

Remote Resident Underwater Drone & Dock

Detailed specification



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Transmark Subsea AS

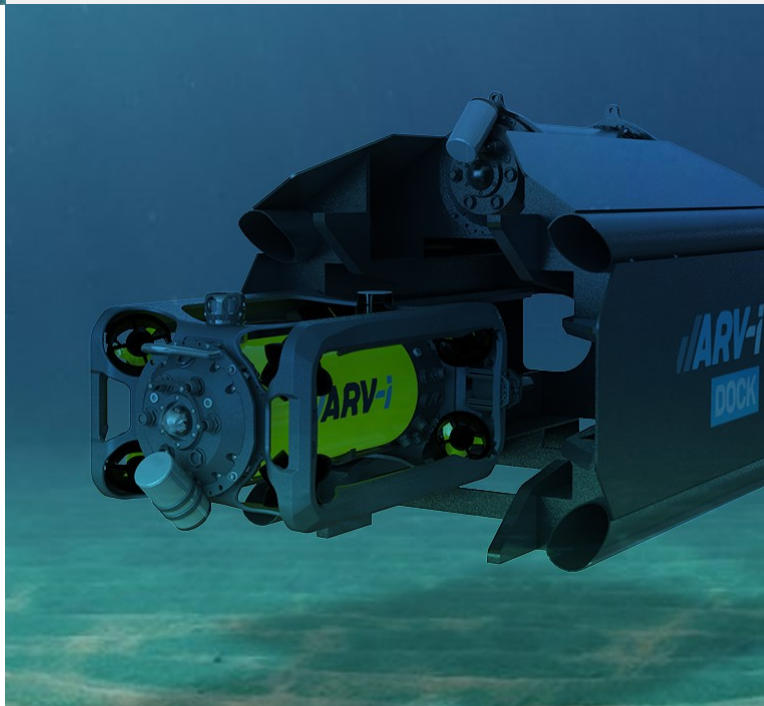
Nedre Nøttveit 16, 5238 Rådal, NORWAY

Tlf. (+47) 56 91 39 00

Email: post@transmark-subsea.com

Organisationnummer 884475 102 MVA Foretaksregisteret

ISO 9001 Certified





Specification Drone

Vehicle Standard Specification

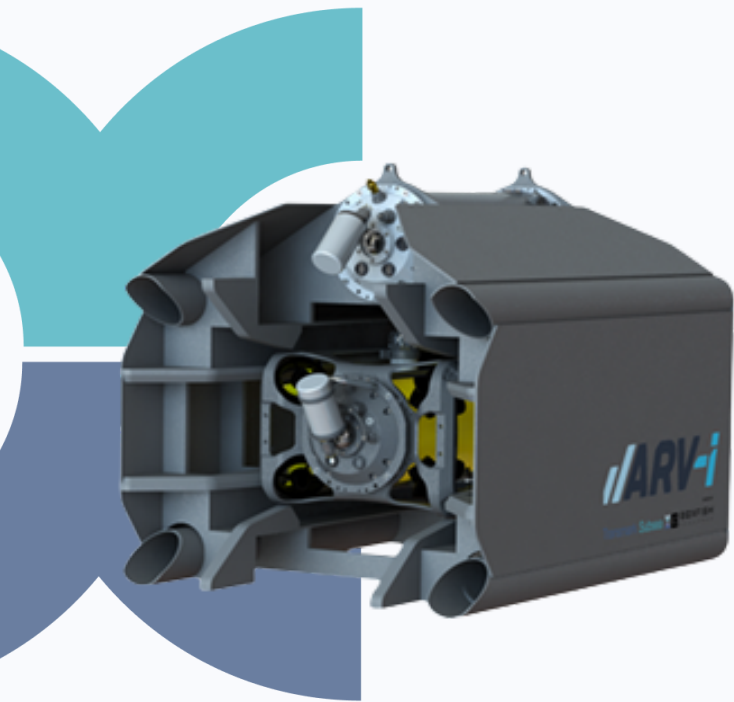
Depth rating	300m
Battery power	500Wh
Piloting	Control unit in carrying case (IP54 opened, IP67 when closed)
Control signal & video telemetry	No Tether: Optical Modem (Free Space Optical) (Tethered options available)
Positioning	USBL (1000m range)
Power for additional sensors	50W @ 12V and 50W @ 24V
Battery Endurance	<ul style="list-style-type: none"> • 3 hours with 100% lighting • 10 hours with 10% lighting • 4 hours with 10% lighting and 1 knot current
Charging to fully charge (from 0% to 100%)	4 hours
On Board storage capacity e.g. video & images	1,5 TB
Dock power/data interface	via WiSub pinless connector, 150W and 100 Mbit/s
Dimensions	610mm / 400mm / 360mm
Weight in air	24 kg (ballasted for neutral buoyancy in seawater)
Lighting	2x 8,500 lumen, high CRI, dimmable
Navigation camera	4K, 130-degree horizontal view
Thruster configuration	8 x 3D vectored thrusters
Autonomous features	Autonomous return to home, path following
Packaging	Sturdy travel case

