

TOP NOTCH DEEP-SEA EQUIPMENT



X08 ROV

Technical Specifications

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1.Product Overview

The X08 features compact size, lightweight design, high speed, agile maneuverability, strong load capacity, high integration, and excellent reliability. Equipped with forward-looking sonar, soil sample collection devices (dual-axis manipulator), high-definition cameras, and bright lighting systems, it performs underwater rescue, observation, and scanning tasks. It is widely applicable in underwater safety, fire and rescue operations, environmental monitoring, water quality surveillance, pipeline inspection, and scientific research and education.



Fig. 1:X08 Axonometric Drawing

2. Technical Parameters

2.1 Robot System

Robot System	
Basic Parameters	
Dimension (L×W×H)	680mm x 450mm x 400mm
Weight	38kg(in Air)
Depth Rating	300m
Power System	220±20 VAC , 50±1 Hz, 3.5kW
Power Performance	
Thruster	-Equipped with eight thrusters: four horizontal and four vertical. -Each thruster provides a maximum forward thrust of 7.8kg. -Variable speed function.
Speed(still water)	3 knots
Automatic Mode	-Heading hold -Roll/pitch hold -Depth hold
Light,camera,PTZ	
Camera	The pan-tilt unit is equipped with one 2-megapixel 1080P high-definition fixed-focus digital lens with a resolution of 1920×1080. It supports both color and black-and-white modes, with a light sensitivity of approximately 0.01 Lux in color mode and 0.001 Lux in black-and-white mode. Featuring a 110° field of view, the lens rotates synchronously with the pan-tilt unit.
Light	Equipped with 4 sets of independent 50W high-brightness LED lights. Each set delivers 4000 lumens, with a total brightness of 16000 lumens. The light brightness is adjustable.
PTZ	-1 set of single-axis pan-tilt integrated with camera -Rotation angle: ±90°

	-Real-time position feedback function available
Dual-axis manipulator (Expandable gripper-shear integrated manipulator)	-Dimensions: $\Phi 40 \times 350 \text{mm}$ -Maximum clamping range: 150mm -Functions: 360° rotation, opening & closing, gripping -Weight: 2.5kg (in air)
Sensor&Instrument	
Sensor	Equipped with gyroscope, depth sensor, temperature sensor and water leakage detector.
Equipped with instruments	Imagenex 873 Blackfin Side Scan Sonar, 1.1MHz
External	Support expansion for Seatrak X150/X110 baseline, DVL and other devices Reserved network port, RS232, RS485, 24V power port and other interfaces as required Multiple mounting positions reserved for expansion

2.2 Deck Support Unit



Fig.2: Deck Support Unit

Deck Support Unit		
Control Box		CPU: Intel i7 Memory: 32GB Hard Disk: 128GB SSD + 1TB Mechanical Hard Disk Graphics Card: Independent Graphics Card LCD Screens: Three 17.3-inch HD LCD screens with resolution 1920×1080 Equipped with DVD Burner Equipped with Professional Control Handle
Handhold Controller		–The handheld controller uses a professional control handle. –Controls basic robot movements, thruster speed, dual-function manipulator actions, and PTZ tilt motion. –At least two spare buttons reserved for future equipment upgrades.
Software System		Full Chinese/English interface (other languages customizable) Controls robot movement: forward, backward, left turn, right turn, left lateral push, right lateral push, ascent, descent, pitch, attitude hold, automatic depth, automatic heading; multi-speed adjustment available One-click video storage and photo shooting; adjustable light brightness and pan-tilt angle Video overlay function: supports overlay of date, time, depth, temperature, heading, etc. Real-time display of monitoring data
External Output		Supports Ethernet transmission of overlay video to the ship Supports data output via Ethernet/RS232 interface
Power System	Distribution	Realizes voltage conversion, power distribution, circuit protection and other functions

2.3 Winch & Umbilical Cable



Fig.3:Cable Winch

Winch & Umbilical Cable	
Cable Length	Length: 300m.
Function	-Winch: Manual winch with electric slip ring -Breaking force: $\geq 300\text{kg}$ -Cable diameter: 16mm -Buoyancy: Neutral (fresh water) -The winch is equipped with four universal wheels for easy on-site use



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