

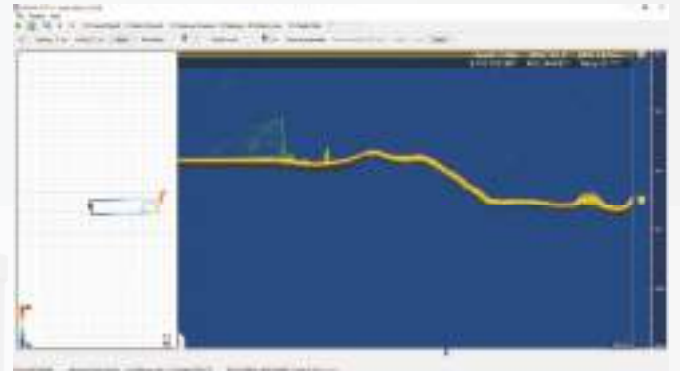
# TERSUS TheDuck™

TheDuck™ floats, and the Depth fixes.



# TheDuck™

TheDuck™ represents a smart, efficient, and productive unmanned surface vessel equipped with a single-beam echo sounder. It provides a fast, dependable, and portable solution to perform bathymetric surveys in various environments, such as rivers, lakes, reservoirs, and coastal areas. With its advanced capabilities and user-friendly design, TheDuck™ is a powerful tool for professionals in bathymetry, offering unparalleled accuracy and precision in the collection of positioning and depth data. TheDuck™ is sure to meet your needs and exceed your expectations.



## Application Scenario



**Rivers**



**Lakes**



**Reservoirs**



**Coastal Areas**

# Features



## Versatile Small USV for Bathymetric Surveys

Experience exceptional versatility with TheDuck™, a small USV designed for precise bathymetric surveys of lakes, inland rivers, and coastal areas.



## Enhanced Safety

Equipped with two plug-in metal ducted propeller, TheDuck™ effectively reduces the risk of entanglement with fishing nets, water plants, and surface debris, enhancing operational safety.



## Effortless Operation

Simplify your project with one-man operation throughout the entire process. From on-site transport to installation, operation, and data collection, TheDuck™ offers convenience and efficiency.



## Optional Echo Sounder

TheDuck™ is equipped with a built-in single-beam echo sounder (100 meters@455 kHz or 300 meters@200 kHz).



## Unmatched Performance

TheDuck™ boasts a lightweight, strong, and stable M-shaped design with a hull made of polymer PP alloy, ensuring optimal performance in various environments.



## Expanded Capabilities

Maximize TheDuck™'s potential by equipping it with Oscar/Oscar-TAP/Luka, unlocking a wider range of applications.



## Seamless Data Transmission

Enjoy enhanced data transmission capabilities with TheDuck™'s two omnidirectional dual 2.4GHz RF antennas. Transmit data over longer and more stable distances (up to 2km), with auto-return functionality in case of signal loss.



## Real-time Data Management

Powered by Android-based software, TheDuck™ provides real-time data display and automatic data recording, ensuring seamless job execution and efficient data management.



## Autonomous Obstacle System

Intelligently perceives and autonomously evades hazards, ensuring safely and efficiently completes missions.

# Technical Specifications

## TheDuck™



Physical		Direction Control:		ES200 Single Beam Echo Sounder	
Hull Dimension:	1000*530*340mm	Differential veering and reverse without steering engine		Sounding Range	
Weight:	7KG(w/o instrument and battery)	<b>Positioning</b>		0.15m to 100m, 0.15m to 300m (Optional)	
	18KG(Maximum Load)	Satellite System BDS, GPS, GLONASS, GALILEO, QZSS		Frequency 455KHz, 200KHz(Optional)	
	22KG(Normal Weight)	Real Time Kinematic Positioning Accuracy(RMS)		Beam Angle: 5°(455KHz/200KHz)	
Material:	High Strength PP Alloy	- Horizontal:	±(8mm+1ppm)	Sound velocity Setting:	
Hull Design:	M-Shaped	- Vertical:	±(15mm+1ppm)	Automatic or Manual 1350 – 1750m/s	
Anti-Wave & Wind:	3rd Wind Level and 2nd Wave Level	<b>Remote Control</b>		Draft: 0~10m	
Water Proof:	IP67	Communication Method		Sounding Accuracy:	
<b>Power</b>		Real time RF peer-to-peer transmission		1cm±0.1%*D (D is the depth of water)	
Rechargeable Lithium Battery:	8S 29.6V 31.5Ah x2	Range	2KM	Resolution:	1cm
Battery Weight:	4.5kg X2	Screen Size	7" high-definition display screen	Data Storage:	Automatic Storage, 16GB Memory
Battery Endurance:	6 Hours x2(run at 2m/s)	Waterproof	IP54	Data Format:	tsl3, csv, txt
Maximum Speed:	7m/s	Function	Real-time displays USV control data, water depth, positioning status, video data, and power	Operating Temperature:	-5°C – 50°C
Propeller type:	2 plug-in mental ducted propeller	<b>Camera Parameters</b>			
Type:	Electric	FOV120°, resolution 1080P, video format H264			

## Tersus GNSS Inc.

### Right to the point.

Tersus GNSS is a leading Global Navigation Satellite System (GNSS) solution provider. Our offerings and services aim to make centimeter-precision positioning affordable for large-scale deployment.

Founded in 2014, we have been pioneers in design and development GNSS RTK products to better cater to the industry's needs. Our portfolios cover GNSS RTK & PPK OEM boards, David GNSS Receiver, Oscar GNSS Receiver and inertial navigation systems.

Designed for ease of use, our solutions support multi-GNSS and provide flexible interfaces for a variety of applications, such as UAVs, surveying, mapping, precision agriculture, lane-level navigation, construction engineering, and deformation monitoring.

Descriptions, specifications and related materials are subject to change.

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