MARITIME DRONE

Monitoring system using marine drones

JD Co.,Ltd.

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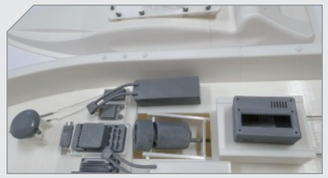
- Maritime drones
- Maritime drones capable of real-time observation/ analysis of weather and maritime environments

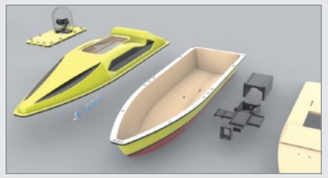
Maritime drones with IoT-based smart autonomous operation and remote adjustment for management of natural ecosystem environments

Equipped with core technologies needed for maritime management, allowing for a variety of measurement and management tasks with only operation of developed drones to minimize waste of time and resources

Allows for efficient water system management with a low-cost environmental observation system

Key items that identify the movement and behavior characteristics of underwater objects and convert them into visual signals to provide convenience to users





Company introduction

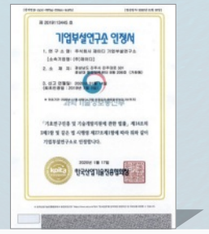
Company name	JD Co.,Ltd.
Date of founding	2017. 06. 07.
CEO	Joong-gun Park

Certifications held

Certification as an Inno-Biz

Certification as a venture enterprise

Minister's Prize for a Small or Medium-sized Enterprise



Recognition of affiliated research institute

ISO 9001

ISO 14001

Family-friendly Certification

Start-up Enterprise Certification

Korea International Trade Association Certification

Industrial-Academic Cooperation Agreement with Gyeongsang National University

Maritime drones

Maritime drones capable of autonomously recovering when capsized in an unstable maritime environment and measuring temperature/salinity, capturing/transmitting video, remote control, and autonomous operation, allowing weather and maritime environment information to be captured in real time

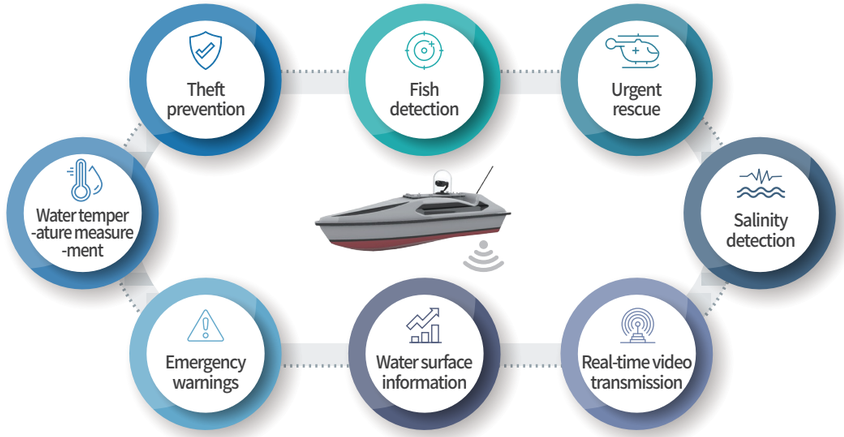
- Real-time observation of weather and maritime environment information
- Remote control and automatic route operation systems
- Structural Design to minimize the possibility of overturning in irregular maritime environment
- Maritime drones for coastal observation and securing of water resources

Maritime drone core technology

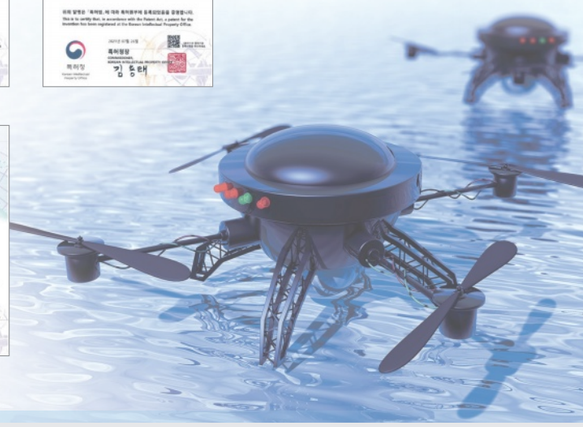
Drone operation performance	
Maximum flight speed	5m/s ~ 10m/s
Maximum flight time	5h or more
Remote adjustment range	Remote control and route operation functions
Recovery time after capsizing	Within 30 seconds
Advanced surface management	IP X7

- Autonomous operation and failsafe functions
- Real-time video transmission functionality
- Water temperature/salinity/fish detection technology
- Ship-type design to allow for autonomous recovery

