



FEATURES

- All-in-one design: tone-burst pulser/receiver, A/D converter, encoder counter
- Multi-channel tone-burst pulser for attenuating material testing
- Connects to laptops and desktops via USB
- Affordable ultrasonic testing instrument
- No external power supply required
- Onboard DSP Chip for real-time data processing
- Onboard encoder counters for position-based data acquisition
- 40 MBPS high speed data transfer to computer RAM
- Up to 50 MSPS high-speed A/D conversions
- Wide-range dynamic gain
- Included UT oscilloscope software for Windows 2000/XP
- Windows 2000/XP software development kits for C/C++, Visual BASIC, and LabVIEW

DESCRIPTION

USB-UT350RT is a tone-burst pulser/receiver and an analog-to-digital converter that connects to a computer's USB port. The device supports up to 16 channels and generates a series of bipolar pulses with user-defined pulse frequency and pulse cycles for each channel. The pulses are transmitted to ultrasonic transducers, which convert the electrical pulses into ultrasound and propagate them through the tested material. The transducer then receives the echoes and converts the ultrasound back into an electrical signal. The onboard receiver processes the signal with the user-defined parameters and the A/D converter converts analog signals into digital data at a rate of up to 50 million samples per second. The digital data is transferred to the computer at about 40 MB per second.

Adjustable parameters include pulse frequency, pulse cycles, receiver gain, DC offset, rectifications, sampling rates, trigger source, and adjustable trigger delay. Standard scope software for MS Windows is included with the device.

One of the unique features is the onboard DSP chip. It is capable of high-speed data processing for real-time peak detection, data compression, spray marker control, factory process control and feedback. The device can run as a stand-alone tone burst pulser/receiver and data processing system without being connected to a computer. The parameters are configured from a computer prior to remote operation.

Applications include flaw detector for solid materials (wood, rubber and concrete) and distance measuring device (through air). Custom software is available for your applications upon request.

The USB-UT350RT is one of the most affordable ultrasonic testing instruments on the market.

SPECIFICATIONS

Pulse Voltage	40 - 300V peak to peak	USB Connection	USB 2.0 compatible
Pulse Frequency	20 kHz to 12.5 MHz	Trigger Source	+external, internal or software
Pulse Repetition Frequency	1 Hz to 1000 Hz in 1 Hz increment	Connectors	LEMO 00 connectors
Pulse Cycles	1 to 30 cycles	Post Trigger delay	0 to 16,370 samples in 1 sample step
Receiver Gain	0 dB to 80 dB in 0.1dB increments.	Dimensions	4.2"x6.8"x1.7" (107mmX172mmX43mm)
DC Offset	-2.5V to 2.5V in 5mV increments	Power Supply	External power supply: +9V / 1A, or power from USB connector
Waveform	Full rectify, + half rectify, - half rectify, or RF	Weight	1.5 lbs
Sampling Rate	50, 25, 12.5, 6.25, 3.125 MHz	Add-on Options	Up to 2 encoder counters 16-bit I/O, TRIG IN, sync out, and encoder connector Up to 2 14-bit A/D converters with user defined input range Battery Monitory Flaw detector software Distance gauge software Windows software development kits for LabVIEW, MS C/C++ and Visual BASIC
Resolution	8 bits (0 to 255)		
Waveform Length	0 to 8190 samples		
Transducer Mode	Single		