

# Tersus GNSS TheDuck™

## Overview

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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.

## Key Features

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- ✓ Android/Windows operating system
- ✓ Manual or Auto-Pilot navigation
- ✓ Optional echo sounder
  - Automatically record data without PC
  - Retain the original analog signal
- ✓ Integrated communication system
- ✓ RTK centimeter level positioning
- ✓ Remote control
  - Real-time display
  - Control distance up to 2KM



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## Technical Specifications

### Physical

Hull Dimension:	1000*530*340mm
Weight:	7KG (w/o instrument and battery) 18KG (Maximum Load) 22KG (Normal Weight)
Material:	High Strength PP Alloy
Hull Design:	M-Shaped
Anti-Wave & Wind:	3rd Wind Level and 2nd Wave Level
Water Proof:	IP67

### Power

Rechargeable Lithium Battery:	8S 29.6V 31.5Ah x2
Battery Weight:	4.5kg X2
Battery Endurance:	6 Hours x2 (run at 2m/s)
Maximum Speed:	7m/s
Propeller type:	2 plug-in mental ducted propeller
Type:	Electric
Direction Control:	Differential veering and reverse without steering engine

### Positioning

Satellite System:	BDS, GPS, GLONASS, GALILEO, QZSS
Real Time Kinematic Positioning Accuracy(RMS):	
- Horizontal:	±(8mm+1ppm)
- Vertical:	±(15mm+1ppm)

### Remote Control

Communication Method:	Real time RF peer-to-peer transmission
Range:	2KM
Screen Size:	7" high-definition display screen
Waterproof:	IP67
Function:	Real-time displays USV control data, water depth, positioning status, video data, and power
Camera Parameters:	White light night vision 30m, FOV120° resolution 1080P, video format H264

### ES200 Single Beam Echo Sounder

Sounding Range:	0.15m to 100m, 0.15m to 300m (Optional)
Frequency:	455KHz, 200KHz (Optional)
Beam Angle:	5° (455KHz/200KHz)
Sound velocity Setting:	Automatic or Manual 1350 – 1750m/s
Draft:	0~10m
Sounding Accuracy:	1cm±0.1%*D (D is the depth of water)
Resolution:	1cm
Data Storage:	Automatic Storage, 16GB Memory
Data Format:	tsl2, csv, txt
Operating Temperature:	-5°C – 50°C



[www.valhallainstruments.co](http://www.valhallainstruments.co)  
[jason.dysthe@valhallainstruments.co](mailto:jason.dysthe@valhallainstruments.co)  
 1 (970)-660-6208

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