# **■** SOFTWARE



## **SNPilot**

SNPilot is a bathymetric data collection software based on Android system. The software supports various route planning methods, such as regional route, channel route, import route etc. It can accurately control the SV600 navigation and display the progress of the current route completion in the process of data collection. In addition, it also supports real-time viewing of the SV600's trajectory, bathymetric data waveforms and live video. It provides the safety configuration of one-click return. The collected bathymetric data can be saved locally or to the ship's main controller.



	Survey settings		
Collection settings	Echosounder type	single frequency	
Echo sounder	Measurement mode	Manual	
Bost	Measurement parameter		
Unit settings	Measuring gear		
Time zone	Display waveform	0	
Language	Draught	0.150 m	

# **EchoSurvey**

EchoSurvey is a post-processing software. The software supports data replay, overlay of waveform depth data, depth data correction, tide correction, data delay correction, attitude correction, and coordinate parameter conversion. It allows re-sampling of collected data based on time or distance. Data can be exported in a custom format, facilitating data export and facilitating data post-processing more easily. It can display different depths in varying colors, with the capability for rollback and undo functions.

# **■** SPECIFICATIONS

Unmanned Surface Vessel

7.2-inches Screen

Ver.2025.03.04

# **Vessel Specifications**

Hull Dimension(L × W × H)	1.18m x 0.7m x 0.39m
Material	Carbon Fiber Composite Material
Hull Shape	Trimaran
Water Proof & Dust Proof	IP67
Weight Without Battery	24kg
Maximum Payload	35kg
Draft	9cm
Moon Pool	23cm in Diameter (Customized)
Anti-wave & Wind	3 <sup>rd</sup> Wind Level & 2 <sup>nd</sup> Wave Level
Equipable Devices	ADCP, Water Sampling Equipment, Water Quality Meter, Sub-bottom Profiler, Side Scan Sonar, Single Beam Echo Sounder, Miniaturized Multi-beam Echo Sounder
Security Configuration	Shoal Automatic Astern, Millimeter-wave Radar Automatic Obstacle Avoidance, 360° Night Camera, Dual-deck Hull Anti-sinking Design, Rubber Bumper, Support Temperature and Humidity Detection Indicator Light for Vessle Operation, Built-in Mounting Motor with Tanoling-free Housing

### **Power**

	Battery Capacity	33V/50Ah, Li-ion Battery
	Propeller Type	Brushless DC
	Direction Control	Veering without Steering Engine
	Motor Power	850W (Single Motor)
	Maximum Speed	3.5 knots (7 m/s)
	Battery Endurance	5.5h @ 2 m/s (Single Battery) (Longer Battery Life Optional)

### Communication

Communication	
Transmission Range	2.5 km (Network Bridge) Unlimited (4G Mode)
SIM Card Slot	Support Nano & eSIM
Video Communication	4G, Network Bridge
Data Communication	4G, Network Bridge, Radio
R/C Communication	4G, Network Bridge, Radio 2.4GHz
Data Storage	Multi-channel Storage (Remote Controller, Vessel, Server)

**AUTHORIZED DISTRIBUTION PARTNER** 

### Positioning

Remote Controller

Positioning		
Signal Tracking	GPS: L1C/A, L2C, L2P BDS: B1I, B2I, B3I, B2b GLONASS: L1,L2 Galileo: E1, E5b NAVIC: L5 QZSS: L1C/A, L2C SBAS: L1C/A L-Band	
Recapture Time	<1s	
RTK Initialization Time	<5s	
Velocity Accuracy	0.02m/s	
Single Point Position (RMS)	≤ 1.5m (Horizontal) ≤ 2.5m (Vertical)	
PPP Accuracy	≤ 10cm	
RTK Accuracy	±8mm+1ppm(Horizontal) ±15mm+1ppm (Vertical)	
Heading Accuracy	0.15° @1m Baseline	
Roll / Pitch Accuracy	0.25° @1m Baseline	
IMU Update Rate	200Hz	

