Leaders In Phased Array Solutions and FMC/TFM

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The TPAC Advantage

Why Choose TPAC?

TPAC is a Company Dedicated to Facilitating Your NDT Projects. Building on Years of Advanced Phased Array UT (PAUT) Experience

Our Team Can:
• Support you in your NDT Project from A to Z or only in areas you find necessary
• Customized hardware and software solutions
• Define the best solution for your application based on standard technologies (e.g. PAUT), or more advanced techniques (e.g. FMC/TFM, etc.)

Expertise

With over 25 years of collaboration with various industries, the TPAC team has been able to create and to participate in the creation of friendly and efficient ultrasonic software to meet customers’ unique demands. Our skilled specialists know your needs and understand your specified requirements.
• Customize TFM software to fit your application
• Analyze FMC data
• Help you design the best PA probe for TFM
• Feasibility Study:
  ◊ Scan your parts so you can see the benefit of TFM

Support on AOS products:

Creating your ultrasonic applications requires electronic solutions that have to adapt to complex requirements. Aware of the difficulties of finding suitable, cost effective electronics, the TPAC team proposes custom solutions based on AOS modular electronics. We have performed various, customized customer applications in terms of:
• Enclosure design
• Thermal shell
• Power consumption
• IP rating
• UT electronics mixed

Consulting:

With a serious and regardful attitude towards your business, we start from the point of concept examination. Our specialists carefully analyze your needs and help you create solutions for implementing your project.
Pioneer: For Application & R&D Labs

- 16/16 to even beyond 1024/1024 parallel channels
- Fast! Up to 3 GB/s Data Throughput
- Supports Linear, Matrix and Custom PA Probes
- ARIA: General Purpose Advanced TFM End-User Software
- Standard SDK with example source code (C++, C#, MATLAB, LabVIEW, etc.)
- TFMToolBox (Low-level TFM API Library, various algorithms and combinations)
- FMC/TFM SDK: High-level API with both FMC and TFM Ultra high speed

Explorer: Phased Array & Advanced FMC/TFM

The most advanced, compact, rugged ultrasonic device on the market is here! Explorer gives you high performance technology that fits right in the palm of your hand.

- PAUT and/or FMC/TFM from 16 to 256 channels
- Small size for mounting on scanners
- Rugged & handles extreme environments
- VR: designed for IP68
- Off-the-shelf software available. See below!

Explorer 64/128 VR: Designed for IP688

Explorer 64/128

Explorer 64/256

Explorer 64/128
ARIA: Advanced TFM Software

ARIA is open format software which contains extensive features and is dedicated for the FMC/TFM process. The capabilities of this software include conventional FMC/TFM, which can be applied to straight or angled beam as well as flat, or curved pipe geometry. TFMp is supported for increased resolution of scan. PWI, which is 20 to 40 times faster than conventional TFM is also available with ARIA. Another key feature is Adaptive TFM which allows inspection of various and unknown geometry.
Prelude: Acquisition and Analysis Software

Prelude is a powerful and simple to use UT acquisition and analysis software for Phased Array weld inspection. It features no menu, less than 12 icons, and few controls so that the operator can easily handle the tough field conditions without being bothered by a complex GUI. Despite of its simplicity, corrected views are standard, and merged views can be obtained by a single click. The Phased Array Wizard is dedicated for the supervisor only. Prelude is also a base for developing the exact application you want. It is meant to be customized.

Concerto: Corrosion Mapping Software

Concerto is a UT acquisition and analysis software specially designed for Phased Array corrosion mapping. For the tough field conditions that operators deal with Concerto features no menu, less than 18 icons, and few controls so that operators can easily work and not be bothered by complex GUIs. Concerto is simple and easy to work with yet WT, Surface, and back wall Cscan can still be analyzed and setting can be changed using the same acquired data. Concerto is a customizable software that can be used to develop the exact application you want.
Solutions

**W-Scan: Weld Inspection**

With many methods for inspecting welds available, you need the right tools for your specific application. **W-Scan** gives you:

- Equipment dedicated to your application
- Solutions adapted to your specific weld inspection application

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**C-Mapper: Corrosion Mapping Inspection**

Corrosion Mapping is a well known technology for detection of the remaining Wall Thickness in Industrial applications. **C-Mapper** provides:

- Accurate assessment of the size of the corrosion shape
- Detection of exact remaining Wall Thickness
- Specific equipment to fit your needs

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**Creep-Scan: Creep Damage Inspection**

For Creep damage inspection, it is important to detect damage before cracking occurs. **Creep-Scan** provides:

- Better detection than conventional Phased Array
- Detection of aligned or isolated cavities (cluster of cavities less than 10 µm size)
- Specific probe allowing greater detection ability
- Equipment suited for your specific application

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**Socket-Scan: Small Bore Pipe Socket Weld Scanner**

For inspection of welds in small bore piping as well as other small pipes, you’ll need a specific solution. No need to look any further, **Socket-Scan** gives you:

- Specific Probes, Wedge and other necessary equipment
- Abundant Field Application Experience
  - Proven inspection in actual nuclear power plants
Customization

Custom Software

With over two decades of experience in creating friendly and efficient Ultrasonic Software to meet customers’ unique demands. Our skilled specialists know your needs and understand your specified requirements. Our team are experts in:

- Laboratory software with complex imagery (Ascan, Bscan, Cscan, Dscan, …) and specific algorithms
- Field software using scanners or specific tools
- Inline software for various industries

Electronics

Creating your ultrasonic applications requires electronic solutions that have to adapt to complex requirements. Aware of the difficulties of finding suitable, cost effective electronics, the TPAC team proposes custom solutions based on AOS modular electronics cards.

Probes

We help you create solutions for your applications this includes customized probes for challenging inspections. Our team specializes in:

- Phased Array (Linear, Matrix, Annular, Pitch/Catch)
- Simulation, Manufacturing, Characterization

Enclosures:

- Integrating UT technology into a pre-existing system
- Building custom enclosures for any environment