



SMARTSOLO®

The Most Rugged and Reliable Node

IGU-16HR IES



www.SmartSolo.com

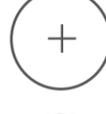
The leading manufacturer in serving geoscience

SmartSolo® The Most Rugged and Reliable Node

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, SmartSolo Inc. 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 3W (Wave = high fidelity signal; When = accurate timing; and Where = 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.



-  New Generation of Intelligent external seismic sensor
-  16-32GB Built-in 16GB Non-volatile Flash Memory could be Expanded to 32GB
-  Support for Bluetooth QC and Find Tracking Function
-  Light Body Small Foot-print
-  Expandable to Million Channel System
-  Compatible with Vibroseis and Impulsive Energy Sources
-  Built-In DT-Solo High-Sensitivity Sensor 5Hz & 10Hz Options External Sensor Option Geophone, Marsh Strings, Hydrophone
-  Sensor Self-test and GPS Positioning
-  Highest Cost-effective System in Industry
-  Integrated Modular Design Greatly Improve Efficiency Low Repair Cost Easy Disassembly and Battery Change
-  64 days 64 Days Operating Life @25°C 2ms 12h ON/12h OFF
-  Red and Green Double Color LED Indicator Green Means "GOOD", Red Means "BAD"

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
- Applicable to water areas



DMC, DCC, DHR The Peripherals of SmartSolo®

Fast Data Harvesting Speed
3000 CHs @ 20 days @ 2ms in < 3.25 hrs
Highly Flexible System Configuration
Complete Software Suite





The leading manufacturer in serving geoscience

International Sales

Unit145,3901-54Ave,NE
 Calgary,Ab T3J 3W5
 Canada
 Tel:+1-403-264 1070
 Toll Free:+1-888-604 SOLO(7656)
 Email:sales@smartsolo.com

Business Development Centre

301, Building B, No.15 South of Ronghua Road,
 BDA, Beijing, 100176, China
 Tel:+86-4000-868-158
 Fax:+86-10-87220112
 Email: marketing@smartsolo.com
 support@smartsolo.com

Physical Specs

Size	139.6mm(L)×95mm(W)×131.7mm(H)(w/o spike)
Weight	1.3kg(Including internal battery and spike)
Waterproof	IP67
Recharge Time	<3.25 hours
Charging Temperature Range	+3°C~+45°C
Operating temperature	-40°C~+70°C
Operating Life@25°C	32 days @2ms continuous 64 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 (Fn)	5Hz
Coil Resistance	1850Ω
Damping	Open Circuit Damping 0.60 Damping with 43kΩ 0.70
Sensitivity	Open Circuit Intrinsic Voltage Sensitivity 80 V/m/s (2.03 V/in/s)
Distortion	< 0.1%

Sensor Specs DT-SOLO 10Hz

(All parameters are specified at +25°C in the vertical position unless otherwise stated.)

Natural Frequency(Fn)	10Hz
Coil Resistance	1800Ω
Damping	Open Circuit Damping 0.51 Closed Circuit Damping 0.70
Sensitivity	Open Circuit Intrinsic Voltage Sensitivity 85.8 V/m/s (2.18 V/in/s)
Distortion	< 0.1%

Smart Electronics Specs

(@ 2ms sample interval, 31.25 Hz, 25°C unless otherwise indicated)

ADC resolution	• 32bits
Sample intervals	0.25,0.5,1,2,4ms
Pre-amplifier gain	0dB to 36dB in 6dB steps
Anti-alias filter	206.5Hz@2ms (82.6% of Nyquist) Selectable - Linear Phase or Minimum Phase
DC blocking filter	1Hz to 10Hz. 1Hz Increments or DC Removed
GPS Time Standard	1ppm
Timing Accuracy	±10μs, GPS Disciplined
Maximum Input Signal	±2.5Vpeak @Gain 0dB
Instantaneous Dynamic Range	125dB @ 2ms Gain 0dB
Equivalent Input Noise	0.18μV @ 2ms Gain 18dB
Total Harmonic Distortion	<0.0002% @Gain 0dB
Common Mode Rejection	>100dB
Gain Accuracy	<0.5%
System Dynamic Range	145dB
Frequency Response	0~1652Hz@0.25ms
Wireless Communication	Bluetooth Low Energy
Input Resistance	20KΩ,43KΩ,2MΩ Optional

• The ADC has 32bit resolution, the noise-free resolution is no more than 24bit. Specifications are subject to change without prior notice.

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

