

Ø QYSEA

FIFISH X1



Underwater NDT Solution

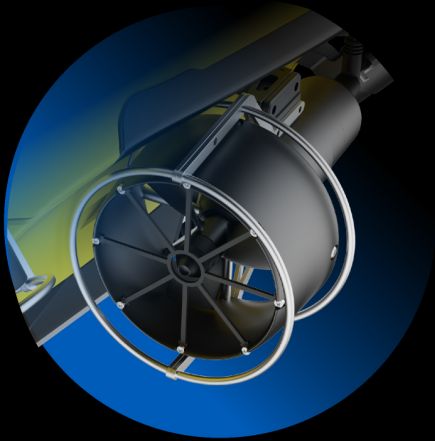
Mission ROV

Offshore · Infrastructure · Shipping Mission ROV

Powerful Precision, Advanced Add-Ons, Superior Stability

FIFISH X1

FIFISH X1 is a Mission ROV for offshore energy applications, reaching depths of 350 meters with powerful propulsion and stability in strong currents.



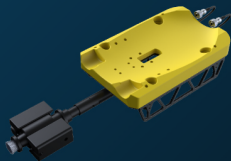
Enhanced 4.5-Knot Propulsion

FIFISH X1 features a revamped vector thruster system, enabling enhanced speeds and exceptional operating efficiency.

Non-Destructive Testing (NDT) Solutions

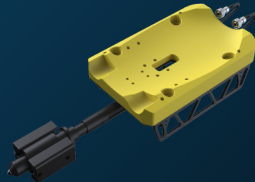
The FIFISH X1's load capacity has increased to 15kg, allowing for various industry add-ons. It supports up to four accessories simultaneously and integrates non-destructive testing tools, enhancing its versatility for inspection tasks.

Electric Cleaning Brush



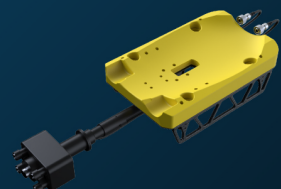
Featuring a compact design with powerful force, this tool is driven by a high-speed motor to effectively remove dirt and deposits from surfaces, restoring objects to their original condition.

Cathodic Protection (CP) Tool



X1 can be equipped with a CP tool to measure the potential data of sacrificial anodes, enabling efficient and safe assessment of whether the anode blocks meet usage requirements.

Ultrasonic Thickness Gauge (UTG)



Accurately assess and evaluate metal thickness, corrosion and material loss, all without damaging protective coatings. The UTG enables precise, non-destructive measurements for reliable inspection.

Q-DVL

Enhanced Stability & Intelligent Control for Offshore Environments

FIFISH X1's built-in Q-DVL is an adaptive system that locks the ROV's position underwater, ensuring stable and precise station-keeping even in challenging conditions. This allows inspections to remain smooth and consistent despite environmental interferences.



