MGBTECH
ENVIRONMENT MEASURING TECHNOLOGY

TARI SFC1

seafloor controller with inductive communication

- ✓ **Sensors**
  - **ADCP**
  - **Multiparameter probe**
  - **Pressure sensor for tide**
  - **Others on request**
- ✓ **Inductive communication**
- ✓ **Extreme low power**
- ✓ **Memory display**
- ✓ **2GB µ-SD card**
- ✓ **70m depth rating**
- ✓ **Acrylic side caps**
- ✓ **Easy toolless opening**

This controller is part of our environmental ecosystem. It is the hearth of our seafloor measurement solution. Together with our battery pack and mechanical frame it is an out off the box solution for on-line tide, ADCP and multiparameter measurements at the seafloor. The system has been designed with custumizability in mind, so other specific measurements and sensors can be implemented to fit your project.

When facing the need for real-time seafloor measurements the technical challenges rise exponentially and all to often the results tend to be disappointing. Our environmental ecosystem has a range of products that are specifically desinged to meet these challenges. Our SFC1 seafloor controller is at the center of our solution.

We tackle this problem by dividing it into two smaller problems. First we gather all the measurement data and log it on an integrated SD-CARD. Secondly we tranfer these measurements to a topside buoy or riverside controller.

To solve the first problem, our SFC1 controller has integrated DC/DC converters to power the peripherals like the ADCP and multiparameter probe. Since the SFC1 is in full control, it can power down the peripherals to save power and power cycle them if they run into a problem. The controller has a build-in 4GB µSD card that logs every measurement made by the controller.

To solve the second problem, Every measurement that is logged on the card will be replicated to the topside controller that is in most cases mounted on one of our buoy solutions. To complete this communication task, we strongly believe that an inductive communication solution is the technology. Therefore we integrated an inductive modem in both our SFC1 and BUOY module providing a reliable, low energy communication means between our seafloor and buoy hardware. They BUOY or riverside controller can then further transmit your measurements over UHF or our DataExchange solutions to get the measurements to whereever you want.

For the ADCP measurements we can tranfer the raw ensemble data provided by the device. For the multiparameter probes we can average or mean the individual parameters over the configured measurement windows. This provides a truly unique and reliable measurement solution.

A low power memory display that can be seen through the acrylic end-caps provides fast and easy status information.

SD-card
- **4GB µSD-card with wear leveling**

ADCP
- **DC/DC for stable 32V power supply**
- **Full ensemble storage and transmittion**
- **Power down between measurement cycles**

MPP
- **Mean or averaging of the measurements**
- **Power down between measurement cycles**

Inductive communication
- **Up to 1000m wire length possible**
- **1200 baud**

Pressure sensor
- **0-4 bar 0.1% absolute pressure sensor**

Connectors
- **2 x 2P male MCBH2M (battery pack)**
- **1 x 6P female MCBH6F (MPP probe)**
- **1 x 8P female MCBH8F (ADCP)**
- **1 x 3P male MCBH3F (IMM)**

Power supply
- **Input voltage 10-30 VDC**
- **2 x SFB1 packs**

Mechanical
- **330.0mm x 225.0mm**
- **Weight : 5 Kg**

Environmental
- **Operational temperature -20°C +45°C**
- **70m permanent submersion**