



Marine Cable Tracker (MCT)

- Locating and estimating the depth of burial of cables below the sea bottom is a difficult and expensive problem. In 2019, GapEOD developed the **UltraTEM-MCT** system to improve cable surveys.
- **UltraTEM-MCT** offers significantly deeper detection and higher resolution than competing acoustic, magnetic and pulse-induction technologies.
- **UltraTEM-MCT** has proven its value in with a depth of burial survey at Borssele wind-farm where the cable was buried too deep for conventional technologies.
- The combination of the latest technology with custom software from Black Tusk Geophysics allows for accurate position and depth of burial surveys, including real-time tracking and depth estimation.

Capabilities and Performance

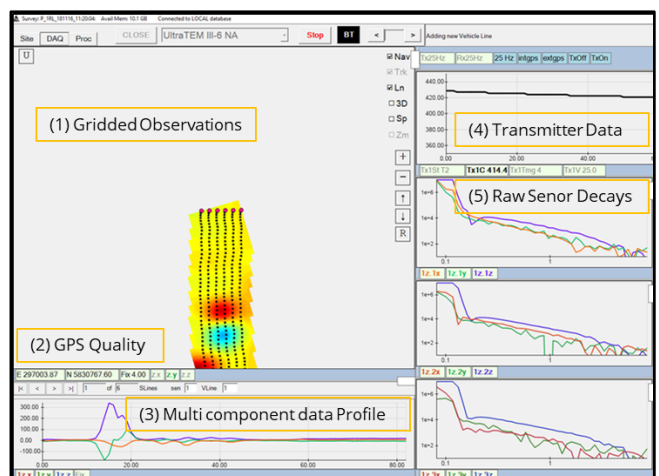
- Pulse induction technology requires no contact with cable.
- Accurate estimation of cable position & depth (typically better than 10 cm at a standoff distance of 3.5 m).
- Can be deployed from a free flying or trenching ROV.



UltraTEM-MCT Components

- High current transmitter loop for very deep cable detection.
- Six three-component EM sensors (receivers) allow for high spatial resolution and optimal estimation of depth of burial.
- Two electronics enclosures for transmitter, receiver and power supply

Real-time software interface





Technical Specifications

Dimensions Array (L x W)	1.8 m x 1.8 m
Dimensions Electronics Box Cylindrical (L x W)	425 x 262 mm
Depth Rating	100 m
Data Acquisition & processing Software	BTField by Black Tusk Geophysics

Weight (sensors & electronics)	96 kg (in air) 9 kg (in water)
Number of Electronics Boxes	1 x Transmit 1 x Receive
Positioning	Customizable for Vessel Configuration
Detection swath	2.4 m

Transmitter Technical Specifications

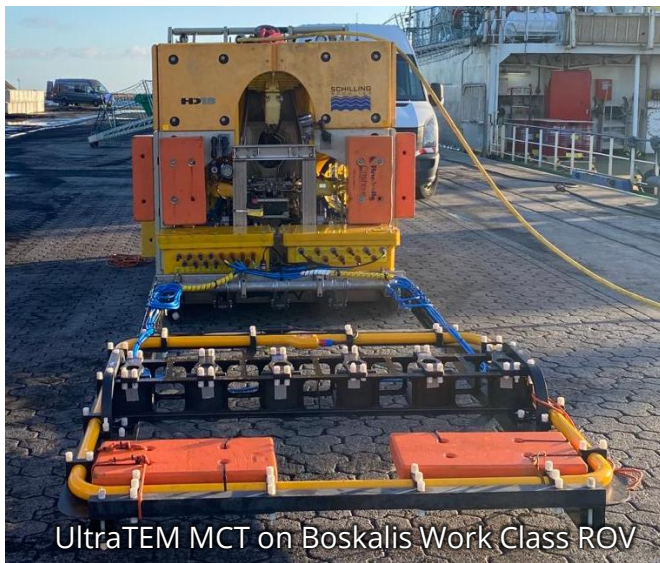
Transmitter	EODTx50 Marine
Power Supply	90 - 240 V AC 22 V DC
Powerline Frequency	50 or 60 Hz
Transmitter Frequency	25, 30, 75 & 90 Hz
Transmitter Duty Cycle	50%

Number of Transmitter Loops	1
Transmitter Loop Dimensions	1.8 x 1.8 m
Loop Wire	2.5 mm ² Copper wire
Transmitter Current (max.)	50 Amps
Detection Capabilities (245 mm diameter cable)	4.0 m above cable 6.0 m in zig-zag mode

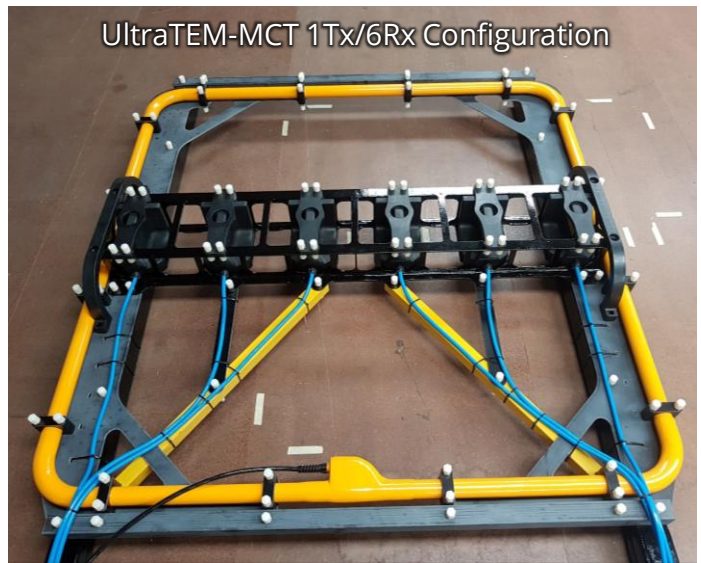
Receiver Technical Specifications

Receiver Coils (3-component)	6
Coil Effective Area	104.5 m ²
Receiver Noise Level @ 1 ms	757.25 nV
Receiver Dynamic Range @ 1 ms	122 dB
Output Signal Range	± 9626.74 μT/s
Coil Noise Level @ 1 ms	0.060134 μT/s

System Noise @ 1000 Hz	< 4 nT/s/√Hz
Receiver Sampling Frequency	800 kHz
Output Decays	5 to 15 per second
Samples per Decay	45 log-spaced time-channels
Decay Range	0.05 to 10 ms



UltraTEM MCT on Boskalis Work Class ROV



UltraTEM-MCT 1Tx/6Rx Configuration