Canopus

LBL and sparse LBL intelligent transponder

Canopus is the new intelligent seabed transponder providing the most advanced LBL capabilities to iXblue positioning and navigation solutions.

FEATURES

- Modes of operation
  - Long BaseLine positioning
  - ASBL Sparse Array positioning
  - Acoustic Communication
- Embedded user interface (MMI)
- Depth rating: 4,000 m (6,000 m in option)
- Compatibility
  - Gaps and Posidonia (USBL)
  - Ramses (LBL and ASBL)
  - iXblue INS
- Standard environment sensors including: pressure, temperature, inclinometer

BENEFITS

- Low power consumption
  - Listening life: more than 5 years (Alkaline)
  - Operation life: 1,600,000 pings pings at maximum sound level (Alkaline)
- A few hundred of unique wideband addresses and codes
- Medium frequency band and omnidirectional transducer head.

TYPICAL APPLICATION

- Marine construction
- Long term subsea observatory
- Renewable Energy
- Dynamic Positioning
- Subsea mining

Taking subsea positioning to the next generation

The Canopus transponder is the latest addition to the iXblue underwater positioning systems. Used as a reference seabed transponder installed on tracked vehicles, it will contribute to the best underwater positioning solution in terms of accuracy, functionalities and ease of use.
Using its expertise and accumulated experience in signal processing and data fusion techniques, iXblue developed a powerful and evolutive electronic platform, able to provide distance telemetry, underwater communication, sensors measurements and data logging.
Canopus is a compact instrument featuring extreme low-power consumption, unique acoustic characteristics, and the usual iXblue touch in terms of simplicity of use, common look and feel user interface, and open architecture.

Canopus, a part of the new subsea positioning solution developed by iXblue

With the new supervision software developed for subsea positioning operations, Canopus along with other iXblue sensors is now forming an integrated positioning solution, designed to assist and guide the user from initial planning of the operations up to data collection, visualization and post-processing.
The next underwater positioning solution is now available providing ultimate performance, time savings, with less equipment to be deployed and no compromise on accuracy.

2021-01-DS-Canopus

contact@ixblue.com | www.ixblue.com
EMEA +33 1 30 08 88 88 | Americas +1 303 993 4649 | APAC +65 6747 4912

iXblue

ACOUSTIC CHARACTERISTICS

Accuracy	< 1 cm
Operating frequency	MF band (20~32 kHz)
Transmit source level	from 181 dB re. 1µPa @ 1m to 196 dB re. 1µPa @ 1m, user programmable
Transducer beam pattern	omnidirectional
Received sensitivity	85 dB re. 1µPa
Signal modulation	MFSK / MPSK. Compatible with other iXblue products
Data telemetry	500 bps
Compatibility	Gaps, Ramses, iXblue INS

SENSORS AND DATA LOGGING

Standard sensors	
Pressure sensor	400 bar, ± 0.03% full scale
Temperature sensor	-10°C to +60°C, ± 0.10°C
Inclinometer	± 90°, ± 0.5°
Optional sensors	
Sound Velocity	1375 m/s to 1900 m/s, ± 0.020 m/s
External sensor	Isolated RS 232/422/485 interface Synchro IN Power Supply 12 VDC, 5 Watt max
Internal storage memory	standard SD card, max capacity 32 Gb

POWER SUPPLY / CONSUMPTION

Battery	Alkaline or lithium battery pack
Alkaline	Standby (listening): 70 months(1) Nb ping: 1 600 000 pings(2)
Lithium	Standby (listening): 110 months(1) Nb ping: 2 800 000 pings(2)
External power supply/Programming	External Subconn connector (USB transponder programming, synchro IN) and power supply provided (9 Vdc to 36 Vdc)

MECHANICAL CHARACTERISTICS

Depth rating	4,000 m (6,000 m in option)
Construction	Hard Anodised Aluminium Alloy & Protective sleeve
Release mechanism	Pelican hook, 250 kg Release load
ON/OFF	Reed magnetic ON/OFF switch
Size (ODxL)	180 mm x 1060 mm (pressure housing diameter 143 mm)
Weight (air / water)	28 kg / 16 kg
Storage	-20°C to +70°C
Operating	-5°C to +55°C

(1) at 20 deg, not considering battery aging and mechanical consideration of the transponder
(2) maximum number of pings at 191 dB ref µPa @1m, out of listening consumption

contact@ixblue.com | www.ixblue.com
EMEA +33 1 30 08 88 88 | Americas +1 303 993 4649 | APAC +65 6747 4912

iXblue