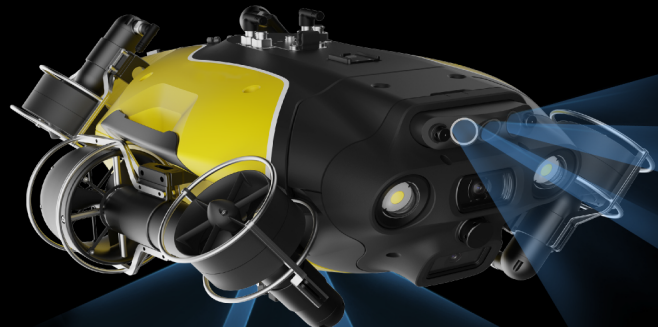
Altitude/ Distance
Lock & Track



Smart
Collision Avoidance



Bathymetric
Mapping

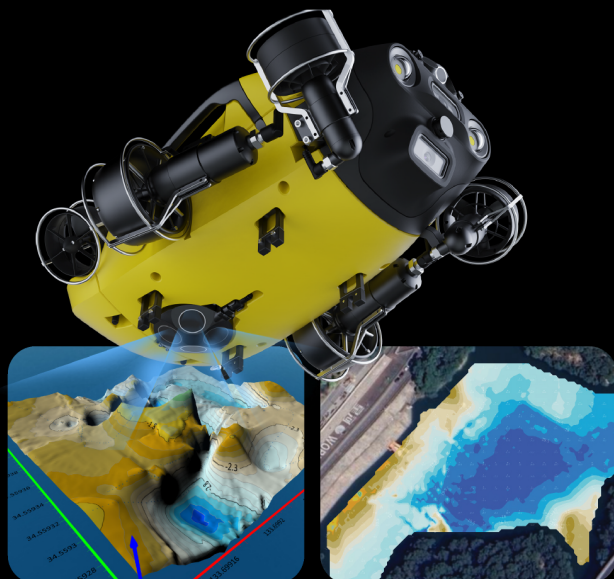
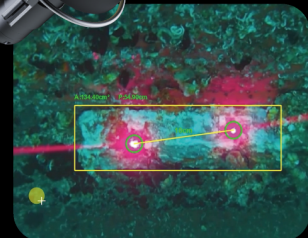
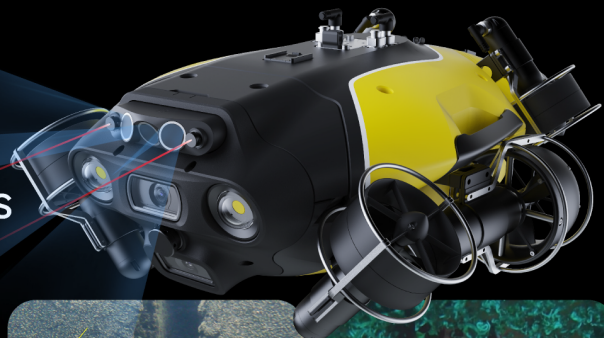


The forward Q-DVL minimizes surge, sway, and heave for reliable station-lock in currents up to 4 knots, keeping NDT tools steady. The downward Q-DVL provides live altitude and distance data for smart collision avoidance and precise bathymetric mapping.

QY-MT | QYSEA Measurement Tool

Adaptive & Smart Non-Destructive Measurements

FIFISH X1 with forward Q-DVL maintains precise station-holding in front of vertical structures, letting the laser scaler measure with a constant stand-off for millimeter-level accuracy in length, area, and angles—perfect for defect logging and structural assessments.



QY-BT | QYSEA Bathymetric Tool

Intelligent Seafloor Measurement & Mapping

FIFISH X1's built-in Q-DVL stabilizes the vehicle's attitude and supports precise depth measurement. You can set automatic routes to collect seafloor data and generate 2D/3D maps, contour lines, and volume calculations using QYSEA's analysis software.

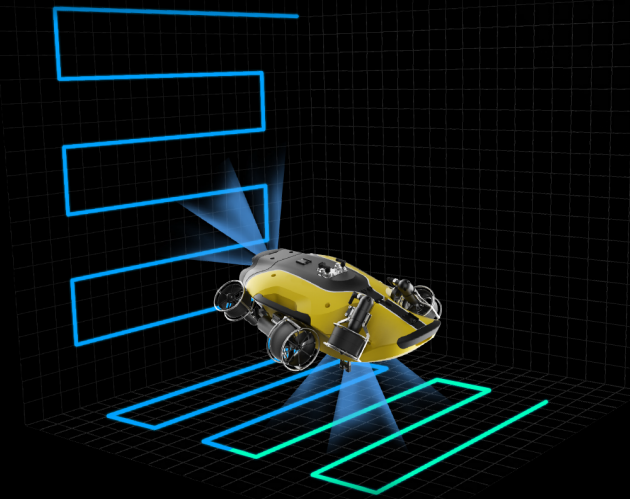
※ Depth data extracted from the ROV can be processed using 3rd party commercial software.



Horizontal & Vertical Precision Navigation

Empower Missions with Smart & Automatic Navigation

QYSEA's AI engine fuses all on-board sensor data with forward and downward Q-DVLs, delivering the enhanced U-INS Plus toolkit. This system unites horizontal path planning, advanced Vertical Navigation, station lock, real-time positioning, POI markings, and bathymetric surveys, all in one ROV.



Continuous forward Q-DVL data powers Vertical Navigation, enabling FIFISH X1 to maintain a centimeter-level stand-off along hulls, piers, or dam walls while automatically moving up or down. Operators gain real-time positioning and dynamic path planning, achieving greater control precision and mission efficiency.



Mission Planning & Location-Tagged NDT Inspection

Automatic Navigation of Vertical Structures

Advanced Dual 4K Camera System

FIFISH X1's Dual 4K Camera System, with an ultra-wide field of view, boosts inspection efficiency and provides a comprehensive underwater perspective. Paired with patented software, it enables extensive data collection for professionals.



4K Dual Camera System
Pixels: 12 MP
Resolution: 4K UHD
Sensor: 1/1.8" CMOS
Lighting: 12,000 Lumens

Ultra-wide FOV Lens
Field of View: 146°
Focus Range: 0.1m~∞

※ The two cameras equipped on this unit have some differences in specifications. Please refer to the specification sheet for detailed parameters.

Direct Power Supply for Extensive Missions

FIFISH X1 enables longer operations over greater distances with ease, featuring a standard shore-side charging system that provides continuous power for uninterrupted subsea missions.



