



山东未来机器人有限公司

SHANDONG FUTURE ROBOT CO.,LTD

VP08 ROV 系统技术规格书

VP08 ROV System technical specification



1 水下机器人 Underwater Robot

Basic Specification 基本参数	
Power System 电源系统	220VAC, 50Hz, 3.5kW
ROV Depth Rating 深度等级	200msw
Robot Dimension 机器人本体尺寸 (L×W×H)	680mm×450mm×400mm
Robot Weight (in Air) 机器人本体重量(空气中)	38kg
Power Performance 动力性能	
Thruster 推进器	1) Equipped with eight thrusters: four horizontal and four vertical. 2) Each thruster provides a maximum forward thrust of 7.8kg. 3) Variable speed function with 10-speed levels. -搭载八组推进器，其中水平四组，垂直四组 -单组推进器正向最大推力 7.8kg -可调速
Maximum Speed(still water) 最大速度（静水）	3knots 3 节
Automatic Mode 自动模式	-Heading hold -Roll/pitch hold - Depth hold -航向保持 -横倾/俯仰保持 -深度保持
Light,camera,PTZ 照明、摄像、云台	
Light 照明	1) Four 50W lights in the front. 2) Each light provides 4000lm illumination with stepless brightness adjustment. -前方 4 组 50W 照明灯 -单个照明灯照度 4000lm，亮度可无级调光

Camera 摄像机	The PTZ carries a 2MP, 1080P HD fixed-focus digital lens with a resolution of 1920×1080P. It supports both color and black-and-white modes, with light sensitivity of approximately 0.001Lux (color) and 0.0001Lux (black-and-white), a 110°field of view, and follows PTZ rotation. -云台搭载 1 组 200 万，1080P 高清定焦数字镜头，分辨率 1920×1080P。具有彩色黑白双模式，光照灵敏度彩色约 0.01Lux、黑白约 0.001Lux，视角 90°，可跟随云台旋转
PTZ 云台	The front end of the robot is equipped with a single-axis integrated PTZ. The PTZ integrates one camera with a rotation angle of ±90°, featuring real-time position feedback. -1 组单轴云台，集成有摄像机，可搭载声呐 -旋转角度±90° -具有实时位置反馈功能
Sensor&Instrument 传感器与仪器	
Sensor 传感器	Equipped with IMU, depth sensor, temperature sensor, water leakage detection, etc 搭载 IMU、深度传感器、温度传感器、漏水检测等
IMU	-IMU integrates accelerometers, gyroscopes, and magnetometers internally -Heading accuracy: 0.5 ° , resolution: 0.1 ° -Pitch accuracy: 0.1 ° , resolution: 0.1 ° -Roll accuracy: 0.1 ° , resolution: 0.1 ° -IMU 内部集成有加速度计、陀螺仪、磁力计 -航向精度：0.5° ，分辨率：0.1° -俯仰精度：0.1° ，分辨率：0.1° -横滚精度：0.1° ，分辨率：0.1°
External 扩展	-Reserve 3 interfaces

	-Can extend sonar, USBL and other components -预留 3 个接口 -可扩展声呐、基线等搭载件
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2 控制系统 Control System



Main Technical Specification 主要技术参数

Control Box 控制箱	1) Dimension: 530mm(L) ×430mm(W) ×300mm (H) Weight: 16kg 2) Main screen: 19-inch high-brightness display with a resolution of 1920×1080P, used to display video feedback, and data from various sensors. 3) Secondary screen: 10.1-inch high-brightness display for setting robot-related parameters. 4) Processor: Intel I7。 RAM: 8GB Hard Drive: 1TB 5) Splash-proof chassis design, supports one-click video recording and snapshot capture. Equipped with a full-metal, three-proof mechanical keyboard and mouse buttons. -尺寸：530mm×430mm×300mm（长×宽×高） -重量：16kg -主屏为 19 寸高亮显示屏，分辨率 1920×1080P；用于显示机器人反馈的视频、各个传感器等数据 -副屏 10.1 寸高亮显示屏，用于设置机器人相关参数 -嵌入式工控机，内存：8G，硬盘：1T -采用防溅机箱设计，可实现一键视频存储及拍照 -采用全金属三防机械式键盘、鼠标按键
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Handhold Controller 手持控制器	1) The handheld controller uses a professional control handle. 2) Controls basic robot movements, PTZ tilt motion, etc. 3) At least two spare buttons reserved for future equipment upgrades. -采用专业控制手柄 -可控制机器人的基本运动、云台俯仰动作等 -预留至少两个备用按键供后期对设备进行升级使用
Control Software 控制软件	1) Multiple operating modes can be set according to different environmental conditions. During navigation, the robot can move forward, backward, turn left, turn right, strafe left/right, ascend, and descend, with multi-level speed adjustment. 2) Supports one-click video recording and snapshot capture; adjustable lighting brightness and PTZ angle. Video overlay function allows overlay of date, time, depth, temperature, heading, etc. 3) The software interface is fully in Chinese or English. (Language customization available) -可控制机器人进行前进、后退、左转、右转、左横推、右横推、上升、下降、俯仰、姿态保持、自动深度、自动航向等，速度可实现多档调节 -可实现一键视频存储及拍照，具有视频叠加功能，可叠加日期、时间、深度、温度、航向等 -软件采用全中文或英文界面（语言可定制）

3 缆车 Winch



Main Technical Specification 主要技术参数	
Cable Length 线缆长度	Length: 300m. 长度：300m。
Function 功能	-Winch: Electric slip ring winding reel -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 -绞车：电滑环卷线盘 -破断拉力：$\geq 300\text{kg}$ -线缆直径：16mm -浮力：中性（淡水） -绞车配置四个万向轮，方便现场使用