- Actual layout can differ from above picture and depends on system configuration.



Options Drone

Depth rating	1000m
Subsea Tether Management System (TMS), integrated into Subsea Resident Dock	200m neutrally-buoyant single-mode fiber, 3.7mm diameter, min. breaking strength 150kg (330lb)
Machine vision	Up to 6 HD cameras – currently used for supervised autonomy functions (offering potential for custom autonomy development and AI features)
Acoustic telemetry control	Acoustic control supported by navigation camera captured images and schematic positioning
4K Camera	4K uncompressed video, suitable for photogrammetry (3D modeling)
600Wh Battery	Larger capacity battery for extended operation
Remote Control	Remote piloting via 4G router with tether converter box
Autonomous features	Pre-programmed missions
Imaging Sonar	Advanced obstacle avoidance and target following
Video overlay	Tailor made video overlay information (control screen and/or stored on HD video)
Additional screen	Additional navigation screen on console (live navigation video)
Tether	Up to 3km 2.7/3.7/4.3mm tether, neutrally buoyant (110kg to 550kg breaking strength)

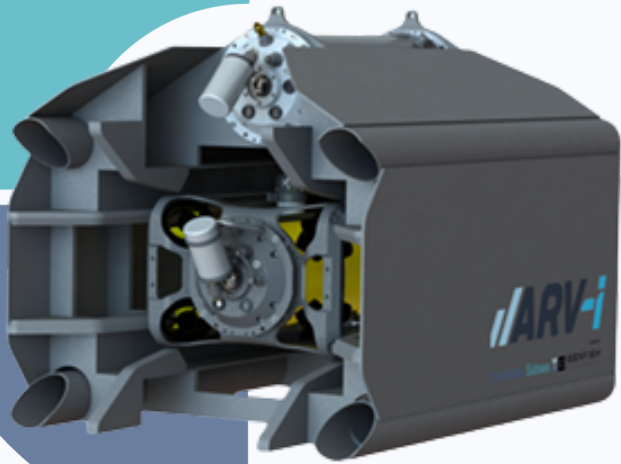


Specification Dock

Drone Standard Specification

Depth rating	300m
Power transfer	Wireless max. 150 Wh
Power In	110-240 VAC
Data transfer	Ethernet: max. 200 Mbit/sec
Control / monitoring	Cloud-based GUI providing: <ul style="list-style-type: none"> • Temperature • Pressure • Power transfer • Camera control • Video stream • Lighting control • Data transfer • Drone battery charge status • On-off status • Drone latch/unlatch
Camera	2 x HD cameras
Lighting	2 x 9000 lumen lights, dimmable
Positioning system	USBL
Dimensions	1m x 1m x 1.2m
Weight in air	45 kg, potentially more depending on ballast
Switch	8-port managed ethernet switch
Serial	4-port RS232 protocol converter
Drone latching	Actuator for drone latching