Command with Power, Deliver with Precision

Q-iRC one-tap split-screen: on monopile or hull runs, view the vertical path alongside live UTG readings. Measure while moving, no view switching. Faster calls, safer ops, and auto-logged timestamps/POIs for proof.

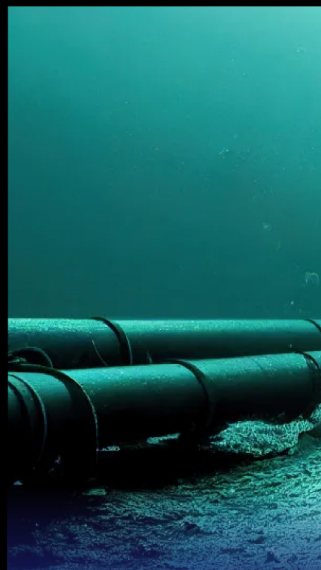


Application Scenarios



Oil & Gas Platforms

Jacket Foundation Inspections
Marine Growth Removal
Anode Potential Checks
Wall Loss / Corrosion & Defect Sizing



Oil Pipelines

Metal Thickness Measurement
Cathodic Protection (CP) Compliance
Biofouling Removal
Leak Detection & Route/Burial Surveys



Wind Farms

Monopile / Structural Cleaning
Thickness & Anode Measurements
Crack / Pitting Sizing
Scour Mapping

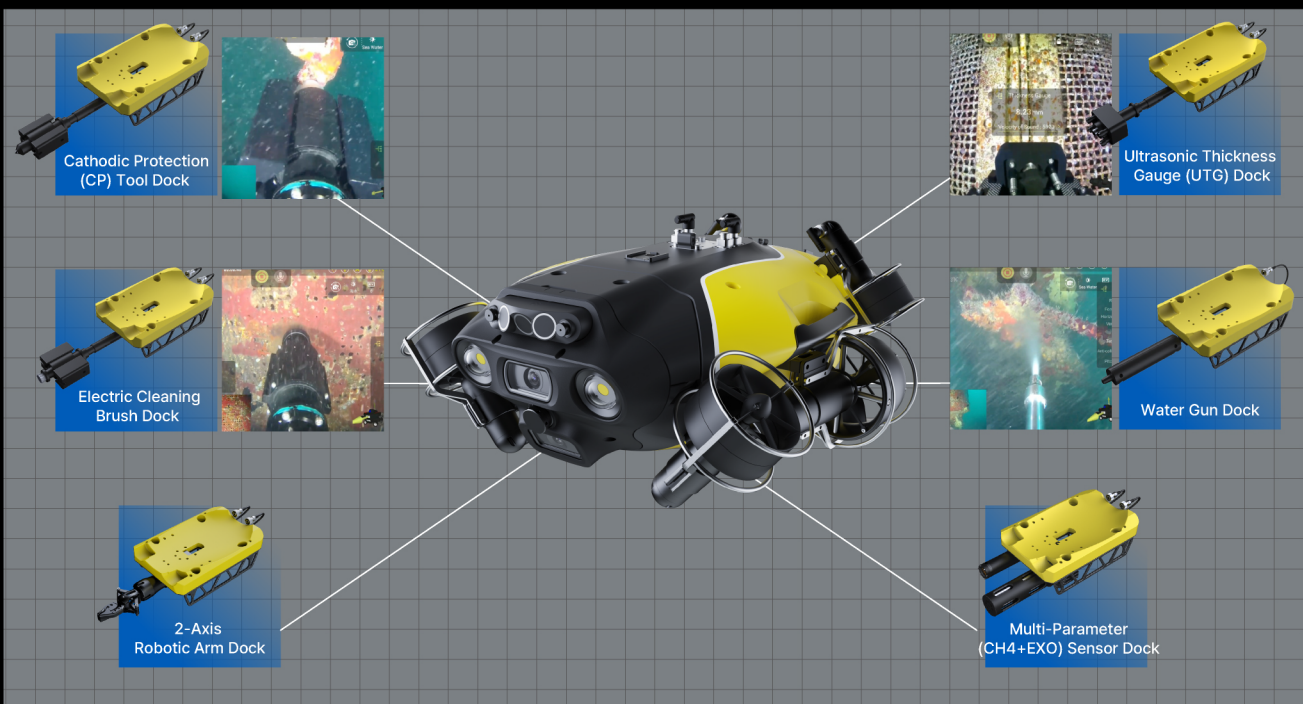


FPSO

(Floating Production,
Storage & Offloading)

Hull Wall-Thickness Measurement
Growth Removal & Cleaning
Anode Condition Monitoring
Hull Structure Monitoring

Multi-dock Expansion



※ Accessories shown in the image are optional items and are not included in the standard package.

