

# MTBx2 Series

## Telemetry Miniature Transponder

The MTBx2 is Exail's miniature transponder Series dedicated to subsea vehicles. Easily integrated on AUVs and towed vehicles, the MTBx2 benefits from robust acoustic data telemetry and offers advanced control & command capabilities during subsea assets deployment and tracking operations.



### FEATURES

- Compatible with Gaps USBL and Ramses LBL positioning systems
- Robust acoustic data telemetry (500 bits/s)
- External sensors interface
- 2 different USBL interrogation channels
- Hemispherical transmission and reception transducer
- Embedded Web-MMI software
- 4 communication ports (Serial Link and Ethernet)
- Responder and external power supply input
- Low power consumption
- Available in OEM format (electronic boards into an EMC filtering housing)

### BENEFITS

- Simultaneous tracking and acoustic communication
- Updating of INS position through the output port
- Interfacing of external sensors through the input port
- Easy vehicle integration
- User-friendly configuration through Web-based interface software

### INCREASED CONTROL/COMMAND DURING TRACKING OPERATIONS

The MTBx2 Gaps transponder Series has been developed to offer increased control/command capabilities during deployment and tracking operations. In addition to the standard acoustic positioning function (transponder mode) the new transponder allows for 160 bits of usable data to be sent or received during every positioning cycle. This data telegram can either be packed into a service (e.g. update the position of a vehicle INS) or as a robust acoustic communication channel from/to the vehicle to monitor its operations.

### DESIGN FOR EASY INTEGRATION ON AUVS OR TOWED VEHICLES

The MTBx2 is packed in a watertight housing rated down to 300 m or in OEM configuration for integration into the dry compartment of existing AUVs or towed vehicles. It smoothly interfaces with Exail INS for external USBL aiding, but also provides standard interface communication ports for users' peripherals.

## TECHNICAL SPECIFICATIONS

### Overall characteristics

|                             |  |
|-----------------------------|--|
| External power supply       | 10 to 36 V DC  |
| Configuration               | Embedded Web-based Man-Machine Interface software, accessible through USB port |
| Inputs/Outputs              | Serial link and Ethernet   |
| Operating temperature range | -5 °C to +55 °C  |
| Storage temperature range   | -20 °C to +70 °C   |

### Acoustic

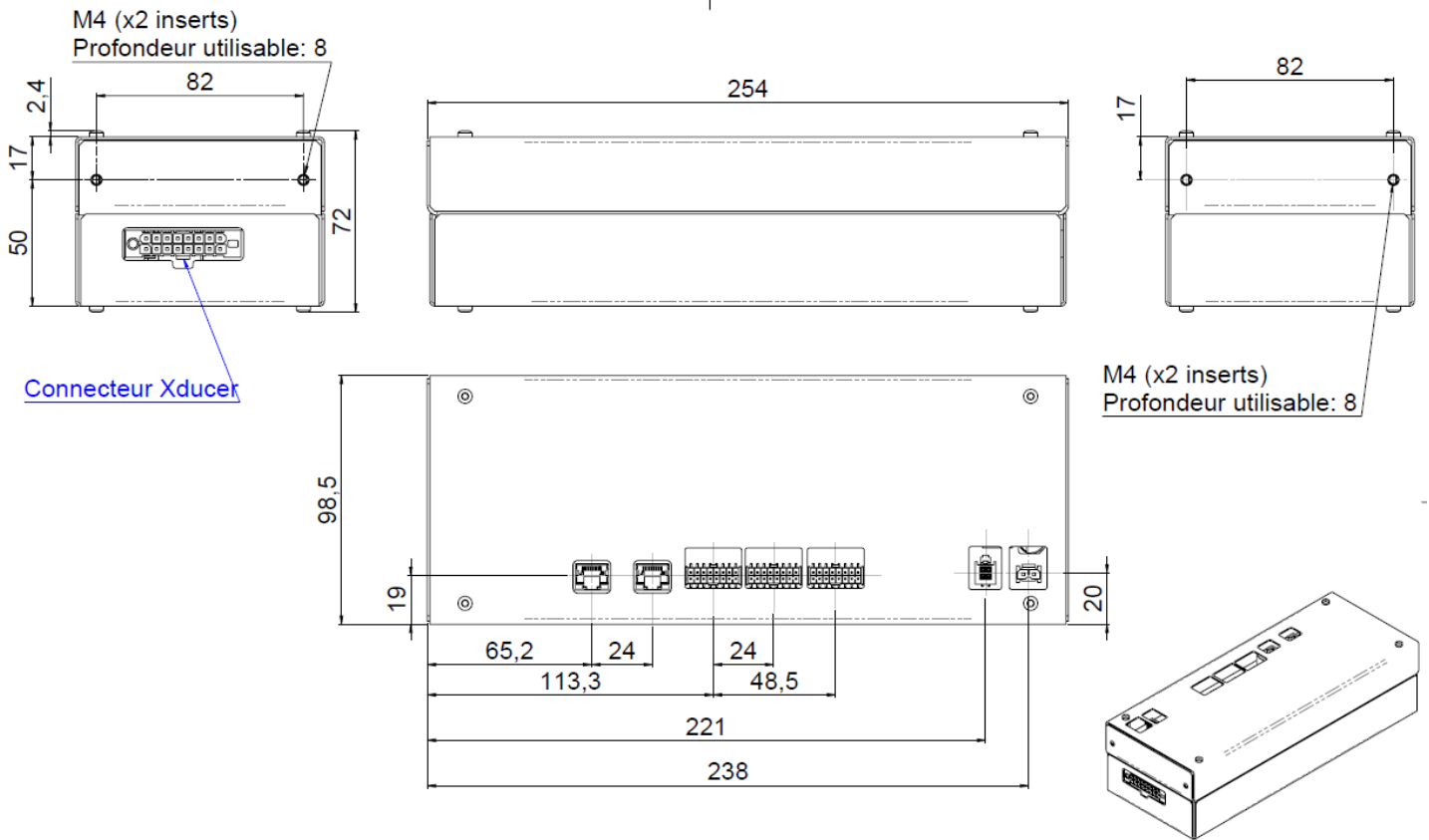
|                         |   |
|-------------------------|---|
| Operating frequency     | MF band (20~32 kHz)   |
| Transmit source level   | From 181 dB re. 1µPa @ 1m to 196 dB re. 1µPa @ 1 m, user programmable |
| Transducer beam pattern | Omnidirectional   |
| Received sensitivity    | 85 dB re. 1µPa  |
| Signal modulation       | MFSK / MPSK. Compatible with other Exail products                     |
| Compatibility           | Gaps, Ramses, Exail INS   |

### Mechanical

|                        | Standalone                   | OEM                            |
|------------------------|------------------------------|--------------------------------|
| Depth rating           | 300 m                        | N/A                            |
| Construction           | Hard anodised aluminum alloy | Aluminum shield housing        |
| Housing size           | 112 (OD) x 362 (L) mm        | 254 (L) x 98.5 (W) x 72 (H) mm |
| Remote transducer size | N/A                          | 91 (OD) x 82(L) mm             |
| Weight air/water       | 3.3 / 0.4 kg                 | 1 kg                           |

## DRAWINGS

### OEM configuration



### Standalone configuration

