M2M MULTI2000™

PAUT equipment for NDT application

MULTIPLEXED ARCHITECTURE

Based on a multiplexed architecture, the MULTI2000 product line provides cost-effective flexibility. The best seller is the 32x128 configuration, but Multi2000 is also available in 16x64, 64x256, and 128x512 configuration.

GENERAL	
(16x64, 32x128) L x W x H: 316mm x 342mm x 133mm	(64x256) L x W x H: 436mm x 449mm x 133mm
Weight: ~7.5 kg	Weight: ~11 kg

ACQUISITION	
Hardware acquisition gates, software gates, synchronization of gates	Choice of data (e.g., RF, peaks, elementary A-Scan), real-time imaging, user-specified configuration
Acquisition trigger on event (threshold, echo, etc.), acquisition on user-specified trigger (e.g., time, coder)	Public file format for parameters (XML) and data (binary), max. data flow 30 MB/s

PHASED-ARRAY	
Customized focusing, electronic scanning, sectorial scanning	32 MB hardware RAM (enabling fast multiplexing)
Inspection modes: pulse-echo and transmit-receive modes, DDF with dynamic aperture	Corrected images (e.g., sectorial B-Scan, C-Scan)

NDT SIMULATION	
CIVA subset into Multi2000 software, complete description of the inspection configuration	Focal-laws and associated ultrasonic field computation

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SPECIFICATIONS

PULSERS	
Adjustable voltage: 30 to 200V with 1V step	Rise time < 10 ns (200V, 50 Ω)
Negative rectangular pulse	Max. PRF: 30 KHz
Adjustable width: 30 ns to 625 ns, step of 2.5 ns	

RECEIVERS	
Bandwidth: 0.8 to 20MHz	Max. input signal amplitude: 0.8 Vpp
Adjustable gain on each channel from 0 to 80 dB	Adjustable analog DAC on 80 dB (max. 40 dB/µs) synchronized on events
Cross-talk between two channels > 50 dB	

DIGITIZER	
Digitizing and real-time summation on 8-channel boards	Dynamic range: 10 bits
Max. sampling frequency: 100 MHz (adjustable from 100 MHz to 6.6 MHz)	FIR filters
Global delay: 0 up to 1.6 ms, step of 10 ns	Input impedance: 50 Ω
Delay-laws at transmission/reception: 0 to 20 µs, step of 2.5 ns	Digitizing depth: up to 50,000 samples (4,000 samples max. per elementary channel)

COMPATIBILITY	
CIVA	NDT kit / ULTIS

HARDWARE / FIRMWARE CONFIGURATION	
multiplexed architecture: 16x64-, 32x128-, and 64x256-channel	2 CPU (PowerPC) on CPU board
Windows-based PC, USB2 link between Hardware and PC (desktop or laptop)	

I/O	
2 Hypertronix connectors	1 USB2
8 encoders input	16 analog inputs
2 external triggers	4 LEMO connectors (type 00) (up to 8 optional)

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