FIFISH X1 Specifications

ROV

Dimensions	770mm(l) x 560mm(w) x 400mm(h)
Weight	≤30 kg
Depth Rating	350m
Payload	15kg
Speed	Forward/ Backward: 4.5 Knots/ 3.5 Knots Lateral/ Vertical: 2.5 Knots/ 1.5 Knots
Current Hold	Up to 4 Knots
Maneuverability	6 Degrees of Freedom Movement: left & right, up & down, forward & backward, 360° yaw, 360° pitch, 360° roll
Material	Titanium Alloy, Polyurea Buoyancy foam, & Hard-Anodized Aluminum
Operating Temp.	-10 °C ~ 50 °C (Operational Temp. Range)
Navigation	U-INS & Vertical U-INS (Underwater Inertial Navigation System)

Sensors

Downward DVL	Detection range: 0.1m-100m	Station Lock & Collision Avoidance
Forward DVL	Detection range: 0.15m-10m	
Gyroscope	±0.1°	
Accelerometer	±0.1°	
Magnetometer	±1°	Posture Lock: ±0.1° pitch angle or ±0.1° roll angle, in any direction
Depth Sensor	Suspension within ±1 cm	Depth Lock
Temp. Sensor	±1°	Smart Measurement
Laser Scaler	Wavelength: 660nm (Red)	
	Type: Dual Spot Laser	
	Distance: 10cm Apart	

Direct Power Supply | Surface Unit

Dimensions	460mm(l) x 360mm(w) x 190mm(h)
Weight	8.4kg
AC Power Input	AC 110V / 220V
Max. Surface Power Output	2.2 kW
Protection Level	IP55 (Lid Opened) / IP66 (Lid Closed)

Direct Power Supply | Underwater Unit

Dimensions	130mm(l) x 130mm(w) x 260mm(h)
Weight	3.8kg
Input Voltage	700-800V DC
Output Voltage	29.2V
Max. Power Output	1.8 kW
Depth Rating	350m

Port Interface

Quantity	4
Interface	29V @ 5A ETHERNET, UART
Adjustable Power	Adaptive Voltage Range for External Add-on Accessories
Secure Plug	Self-Diagnostic Test & Water Ingress Prevention

※ Specifications are subject to change without prior notice.
Please contact QYSEA for detailed parameters.

Camera

Quantity	Dual 4K Camera System
Front Camera	Aperture: f/2.5
	FOV-Vertical (Underwater): 69°
	FOV-Horizontal (Underwater): 120°
	FOV-Diagonal (Underwater): 146°
Lower Camera	Focus Range: 0.1m~+∞
	Aperture: f/1.8
	FOV-Vertical (Underwater): 52°
	FOV-Horizontal (Underwater): 87°
Sensor	FOV-Diagonal (Underwater): 96°
	Focus Range: 0.3m~+∞
	1/1.8 " CMOS
	12MP
Shutter Speed	5-1/5000 Second
Burst Shooting	1/3/5/10 Frames
ISO	100-6400 (Auto/Manual)
White Balance	2500K-7500K (Seawater/Freshwater, Auto/Manual)
Exposure Comp.	-3.0 EV to +3.0 EV (Auto/Manual)
Photo Resolution	4:3 = 4000 × 3000 / 16:9 = 3840 × 2160
Photo Format	JPEG, DNG
Video Resolution	4K UHD: 25/30 fps
	1080p FHD: 25/30/50/60/75/90 fps
	720P HD: 25/30/50/60/75/90 fps
Video Encode	H.264
Video Format	MP4
Stabilization	Electronic Stabilization (EIS)
Color System	NTSC & PAL
Internal Storage	External TF Card (FAT32 File System, Up to 256GB Maximum Capacity)
AI Functions	Vision Lock, Auto Navigation

Lighting

Brightness	6000 Lumen LED * 2
CCT	5500K
Beam Angle	120°
Brightness Levels	3

Tether Spool

Cable Length	350m
Cable Diameter	9.5mm
Tensile Strength	300kgf
Spool Dimensions	600mm x 430mm x 540mm
Spool Weight	53kg
Protection Level	IP66
Tether Weight	Neutral Buoyancy (Underwater)

Control Console | Q-iRC

Wireless Network	2.4Hz & 5GHz WiFi: 802.11 a/b/g/n/ac
Weight	1420g
Screen Size	7 Inches
Brightness	1,500 Nits
Usage Time	Up to 8 hours
Protection Level	IP54
Storage	LPDDR4x 4GB RAM + 64GB eMMC Storage

Connect with QYSEA



QYSEA Website



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