

# CoPilot

## Piloting with Ease

CoPilot is the world's most advanced Dynamic Positioning software for Remotely Operated Vehicles (ROVs). Through a straightforward and intuitive point and click interface, the ROV is better equipped to carry out successful surveys, field development and pre & post lay operations, amongst a range of other applications.

By offering the largest available set of flight modes, CoPilot delivers the benefits of Dynamic Positioning in environments and scenarios not achievable using any other software product.

The control and flexibility offered on-survey allows for unplanned intervention with minimal error and down-time. While a fully-integrated MBI sonar enables control relative to a target and improves operations in low visibility.

### Some Key Features of CoPilot:

- **MBI Sonar Track** - Get the best data by setting the ROV to remain a constant distance from the target
- **Mid-water DP** - Get the benefits of DP in any mid-water situation, without requiring bottom-lock
- **Survey Control** - Get the only the data you need as the ROV follows an exact plan
- **Station Keeping with Minimal Hover Footprint** - Obtain the best quality data within inches of your required position
- **Point & Click Interface for Positioning** - Provides efficient training & operations for all levels of ROV Pilots



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# Specifications



## Flight Modes:

CoPilot offers five flight modes to achieve full ROV DP

- MBI Sonar Track
- Survey-control
- Station Keeping
- Mid-water DP
- Cruise-control

## Typical Performance:

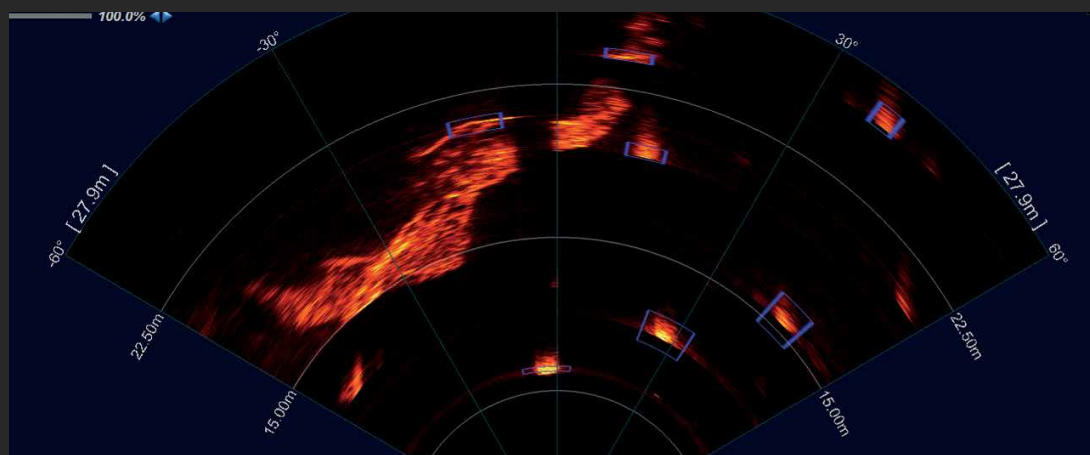
Degree-of-Freedom	Maximum Overshoot	Steady State Error	Oscillation
Yaw	<4 degrees	<1 degrees	+/- 0.5 degrees
Forward	<0.20 m	<0.10 m	+/- 0.05 m
Sideways	<0.20 m	<0.10 m	+/- 0.05 m
Downwards	<0.20 m	<0.10 m	+/- 0.05 m

## Installation:

- Compatibility: Simple retrofit, no modification to vehicle required
- Work-class ROVs: Available for retro-fit to the majority of work-class ROVs on the market. For details, contact [sales@seebyte.com](mailto:sales@seebyte.com)
- Mini ROVs: CoPilot is already available for purchase as an off the shelf product with any VideoRay Pro4 microROV. For details, contact [sales@videoray.com](mailto:sales@videoray.com)
- Inspection-class ROVs: CoPilot is available on the Predator ROV as an OEM for Seatronics customers or as a rental solution. For details, contact [aberdeen@seatronics-group.com](mailto:aberdeen@seatronics-group.com)

## System Requirements:

- Doppler Velocity Log: This is a required sensor for CoPilot, with data provided at  $\geq 3$ Hz
- Depth and Heading: For typical performance these must be supplied at  $\geq 3$ Hz
- ROV Thruster Control: Analogue joystick or digital command system with updates  $> 5$ Hz
- Sonar: The Tracking Module requires an input from an MBI sonar



SeeByte's target tracking software on Tritech's Gemini 720is sonar.

Image courtesy of Tritech International, a Moog Inc company.