

Pulser Receiver

UTPR-8

NDT Instruments

High Performance Multichannel UT

Computer Controlled NDT Instruments for Automated Testing Systems and more ...

TecScan's UTPR-8 instrument is a high performance non-destructive testing instrument. The instrument is flexible and designed for automated inspection systems and demanding scanning applications. Combining the UTPR-8 with TecView™ UT data acquisition and analysis software would result in powerful UT solution.

The UTPR-8 is a universal solution for multichannel UT inspections that can be scaled up to 32 pulser-receiver channels. Whether the application requires Fast Data Acquisition, Real-time C-Scan Imaging, Repeatability, Near & Far Surface Resolution, Penetration Power or Channel Configuration Versatility, this unit has what it takes to meet the challenge.

UTPR-8 Features & Advantages

High data throughput

High data acquisition and data transfer throughput

Data transfer rate of 300 MB/S

80000 A-scans/s (1024-point A-scan)

Up to 32 pulser/receiver channels

Available in a rack-mount or desktop version and Configurable up to 32 independent pulser/receiver channels

Selectable pulse type

Computer selectable pulse type (Bipolar or unipolar square)

Computer controlled

USB 3.0 computer controlled along with TecView™ UT

Receivers support DAC/TCG & BEA

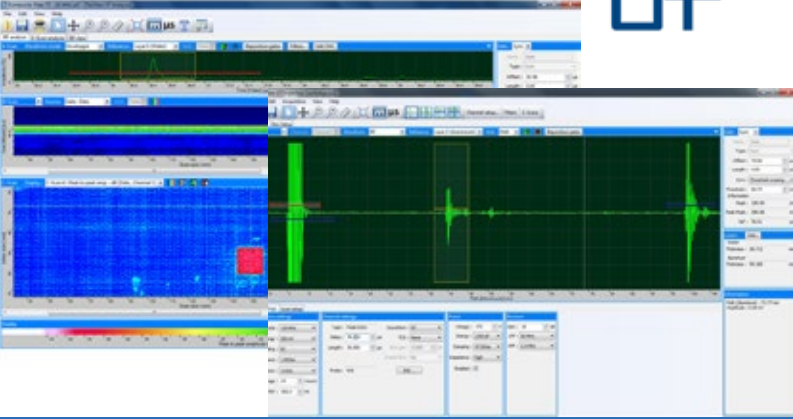
With TecView™ UT, the TCG curves & BEA are easily configured

UTPR-8
fast data transfer
rate
300 MB/S



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TecView™ UT



C-scan imaging

TecView™ UT Features:

- Full waveform acquisition
- Motion control up to 12 axes
- Inspection, Imaging and Analysis modules
- Live display of A, B and C-Scans
- Inspection report generator
- C-Scan gating capabilities (up to 16)
- DAC curves, TCG & BEA controls
- Defect measurement and analysis tools

UTPR-8 TECHNICAL SPECIFICATIONS

Channels

Number of channels	8 pulser-receiver channels (optional up to 32 channels)
Channels specifications	Independent pulser and receiver on each channel
Channels configurations	Pulse-echo & Through-transmission

Pulser

Pulser type	Bipolar square, unipolar positive, unipolar negative square wave
Pulse voltage	±15 V to ±100V, 1V Step
Pulse width	Unipolar pulse width 25 ns to 500 ns, 5ns step Bipolar pulse width 50 ns to 1 µs, 5 ns step
Damping	Active
Pulser output impedance	8 Ohm (typical)
Pulse Rise time	5 ns @ V- = -100V (typical)
Pulse Fall time	11 ns @ V+ = 100V (typical)
PRF max	10 kHz - All channels pulsing, @max voltage, @max pulse width, 50 Ohm load per channel
Trigger source	Internal/External

Receiver

Gain	0 to 70 dB (0.1 dB steps)
Bandwidth	Broadband: 400 kHz – 35 MHz (-3dB)
Peak-peak input referred noise (Full bandwidth)	200 µVpp (34 nV/sqrt(Hz))
High-Pass Filters	400 kHz, 750 kHz, 1 MHz, 1.5 MHz, 2.5 MHz, 3.3 MHz
Low-Pass Filters	35 MHz, 30 MHz, 22.5 MHz, 15 MHz, 10 MHz, 6.75 MHz, 2.5 MHz
TT isolation	> 100 dB
TCG	0 to 70 dB
BEA	70 dB Attenuation

Data acquisition

Sample rate	Max 100 MHz
ADC resolution	12 bit
A-Scan samples	Up to 32768
A-Scan acquisition rate	80000 A-scans/s (1024-point A-scan)
Encoder interface	2 quadrature-type

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