog to digital converter board.

Other adjustable parameters of the PRM board include pulse voltage, pulse width, damping, internal relay for pulse/echo or through transmission switching, receiver gain, DC offset, low pass filter, high pass filter, rectifications, trigger sources, digital inputs and outputs, and internal trigger rates. The user selects the pulsing channel and the receiving channel, which are not necessarily the same. Control software for Windows 95/98/2000/NT is included.

Optional add-ons include digital inputs and outputs, a trigger-sync output connector, a logarithmic amplifier, up to 4 encoder counters, a higher pulse voltage, narrow and wide pulse widths, distance amplitude correction (DAC), and Windows software development kits.

For the option of analog to digital conversion, please refer to our product UTM--the 100 MHz analog to digital converter board for PCI bus with 4 pulser/receiver channels. Refer to PCIPR300 pulser/receiver board and DT16B 16-channel pulser/receiver switching board for more channel solutions.

SPECIFICATIONS

Pulse Voltage	-40V to -300V, 256 steps. Higher voltages are available upon request.	High Pass Filter	4.8MHz, 1.8MHz, 0.8MHz, or 0.6MHz
Pulse Width	50 ns to 484ns, 256 steps	Waveform	Full rectify, + half rectify, - half rectify, or RF
Damping	500 Ohms, or 50 Ohms	Trigger Source	external, internal, or software
Internal Trigger	1 Hz to 5000 Hz in 10 Hz increments when internal trigger is selected.	Transducer Mode	Single (pulse/echo) or dual (through transmission)
Receiver Gain	0 dB to 80 dB in 0.1dB increments, or 0 dB to 40 dB fixed and 0 dB to 40 dB DAC.	Dimensions	12.5"x4.25" not including BNC and PCI edge connectors
DC Offset	-2.5V to 2.5V in 5mV increments	Connectors	BNC connectors: 4 Pulse out, 4 receiver in, 1 signal out, and 1 external trigger in.
Low Pass Filter	All, 48MHz, 28MHz, 18MHz, 8.8MHz, 7.5MHz, 6.7MHz, or 5.9MHz	Add-on Options	- BNC trigger-sync output connector - Logarithmic amplifier - Up to 4 encoder counters and connectors - High pulse voltages - Distance amplitude correction (DAC) - Software development kits