Maritime drone characteristics



Maritime drone development experience

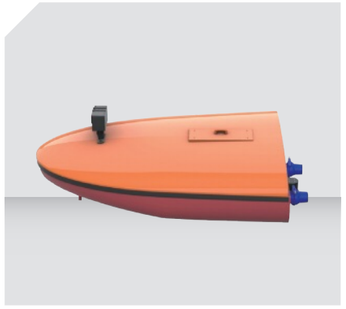


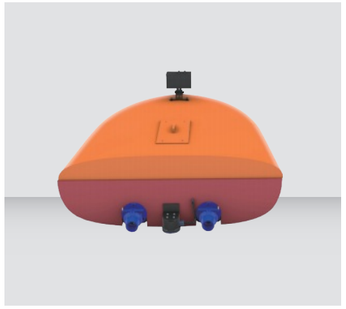
Maritime drone construction process

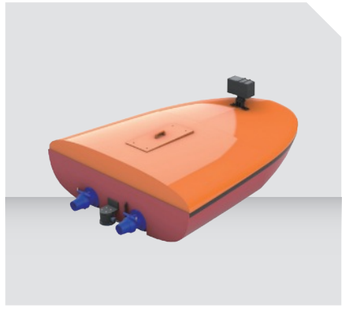
- Development of hull by applying ship design technology

Water jet-equipped maritime drones

- Continuing monitoring of water temperature and depth changes in ocean, rivers, lakes, etc
- Possible to work in areas that are difficult to access and contaminated waters
- Remote control with an integrated management program equipped with environmental monitoring equipment







Product interior

Product lower part

Usage proposal

SOLUTION 01
Monitoring river topography and creating maps

SOLUTION 02
Continuous environmental pollution monitoring and detection

SOLUTION 03
Continuous monitoring for enforcement against illegal disposal of fishing equipment waste and collection of discarded fishing equipment

SOLUTION 04
Monitoring of waterside development sites

SOLUTION 05
Monitoring and damage prediction for drought and flood

SOLUTION 06
Continuous observation of dangerous waterways and restricted areas

SOLUTION 07
Continuous monitoring of multi-purpose dams and levees

Multi-purpose maritime drones

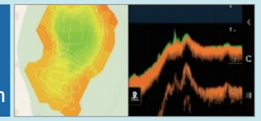
- Real-time observation and analysis of weather, maritime, and physical data using ultrasound, radar, and observation sensors
- A system that identifies the movement and behavior characteristics of underwater objects through ultrasonic radar and delivers them to users

Maritime drone capable of self-restoration in real-time video transmission and overturning

coastal monitoring
Theft prevention
Real-time video transmission
Self-recovery
Remote control

Flight and video

Weather and maritime information



Patent registration number: 10-2233167

Pose stability

◂ Comprehensive monitoring system ▸

Comprehensive monitoring system capable of remote adjustment and control

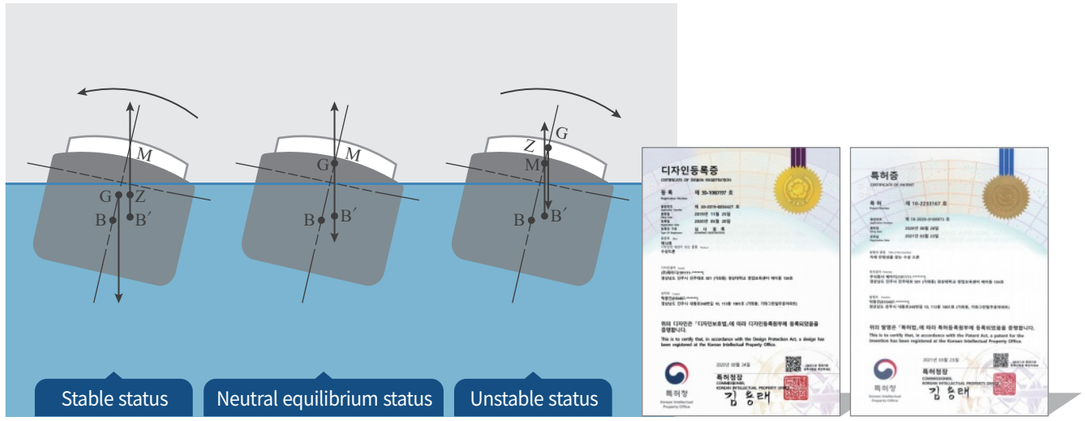
Product exterior

Product interior

Finished product

Maritime drones with pose stability

- In a shaky marine environment, a ship shaped square structure generally has a stable posture and can be controlled in direction
- Maritime drones with pose stability which are able to use their center of gravity to quickly recover (within 30 seconds), even in the event of capsizing

