



# GeoPulse Compact OTS

Side-Mounted Sub-Bottom Profiler for Shallow Water Operation



## OVERVIEW

The GeoPulse Compact OTS is an advanced high-performance sub-bottom profiler designed for rapid deployment and ease of use.

Lightweight and robust with low power consumption, the system contains a newly designed transducer and hydrophone which is combined with state-of-the-art, adjacent transmit and receive electronics to outperform any other system in the same size and weight class.

The GeoPulse Compact OTS is designed for use in shallow water and can work at depths less than 1 metre by receiving on the hydrophone while the transducer is active.

The system is shipped with the latest version of Chesapeake SonarWiz© software, for control, visualisation and data processing.

## KEY FEATURES

- Lightweight and rugged design
- Wide frequency range
- Output power up to 1 kW
- Low power: 10 - 30 VDC (30 W)
- Operates down to 100 m+
- Penetration up to 80 m
- Resolution as small as 6 cm

## APPLICATIONS

- Pipeline detection
- Geological surveys
- Dredging surveys
- Environmental surveys
- Buried object detection

### Interface Box (Model GP01)

Mechanical	Anodised aluminium case
Physical	Dimensions: 268 mm (D) x 350 mm (W) x 103 mm (H) (excluding connectors) Weight: 7 kg
Environment	10 %-95 % RH, non-condensing   0 °C-40 °C (operation), -20 °C-75 °C (storage)   IP66 rated (including mating connectors), IP66 rated connector covers supplied
Connectors	Power in, deck cable (up to 50m), 3 x Serial   PPS input, external trigger input
Indicators	Power in, HV, Time sync, Sonar link
Power	Input: 10 VDC-34 VDC (24 VDC nominal recommended)   Reverse polarity and overvoltage protected   Power: 30 W typical plus transmitter power   Transmitter power usage: 1 W-35 W
AC Input	Mains Adaptor Supplied. Input: 90 VAC-305 VAC, 47-63 Hz   Output: 24 VDC nominal, 120 W capable   Short circuit & over-current protected. IP65 rated
Serial	3 x RS232 with overvoltage protection   Range of baud rates selectable
PPS	TTL level, protected, edge selectable

### Acquisition Software

Type	SonarWiz fully featured SBP with control interface (locked for use with GeoPulse Compact)
Features	Control of all system parameters   Full range of processing tools   Data export in industry standard formats   1 year of maintenance included

### Over The Side Bubble (Model GP06)

Mechanical	Anodised aluminium/acetal construction, fibreglass shell covers.
Physical	Dimensions: 900 mm (L) x 300 mm (W) x 280 mm (H) (exc. connectors) Weight: 24 kg

#### TRANSMIT & RECEIVE

TX - Output Power	1 kW peak (adjustable as % of full scale)
TX - Waveforms	Pinger: Frequency and cycles select: 1-32 cycles (in 1 cycle steps). 4-15 kHz (in 0.1 kHz steps). Ricker: Spread spectrum (select by highest frequency component). 4-15 kHz (in 0.1 kHz steps) Chirp: Sweeps with 5/10/15 kHz bandwidth, 8/16/32 ms length, frequencies 1.5-18 kHz
TX - Rep Rate	Up to 20 PPS (waveform dependent)
RX - Acquisition	Dual channel, 800 kHz front end sampling, 50/100 kHz sample output, 24 bit

#### ACOUSTIC

Source Level	Up to 196 dB $\pm$ 3 dB re 1 $\mu$ Pa @ 1 m
Beam Width	Along track (hydrophone Rx): (two way) 35° at 5 kHz, 18° at 10 kHz, 12° at 15 kHz   Along Track (Transducer Rx): 45° at 5 kHz, 25° at 10 kHz, 35° at 15 kHz
Resolution / Penetration	6 cm (using 15 kHz "Chirp" sweep) / Up to 80 m (fine clay), up to 20 m (sand)

Specifications subject to change without notice. E&OE