## Single Beam Echo Sounder

Weight         1.0 kg           Sounding Range         0.3-100m (Standard)           Sounding Accuracy         ±0.01m ± 0.1%D (D is the depth of water)           Resolution         0.01m           Frequency         200 kHz           Beam Angle         5°           Supply Voltage         9-15V DC           Frequency         200 KHz	•	
Sounding Accuracy ±0.01m ± 0.1%D (D is the depth of water)  Resolution 0.01m  Frequency 200 kHz  Beam Angle 5°  Supply Voltage 9-15V DC	Weight	1.0 kg
(D is the depth of water)  Resolution 0.01m  Frequency 200 kHz  Beam Angle 5°  Supply Voltage 9-15V DC	Sounding Range	0.3-100m (Standard)
Frequency 200 kHz  Beam Angle 5°  Supply Voltage 9-15V DC	Sounding Accuracy	
Beam Angle 5° Supply Voltage 9-15V DC	Resolution	0.01m
Supply Voltage 9-15V DC	Frequency	200 kHz
	Beam Angle	5°
Frequency 200 KHz	Supply Voltage	9-15V DC
	Frequency	200 KHz

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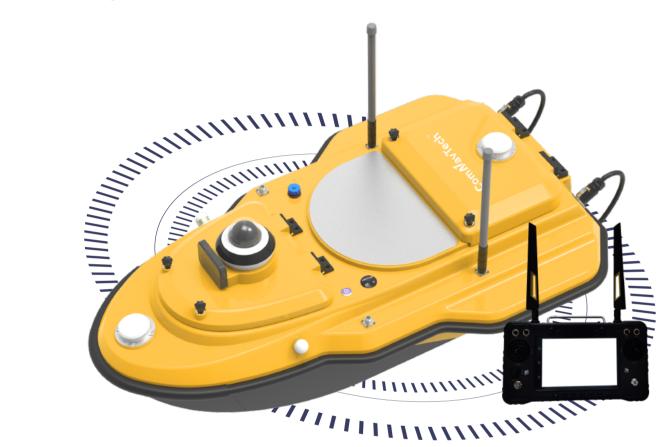
# **Unmanned Surface Vessel**

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# **■** INTRODUCTION

The SV600 is an advanced Unmanned Surface Vessel (USV) specifically engineered for hydrographic survey. Offering remote control capabilities, it seamlessly integrates adaptive water flow straight-line and hovering technology for enhancing efficiency.

Equipped with a dual-moon pool design, this vessel facilitates the simultaneous deployment of multiple payloads. From Acoustic Doppler Current Profiler (ADCP) to Single-beam Echo Sounder (SBES), Side-scan Sonar, Pipeline, and Miniaturized Multi-beam Echo Sounder, the SV600 enables versatile surveying capabilities. Thanks to its rapid installation feature, transitioning between missions is effortless, allowing for seamless switching between various modes of measurement operations.









Integrated Master Control Design

Obstacle Avoidance Radar System









# **FEATURE**

### Uninterrupted Positioning with GNSS+IMU

The SV600 is outfitted with ComNavTech's dual-antenna GNSS module, featuring full-constellation multi-frequency tracking. This enables precise positioning and navigation. With an integrated IMU, it ensures continuous availability of position data, even during temporary GNSS signal loss.



# Streamline Design

The master control of the SV600 is highly integrated, effectively minimizing the complexity of cables within the vessel's cabin.

## Double-deck Hull Design

The double-deck hull design of the SV600 ensures its resilience against sinking and damage from unexpected impacts, safeguarding its integrity even in the face of unforeseen incidents.



### **Dual Moon Pool**

With the capacity to carry payloads of up to 35kg, the dual-moon pool design provides ample space and strength to accommodate various scanning devices, offering versatility in hydrographic surveying.

## 360° Night Camera

With 360° real-time camera technology, you can immerse yourself in the environment, enhancing navigation safety.



### **Vessel Battery Status Display**

Checking the battery status of the vessel is as easy as pressing button, eliminating the need to open the remote controller or access the cabin.

### Millimeter-wave Radar Automatic **Obstacle Avoidance**

With its advanced radar technology, the obstacle avoidance radar system ensures safe operations by detecting obstacles and providing timely alerts to users, allowing for quick and effective navigation even in low-visibility conditions.





### **Smart Remote Controller**

SV600 remote controller support radio and 4G connection. Its maximum communication range of network bridge is up to 2.5km. The controller is equipped with a 7.2-inch screen that the image captured by camera can be viewed at any time, truly enhance the utility and compatibility.



IP67 Dustproof









