PragmaPod

Remote-Control Instrument Platform for Advanced Nondestructive Testing

For Scanner-Mounting, Robot-Mounting, Automation and R&D

The PragmaPod platform is ideally suited for the most demanding system integrators. It features all the I/O interfaces and ruggedness for industrial use, and its small size allows for new capabilities.

With FPGA Ethernet communications and no CPU in the way, the data acquisition bandwidth is maximized allowing super fast inspection speeds.

Compact
CNC-machined aluminium enclosure, for durability and fanless operation.

Connectors for Industrial Use
Rugged twist-lock connectors for durability in the field or in the factory.

Self-Cooling
Active cooling thanks to a fan-based heat exchanger, completely sealed without any air or water inlet.

High-Speed and Low Latency
Very fast data throughput thanks to Gigabit Ethernet or 10 Gigabit Fiber (optional), and low-latency thanks to direct FPGA implementation.

Multi-Modal
The platform can welcome the docking of several available cartridges for a choice of modality: UT, PAUT, ECT, ECA, etc.

Alarms
The platform feaures four LEDs and a loud buzzer to provide status information.

*Light enough to be mounted on a magnetic-wheel scanner, to simplify the umbilical. Shown here on a **Jireh** scanner, alongside a **Hexagon Leica T-Probe** laser target.*
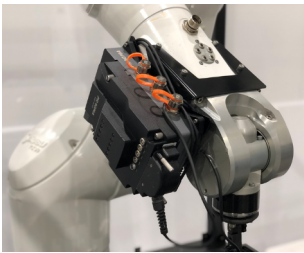
*Ideal to mount on a robot forearm,to keep the NDT probe cable short and prevent electrical noise. Mounting adapters available for **KUKA** and **Stäubli** brands.*
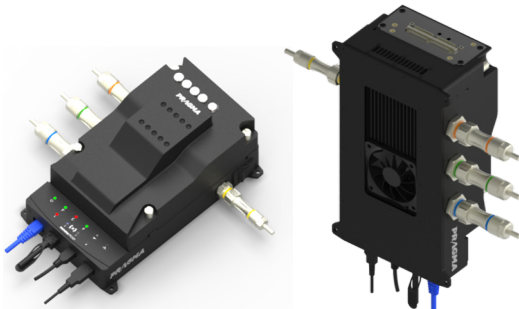
Ideal for system integration: heavy-duty twist-lock connectors and integrated fan for heat-exchanger cooling (no air inlet).

The PragmaPod is modular and ready to support several cartridges for UT, PAUT, ECT, ECA and other advanced NDT methods.

Integrator Interface

Alarms	Four (4) visual alarms, including platform status
Sound	One (1) loud buzzer
Inputs	Four (4) isolated 5V inputs
Outputs	Four (4) isolated 5V outputs
Button	Power On/Off Flip Switch

Connectors

Power	DC input, +24V, max. 3.75A
Ethernet	Ethernet 10/100/1000, RJ-45
10G Ethernet	SFP+ optical transceiver (option)
USB 3.0	Type A (Host)
Input connector	Twist-Lock 14 pins

Receivers

Input Impedance	50 Ohms
Analog Gain	Adjustable from 0 to 92 dB (also for TCG)
Analog Bandwidth	0.5 to 30 MHz (-3 dB)
Element Calibration	Relative gain for each probe element
Angle-Corrected Gain	Relative gain for each beam (focal law)
Time-Corrected Gain	Up to 16 points, per beam (focal law)

PAUT Beamforming

Digitizing Frequency	125 MHz (PAUT), up to 1 GHz (Mono)
Sampling Quantification	12 bits per channel
Max Rate	30 kHz (C-scan)
Number of Data Points	Max 16,535 per A-scan
Real-Time Averaging	2 to 64
Rectification	RF, Full Wave, Half Wave +, Half Wave -
Filtering	Digital filter (fully adjustable), 5x presets
Video Filtering	Optimal Decimation

Files and Analysis

File Formats	Config (.cfg, .xml), 3D (.pgdat), vector (.svg), .CIVA Import/export focal laws (.law)
Analysis Tool	Embedded software and windows PC viewer

Environmental

Dimensions & Weight	WxHxT: 120 x 190 x 68 mm (4.7 x 7.5 x 2.7 in.) 1.0 kg (2.4 lbs)
Operating Temperature	-10 to +45 C (14 to 113 F) typical
Storage Temperature	-20 to +70 C (-4 to 158 F)
Relative Humidity	0 to 90% noncondensing Designed for IP66 and MIL-STD-810G 507.5
Rain and Sand Proofness	Designed for IP66 and MIL-STD-810G 506.5/510.5
Shockproof Rating	Designed for MIL-STD-810G 516.6