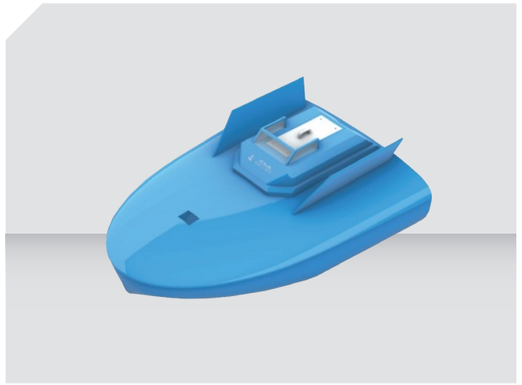


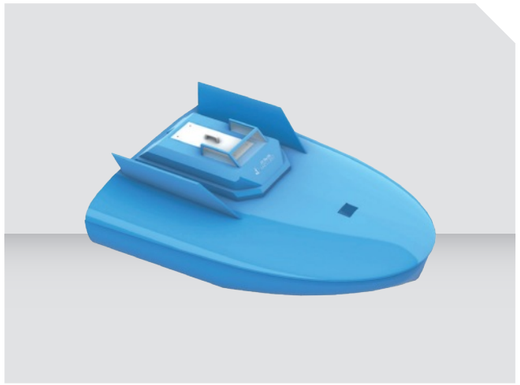

Product side


Product rear

Maritime drones for aquaculture industry

- In order to prevent problems such as net damage and theft in coastal fish farms and major fishing grounds, it is continuously monitored on behalf of manpower
- The marine environment with severe weather environment changes can be continuously managed



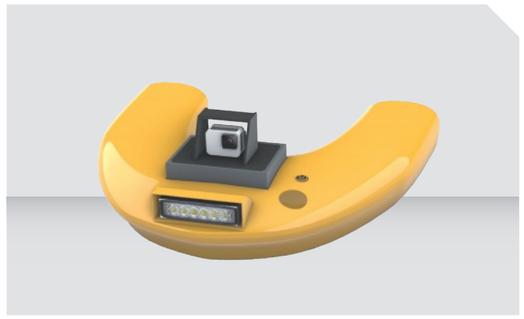



Product top

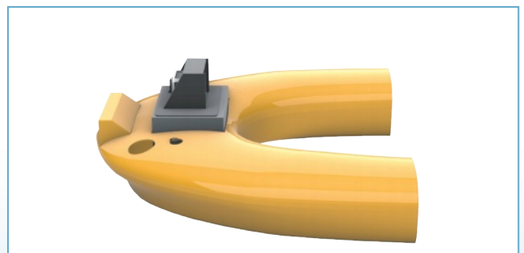

Product rear

Maritime rescue drones

- Lifesaving devices(live jackets and tubes, etc.) are deployed in marine and rivers, but it is difficult to deliver to drowning people
- By developing a life-saving water drone that anyone can control wirelessly, marine accidents and casualties can be minimized



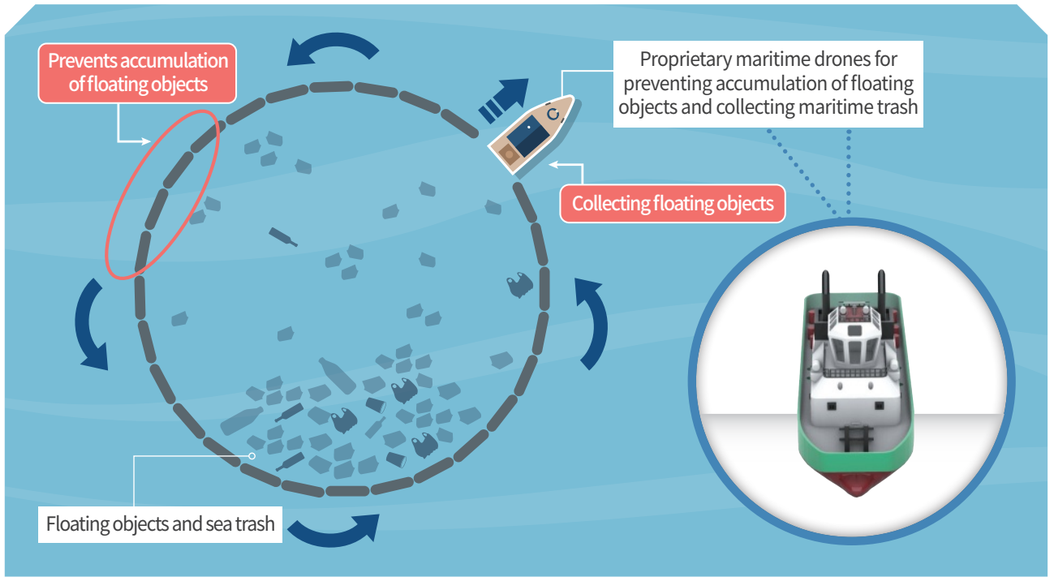
Product exterior



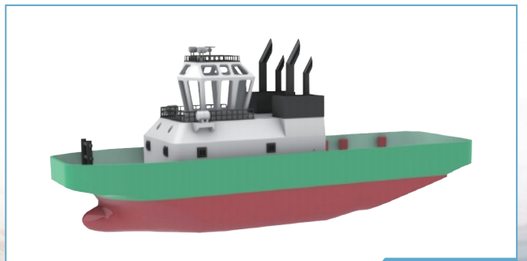
Product side

Maritime drones for management of maritime environments

- Equipped with cameras that detect suspended substances and wastes, and developed floating drones that can collect suspended substances without having to enter the water directly
- A design of a hull structure that can prevent overturn and retain buoyancy due to the weight of marine environment and collection float by calculating COG during the prevention and collection of spreading of floats



Product rear



Product side

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