

# MAPS

Modular Absolute  
Positioning System

## Positioning the Future of NDT Inspections

HEBI Robotics, Inc. offers MAPS as a Modular Absolute Positioning System with an Integrated UT Corrosion Mapping Solution or as a Universal 3D Encoder Arm. With this tool, you can do more with less.



- ✓ Universal encoder arm, capable of producing positional data for complex surfaces
- ✓ Software that provides compatibility with existing inspection tools
- ✓ Integrated ultrasonic (UT) flaw detection system

- Tablet-based UI for efficient electronic workflows
- Real-time feedback to ensure data quality and proof of coverage
- Built-in auto generated reports with .CSV data export
- Quick-change end effector supports multiple NDT sensors.
- Creates a digital twin of any surface: girth or saddle welds, spherical heads, elbows, tees reducers, etc.
- Operate as turnkey integrated UT system, or send 3D encoded X,Y,Z coordinates to external third-party flaw detectors.
- Reconfigurable arm can be adjusted to provide versatility required of multiple applications, surface geometries and asset sizes.
- Lightweight and portable with a base that can be mounted to any surface by clamps, straps, magnets, etc.

	Universal Encoder	Integrated UT
User Interface *	iPad in Ruggedized Case	
Degrees of Freedom	7 Continuous Rotation Joints	
Mounting	3-point Articulate Magnetic Mounts	
Reach	300mm / 700mm / 1100mm	
Measurement Resolution	0.01 mm (0.004 in)	
Measurement Accuracy	+/- 10 mm	
Measurement Repeatability	+/- 3mm (typical) +/- 10mm (worst case)	
Minimum Grid Size	1mm (0.04 in)	
Communication	Ethernet / WiFi / USB	
Power Supply	120VAC 50/60HZ	
Protection Rating	IP67 - Arm IP65 - Control Box	
Battery Life	7 hours	6 hours
Weight	4 kg (16 lbs)	5 kg (20 lbs)
Operating Temp - MAPS	-10 to 50 °C Ambient	
Operating Temp - Probe	-	-20 - 500 °C (D790) -20 - 150 °C (DRE5-10)
Supported Probes	-	Single / Dual-Element UT Thickness
Probe Interface	-	2x - BNC
Probe Cabling	-	2x - 5 m (15 ft) Lemo 00 to BNC

By default, the **Tru-Sonic DRE5-10** is included with the integrated UT MAPS kit. Olympus D790-RL can be included on request.

\* MAPS also integrates with many 3rd party flaw detectors including Olympus Omniscan and Zetec Topaz

