

iProbe_{PA}® A Complete Phased Array System in a Probe

By combining great British innovation with the latest Phased Array technology, we have produced the iProbe_{PA}. A complete digital Phased Array system in a probe. The smallest, lightest and most portable Phased Array System ever produced, without any compromise on performance, quality or reliability.



With the iProbe_{PA} there is no need for a large, heavy instrument

Simply connect the iProbe_{PA} to any Tablet or Notebook computer (minimum specification) via its integral USB interface and start performing inspections using our incredibly powerful, easy to use, intuitive UltraPhase software.

Full encapsulation to ensure maximum reliability in the field

Every aspect of the design has been carefully considered to enable the iProbe_{PA} to withstand extremes of heat, vibration and shocks so it is ready for any harsh on-site conditions

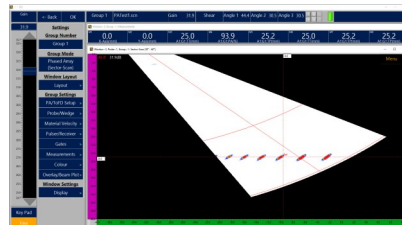


Applications

- Forgings & Castings
- External Pipeline Welds
- Aircraft Components
- Complex Geometries
- Pressure Vessel Welds
- Turbine Disks & Welds
- Hydrogen Damage
- Internal Pipeline Inspection

Industries

- Oil & Gas
- Petro-Chemical
- Nuclear
- Infrastructure
- Transport
- Storage Tanks
- Aircraft
- Condition Monitoring



iProbe_{PA}, no larger than a conventional Phased Array probe

Available with a range of frequencies, elements, pitch and elevation. Hi-Spec can also supply a complete range of matching wedges for virtually every application.

iProbe_{PA} has an integral quadrature encoder interface

This allows fully encoded scanning and is compatible with most encoders and scanners, including the UltraClamp and UltraBug

iProbe_{PA} transducers use a purely digital interface

This ensures a premium signal quality regardless of cable length or noisy electrical environments. With the integral Lemo connector, various cable lengths can be accommodated by simply changing the cable

Features

- 32 or 64 Element Probes
- Rugged and reliable 4 pin connector for power and data
- Operating temperature range -4°F (-20°C) to 140°F (60°C)
- Single or multiple probe operation
- Cable length on standard USB up to 5m
- Extend up to 100m by connecting to the UltraHub
- Compatible with our intuitive UltraPhase touch screen software



iProbePA Specification

General

- Frequency 5.0MHz (standard), 2.0, 3.0, 4.0, 7.5, 10.0MHz available
- Number Of elements 32, 64
- Element Pitch 0.6mm (standard), 0.3, 0.4, 0.8, 1.0mm available
- Element Elevation 11mm (standard), other sizes available
- Aperture 1 to 32
- Pulse Voltage 100V
- Pulse Shape Square Wave
- Pulse Width 50ns to 250ns

Digitiser

- ADC Sampling Frequency 100MHz
- Resolution 12 / 14 Bit
- Bandwidth (-3dB) 0.75MHz to 25MHz
- A-Scan Points 8192
- Number of Gates 3 overlapping gates
- Gate Start/Width User definable

Signal Averaging

- Number of Channels All
- Averaging Rate 1 to 64 user definable

Digital Filtering

- High Pass Filters (-3dB) 0.75, 1.5 and 2.5MHz
- Low Pass Filters (-3dB) 7.5, 10, 15MHz
- Post Rectification Filters (-3dB) 1, 2, 3, 4, 5, 6, 7, 8, 9.0MHz

Encoder Interface

- Type Quadrature
- Number of Axis 2
- Interface TTL/CMOS Compatible
- Output Voltage 5V @ 100mA (max)

Connectors

- USB Interface Lemo 0B, 4 Way
- Encoder Lemo 0B, 9 Way

Dimensions

- Length x Width x Height 32/64 Element
44 x 31 x 32 mm (1.73 x 1.33 x 1.26 inches)

Environment

- IP Rating IP65
- Temperature -20° (-4° F) to 60° C (140° F)
- Humidity 100%

Warranty

- Warranty Period 12 months against defective materials or workmanship.
See general [Terms and Conditions of Sale](#)

