

# Science Bay

## Sensor Payload Module

### Add Scientific Sensors For Environmental Monitoring

The Gavia Science Bay Module is a generic payload module that allows a Gavia user to add up to six scientific sensors to the Gavia AUV. The module includes several hull penetrations, including four (4) penetrations that can accommodate WetLabs ECO pucks, two external wet plugs that can provide power and serial communication for external devices, one slot for a SeaBird CTD, one penetration that can accommodate an Aanderaa Optode oxygen sensor, as well as a weak link on the bottom of the module. The weak link provides the option of towing an external sensor and reduces stress on the wet plug.

The standard electronics inside the module is an Ethernet connected microcontroller with six (6) serial ports and a generic power supply unit that can provide 5V, 12V, and raw battery power (18 – 36V). The microcontroller can be configured for different sensor setups. The microcontroller enables automatic discovery by the Gavia vehicle software which also allows the user to include the sensors when mission planning through the Gavia Control Center.

The Gavia Science Bay Module can be delivered with pre-installed sensors at the factory or can be used as a payload module for custom sensor integration by the user.



*Science Bay Module  
(left and right views)*

### PRODUCT FEATURES

- Accommodates up to four ECO pucks, external CTD, and oxygen optode
- Two external wet plugs for power and serial communication
- Weak link for towing
- Same “plug and play” capability as other Gavia AUV modules

### Applications

- Environmental Monitoring
- Conductivity, Pressure, and Temperature Monitoring
- Dissolved Oxygen Measurements



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# Science Bay Sensor Payload Module

## TECHNICAL SPECIFICATIONS

Length	388 mm
Diameter	200 mm
Weight in Air	12kg in air

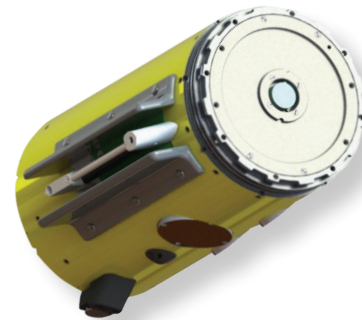
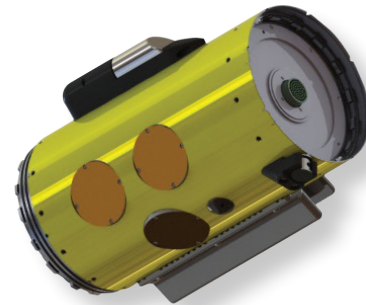
### Sensors

The following sensors are supported by the Gavia vehicle software. Support for other sensors can either be added by the user or integration can be requested from Gavia.

Manufacturer	Sensor
Wet Labs	Fluorometer, including SeaOWL UV-A, ECO Triplet, and ECO FLNTU
Seabird	SBE-49 CTD Slocum Glider Payload CTD
Aanderaa	Aanderaa Oxygen Optode 4831

### Science Bay Configuration

Below are views of the science bay module configured with a Wet Labs SeaOWL on top, Aanderaa Oxygen sensor, and a SeaBird CTD. Guards can be placed around the CTD for protection. Unused penetrations can be blinded. It is also possible to orient the module at 45 degree increments to position the sensors based on the user's operational requirements. For ballasting and trimming, bar weights can be added to help keep the module level.



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