

UTxx-PA4

UTxx is a versatile ultrasound electronic platform for industrial Nondestructive Testing (NDT) applications, testing machines, and on-line systems. Configurations are available for 64 or 128 channels Phased array, up to 4 x 128 channels in one rack, and multiple racks configurations.

Technical Specifications

Configuration

128 channels - Up to 4 boards in a rack

Pulsers

25 V to 105 V adjustable in 1 V steps

Negative spike

Adjustable width of 20 ns to 100 ns in 20 ns steps

Max. PRF 20 KHz

Adjustable delay 0 - 80 μ s in 5 ns steps

Output impedance of $\approx 15 \Omega$

Receivers

3.8 V pp input voltage

200 Ω input impedance

0.3 - 20 MHz analog bandwidth

80 dB dynamic range (per channel)

Adjustable delay 0 - 80 μ s in 5 ns steps

102 dB gain control

102 dB TCG with 102 dB/20 ns slope

Digitizers

Sampling frequency of 50 MHz

20-bit amplitude/channel

655 μ s long A-Scan

Signal Processing

Summation of up to 128 channels

Programmable digital filter (0.1 MHz to 25 MHz)

Linear or logarithmic display

A-Scan compression

ALOK (Multi-peak/TOF detection)

Phased Array Features

Focusing, steering and scanning

Aperture size from 1 to 128 elements

Memory sub-cycles (no firing) with water path suppression (up to 655 μ s)

Pulse echo, Through-transmission, Pitch-catch

Evaluation

4 gates including Interface trigger gate

2 alarm levels per gate

10 ns TOF resolution

Backwall tracking gate

Echo adaptation (delay law automatic calculation)

Interfaces

External PRF input, external acquisition trigger input

12 alarm outputs

USB2 or LAN interface between hardware and PC

