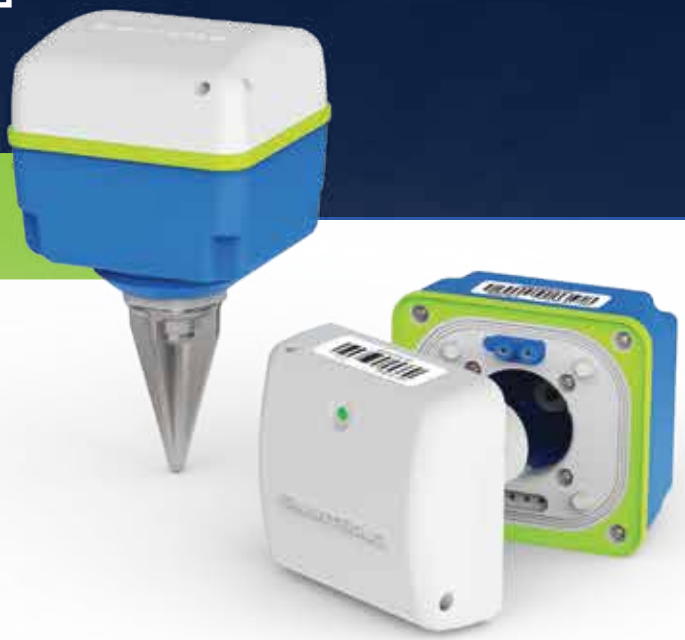
SMARTSOLO®

World's First Smart Seismic Sensor
Makes $100/CH High Density Seismic Possible



SMARTSOLO
A Proud DTCC Product

www.smartsolo.com

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SmartSolo®
World's First Smart Seismic Sensor

The seismic industry continues to demand that exploration is carried out at ever-greater scale and receiver density, while somehow attempting to balance the requirement to keep project costs under control. To provide the industry with a solution to this challenge, DTCC has developed the SmartSolo intelligent seismic sensor.

SmartSolo is based on DT-SOLO, the high-sensitivity geophone and focuses on the principal of seismic exploration which is known as 3**W** (**W**ave = high fidelity signal; **W**hen = accurate timing; and **W**here = the location), incorporated with electronics and software technologies in mobile internet era. This smart sensor provides adequate info for highest-quality seismic data acquisition while keeping its functions and structure as simple as possible. Electronics and software technologies are super reliable, mature and cost-effective in mobile internet era. These technologies are used for SmartSolo at maximum possible scale. The result: the geophone is something smart, reliable, user-friendly, cost-effective and could run in any harsh environment.

Patent Publication Number 201630504296. 0
Patent Pending Number 201610905491.3

- Lowest per Channel Cost in the Seismic Industry
- Small Footprint
  95mm X 103mm
- Mobile App
  Scanning & Technical Support
- No Exposed Connector in the Field
- 50 Days Operating Life
  @ 25℃ 1ms 12h ON/12h Off
- Stake-less Operation
  for Max Flexibility
- Light Weight
  1.1 kg (including battery and spike)
- Built-in 8 GB Non-volatile Flash Memory
  could be Expanded to 32 GB
- DT-SOLO
  High-sensitivity Sensor Technology (10Hz & 5Hz optional)
- Optional External Battery and Sensor
- Automatic Sensor Testing and GPS Logging
- Auto Scan Mode
  for Fast Deployment

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DT-SOLO®
The Heart of SmartSolo

High-quality seismic data derives from high-quality seismic sensors. DT-SOLO is a high-sensitivity geophone specially designed for point receiver applications. It is well-known in the seismic industry as the top-quality high-sensitivity geophone which is widely used by contractors and equipment manufacturers.

- High Quality
- High Sensitivity
- Super Reliable
- Greater Savings
- Low Distortion
- Single Point Receiver
- Industry Leader
- Available in 10 Hz & 5 Hz

DMC, DCC, DHR
The Peripherals of SmartSolo®

Fast Data Harvesting Speed
240 GB / 7 min
3000 CHs @ 20 days @ 2ms in < 3.5 hrs

Highly Flexible System Configuration
Complete Software Suite

SmartSolo®
The Future of the Seismic Industry

Smaller crew size, less man power and simpler equipment
- Lower operational cost
- Less environmental impact
- Improved HSE

Million channels capability
- High channel density
- Better image at lower cost

Super reliable, lower power consumption, longer operating time
- High productivity
- Lower operational cost

Highly efficient data harvesting and management
- Lower operational cost
- Better user experience

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Physical Specs

Size	95mm x 103mm x118mm (without spike)
Weight	1.1kg (including internal battery and spike)
Waterproof	IP67
Operating temperature	-40℃ to +70℃
Battery	38.48Wh
Operating Life @25℃	25 days @ 1ms continuous 50 days segmented (12hours ON/12hours SLEEP)

Sensor Specs DT-SOLO 5Hz
(All parameters are specified at +22° C in the vertical position unless otherwise stated.)

Natural Frequency	5Hz
Damping	70%
Sensitivity	76.7 V/m/s (1.95 V/in/s)

Sensor Specs DT-SOLO 10Hz
(All parameters are specified at +25° C in the vertical position unless otherwise stated.)

Natural Frequency	10Hz
Damping	70%
Sensitivity	78.7 V/m/s (2.0 V/in/s)

Smart Electronics Specs
(@ 1ms sample interval, 31.25 Hz, 25°C unless otherwise indicated)

ADC resolution	24bits
Sample intervals	1,2,4 milliseconds
Preamplifier gain	0dB to 24 dB in 6 dB steps
Anti-alias filter	206.5 Hz @ 2ms (82.6% of Nyquist) selectable - linear Phase or minimum phase
DC blocking filter	1Hz to 10Hz,1Hz increments or DC Removal
GPS Time Standard	1ppm
Timing Accuracy	±10µs, GPS disciplined
Maximum Input Signal	2.5V peak @Gain 0dB
Equivalent Input Noise	0.71µV @ 2ms @Gain 12dB
Dynamic Range	116dB @ 2ms @ Gain 0dB
Total Harmonic Distortion	<0.0005%
Common Mode Rejection	≥100dB
Gain Accuracy	<1%

Specifications are subject to change without prior notice.

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