



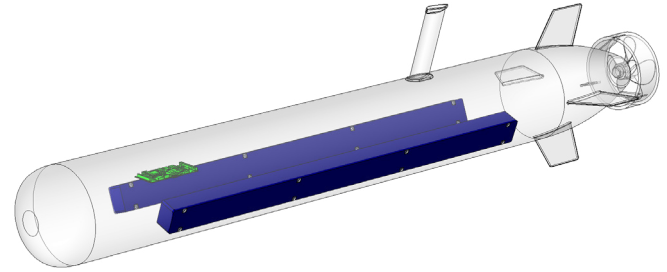
KLEIN MANTIS UUV

NEXT GENERATION IN SONAR TECHNOLOGY

Klein MANTIS UUV offers Klein's multichannel side scan sonar technology with onboard processing for high-quality imagery at higher speeds and in demanding motion environments. It is designed for streamlined vehicle integration, mission efficiency, and high-confidence target identification.

PRELIMINARY FEATURES AND VALUE (600 KHZ) SPECIFICATIONS*

Technology	• Multichannel side scan sonar processing • Onboard processing in real-time • Designed for ease of UUV integration
Frequency	600 kHz (baseline) / 720 kHz / 850 kHz
Maximum Range (Per Side)	• 150 m @ 600 kHz • 100 m @ 720 kHz • 75 m @ 850 kHz
Performance	(600 kHz configuration)
Feature:	Value:
• Max operating depth:	1000 m
• Supply voltage:	12–48 VDC
• Power usage:	25 W average
• Interfaces:	1 Gbps Ethernet + hardware trigger in/out
• Data output:	SDF; final supported output formats to be confirmed during final release.
• Center frequency:	600 kHz
• Across-track resolution:	1.2 cm
• Along-track resolution:	5.5 cm @ 25 m 11 cm @ 50 m 16.5 cm @ 75 m 27 cm @ 120 m
• Horizontal beamwidth:	0.125°
• Max range:	Up to 150 m per side / 300 m total swath
• Operational speed range:	2–8 knots
• Typical operating range:	120 m per side
• Onboard processing:	Multi-beam, wide-band, side scan sonar processing
Weight	
• In air	12.5 lb (5.7 kg)
• In water	5.6 lb (2.5 kg)
Mechanical	• Overall length: ~1.3 m • Installation: vehicle-integrated module (envelope and mounting configuration dependent on platform)
Depth Rating	1000 m



Vehicle Operation	Operational speed range: 2–8 knots. Supports high-speed UUV survey operations up to 8 knots. Coverage and image quality are dependent on vehicle altitude, selected range, frequency, environmental conditions, and mission profile.
Data & Integration	• Integration: Ethernet-based data output with documented interface for straightforward integration and downstream processing workflows. • Data format: Final supported output formats will be confirmed during final release.
Navigation / Motion	• No vehicle attitude sensor integration required.
Vehicle Dependencies	• Power, control, data interfaces • Ethernet communication

APPLICATIONS:

Survey missions where operational speed, image clarity, and efficient data collection matter.

- Mine Countermeasures (MCM)
- Search & Recovery (SAR)
- Hydrographic / Geophysical Survey
- Offshore Infrastructure Inspection (pipelines, cables, foundations)
- Route Survey and Seabed Characterization
- Environmental and Habitat Mapping

KEY FEATURES:

- Multichannel side scan sonar technology with onboard processing
- High-speed operation up to **8 knots**
- Motion-tolerant performance for dynamic UUV conditions
- Ethernet data interface for streamlined vehicle integration

Note: Final specifications may vary by configuration and vehicle integration requirements. Specifications subject to change.