

Top Box

Marine GPS Receiver, Sensors and Telemetry

The Top-Box can be used to expand the OceanPack measuring system with Sensors, Modems, Antennas or GPS receivers. The Top-Box can be used for data transmission or positioning application, not only with the OceanPack.

With the standard RS-485 data interface and wide range included power supply the Top-Box can be placed anywhere, e.g. on top of the mast. More interfaces are supported, e.g. WLAN or simple RS-232 or RS-485 interfaces.

Standard applications are to get GPS and radio signals from beyond room or ship hulls. Another possibility is the usage of outdoor sensors like meteorology. Digital and every kind of analogous sensors are supported.



- GPS:** 12-channel Garmin marine receiver for marine environmental conditions
- Modem:** Optionally GSM modem, IRIDIUM, INMARSAT or ARGOS on request
- Data transmission:**
 - RS-485: for separate transmission line, max. 1200m
 - RS-232: for separate transmission line, max. approx. 50m
 - Options: WLAN, Bluetooth, radio and others: on request.
- Power:**
 - Supply: 10..32V (12V, 24V) DC / 110-240VAC
 - Current: depends on the equipment, e.g. 0,1A @12VDC for GPS only
- Temperature:** Operating: -25°C ... +75°C operating
- Options:** RS-485 Data acquisition modules for e.g. meteorology with analogous or digital inputs. Data link for any additional input down to a computer system (e.g. OceanPack). Telemetry modules for Bluetooth, WLAN, radio link etc.
- Connector, cable:** Water-proof connector IP68 with halogen-free outdoor cable. The cable length should be max. 100m if the power must be transmitted via the cable.
- Housing:** PVC or metallic weather-resistant enclosure, depends on the equipment
Classes for PVC housings: Ingress Protection (EN 60529): IP 66/67; Impact Resistance (EN 62262): IK 08/07; Halogen free: DIN/VDE 0472, Part 815; Flammability Rating (UL 746 C 5): UL 94 5V; UL Type: UL TYPE 1, 4, 4X, 12, 13



*Photo left :
INMARSAT
transmitter
beside the
(black) Top-Box
with PAR sensor
and GPS
receiver.*



*Photo left :
Top-Box contains LI-COR®
PAR sensor and GPS receiver
to support the pCO₂
measuring system.
Additionally sensors are
connected: TriOS RAMSES
Spectrometer (down left) and
a global spectrometer (at the
end of the frame)*