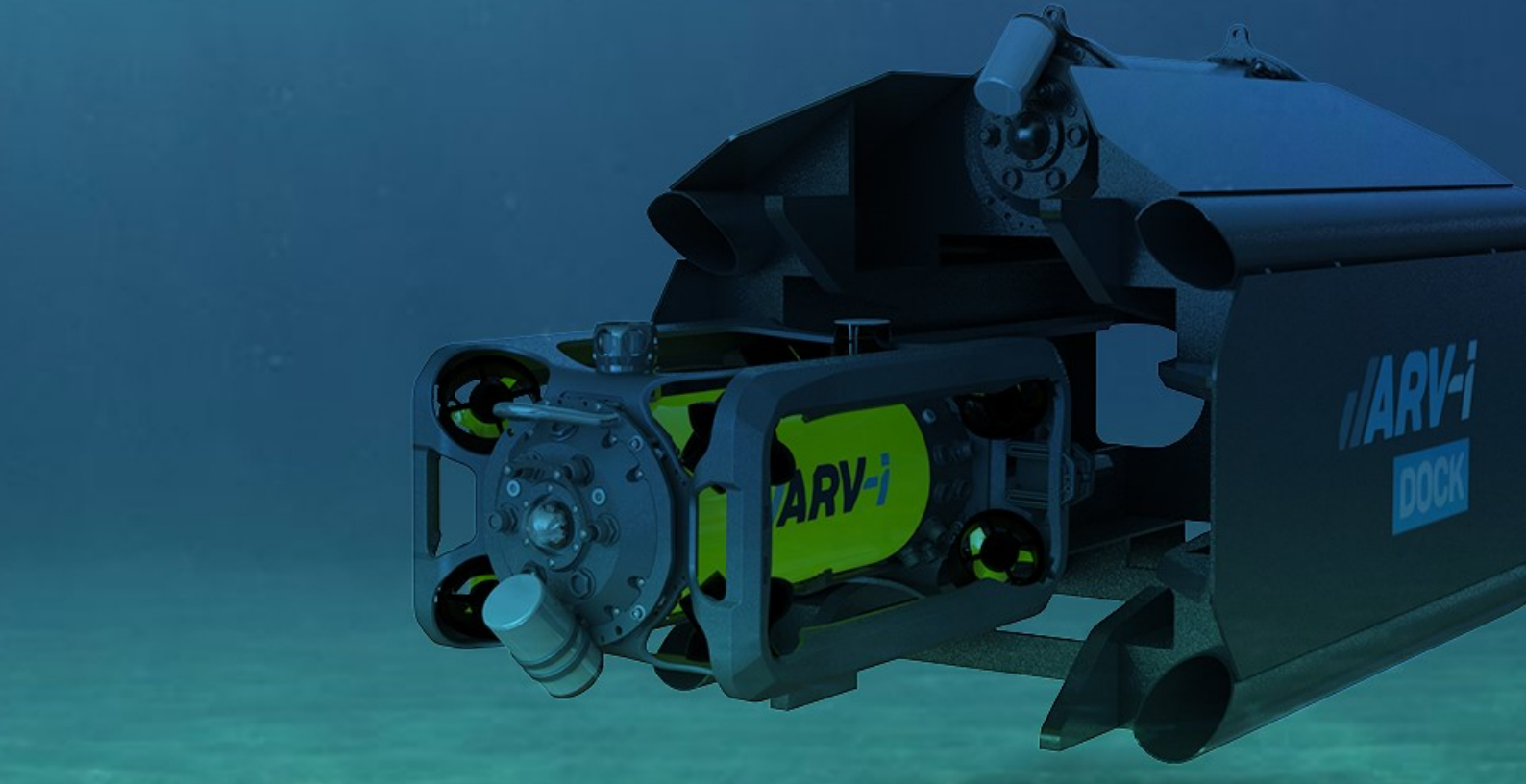
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Options Dock

Depth rating	1000m
Buoy	Sensor buoy (AKVA)
Cabling	Subsea cable and connectors for power and signal
Lifting system	Ship based launch and recovery including winch and a-frame
Water flow sensor	ADCP or equivalent





ARV-i

