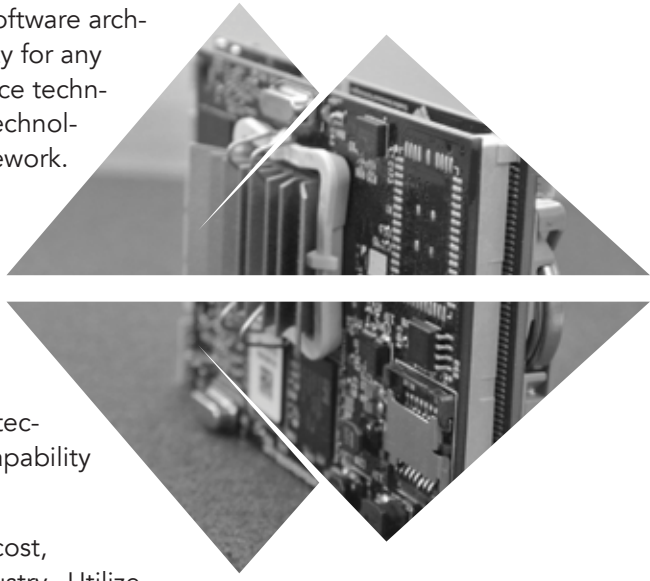
GREENSEA

OPENSEA HUB

A Complete Embedded Solution Suite for the Rapid Deployment of Robust Robotic Systems

The OPEN Software and Equipment Architecture, OPENSEA, is a flexible, scalable, and severable software platform with over 15 years of development running on nearly 1000 vehicles worldwide. This commercially supported software open architecture suite is available preloaded on the OPENSEA hub, a small, powerful computer with easily accessed ports for serial, CAN, and Ethernet, with OPENSEA. The OPENSEA hub provides a complete robotic software build environment to meet the needs of professional robotic developers.

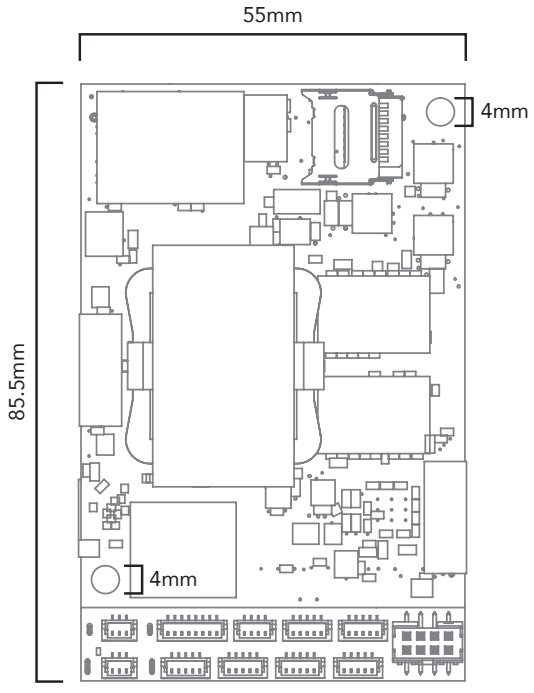
Developers and innovators within the marine industry use OPENSEA to add value to their business. As a low-level platform and enabling software architecture, they can realize immediate out-of-the-box functionality for any vehicle or machine. It can reduce development costs and reduce technical risks by allowing developers to build their differentiating technologies and products on top of OPENSEA's robust, proven framework. Innovators can focus on moving the industry forward, not reinventing the wheel.



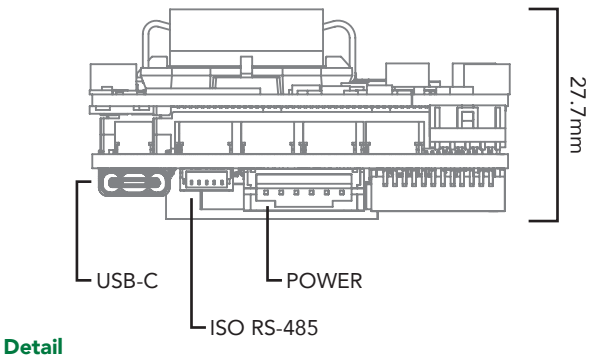
The OPENSEA platform includes an extensive library and array of applications to provide sensor fusion, navigation, data management, payload control, and vehicle control. It can also work under third-party, advanced autonomy packages to provide a solid vehicle framework with a front-seat driver architecture to implement the next generation of unmanned vehicle capability more efficiently and more robustly.

OPENSEA empowers developers and innovators by reducing cost, reducing risk, and accelerating technology insertion in the industry. Utilize the OPENSEA Software Development Kit (SDK) to advance capabilities and customize applications for specific programs. With a fully distributed framework, developers can isolate their work and protect their IP. The OPENSEA Hub is a complete solution that moves technology further, faster.

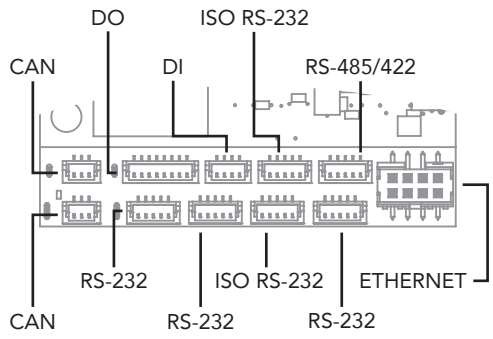
Top View



Side View



Detail



Specifications

Power	› ~6W average at max CPU usage. › 10.8W max › 10-36VDC input voltage › 5VDC out capable of sourcing 1 amp
Supported I/O	› 4 Standard Serial Ports (3 x RS-232, 1 x Configurable RS-485/422) › 3 Isolated Serial Ports (2 x RS-232, 1 x RS-485) allowing noisy devices to be isolated from the main power rail › RS-232 and RS-485/422 serial connectors also provide fused access to input power, for easy wiring to devices › 2 CANbus › 1 USB-C › Gigabit Ethernet
DIO	› 3 x Digital Output › 3 x PWM Output › 2 x Digital Input
Operating Temperature	› -25 to 70C
CPU Details	› 1 GHz Quad Core Cortex A9 ARM CPU › 2 GB DDR3 RAM › 4GB MLC eMMC flash storage › microSD card socket for expandable storage › Temperature compensated RTC
Operating System	› Custom Ubuntu 18.04 with Greensea's OPENSEA platform
Connector Series	› JST SHR for DIO & Serial › JST PHR for input power › Amphenol ICC Minitek 2.00mm
Dimensions	› About the dimensions of a credit card › 85.5mm x 55mm x 27.7mm
Mass	› 85g