



# SMARTSOLO®

World's First Smart Seismic Sensor



## IGU-BD3C-5

[www.SmartSolo.com](http://www.SmartSolo.com)

**SMARTSOLO**  
S C I E N T I F I C

The leading manufacturer in serving geoscience

## SmartSolo® World's First Smart Seismic Sensor

IGU-BD3C-5 is a low-cost, broadband, and micro power consumption broadband smart seismic sensor. Based on the high-sensitivity geophone DT- SOLO——proudly produced by SmartSolo Inc, and incorporated with electronics and software technologies in mobile internet era. With internationally well-received and reliable electronic spread spectrum technology, the frequency band range of IGU-BD3C-5 is up to 0.2Hz-150Hz. Due to its high reliability and high level of customization of storage and power capacity, it is very suitable not only for traditional active seismic exploration, but also for long-period observation of natural microseismic, transient surface wave survey and mobile station natural earthquake monitoring, etc.

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New Generation 3  
components Smart Seismic Sensor



Low frequency can reach to 5s



Internal battery support up to  
30 days of continuous recording  
(see Technical specs for details)



Support for external power supply  
and Bluetooth QC



Built-in GPS receiver and  
time-disciplined high precision clock



High resolution data with up to  
0.25ms sampling and 32-bit  
delta-sigma ADC



Real-time seismic data monitoring  
and sensor status QC



Internal 64GB memory  
Can be expanded to 128GB



Dual LED for status QC  
Indicate Bluetooth,  
battery level and working status



Compatible with vibroseis  
and impulsive energy sources

## 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
- Low cost
- Super Reliable
- Greater Savings
- Low Distortion
- Single Point Receiver
- Industry Leader



## Dedicated AIO, 16 Slots AIO, SoloLite The Peripherals of IGU-BD3C-5

Fast Data Harvesting Speed  
USB 3.0 @ 20MB/s

Portable data harvesting and charging

Highly Flexible System Configuration  
Complete Software Suite

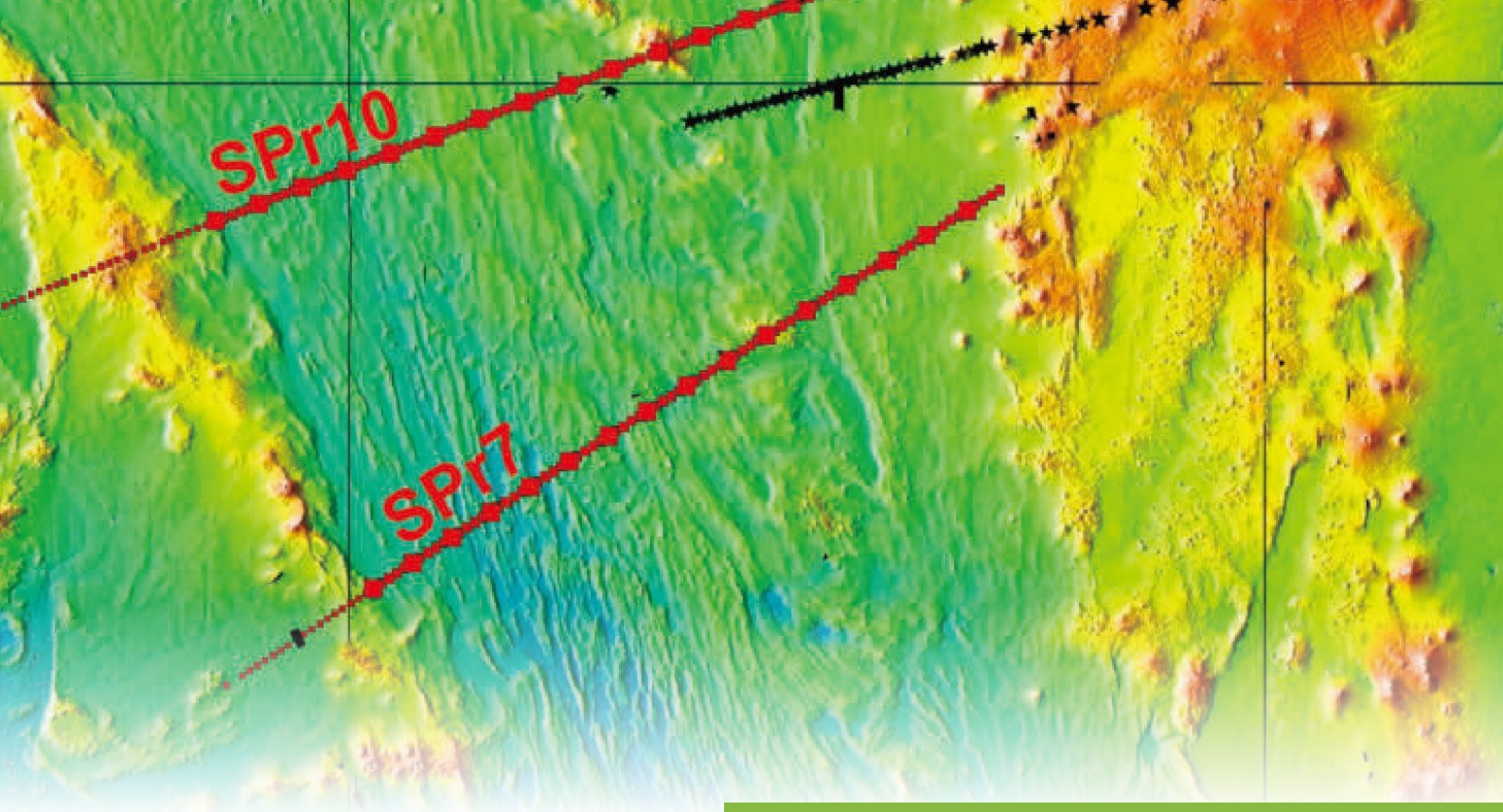


**Dedicated AIO**



**16 Slots AIO**





## Physical Specs

Seismic data channel(s)	3
ADC resolution	32 bits
Sample interval	0.25,0.5,1,2,4,8,10,20 ms
Instrument Noise Floor	Whole frequency band lower than the NHNM curve 5s~1Hz lower than the NLNM curve
Operating temperature	-40°C ~ +70°C
Waterproof	IP68
Physical Size	Φ158 x160mm (w/o spike)
Weight	2.8 kg (Including internal battery and spike)
Data Storage	64GB (can be expanded to 128GB)
Operating Life@25°C	30 days Continuous 60 days Segmented (12h ON/12h SLEEP)
External Power Supply	7V~ 15V (single supply)
Bluetooth QC	Available
Data Harvesting	USB 3.0
Charging Temperature Range	+3°C~ +45°C
Charging Time	<7.5H, Fully Charged (Standard battery)

## Acquisition Performance

Frequency Bandwidth	0.2Hz ~ 150Hz
Distortion	<0.1% @12HZ (0°~ 10°) tilt, (0°~3°) horizontal tilt
Sensitivity	200V/m/s (5.08 V/in/s)
Remark	All parameters are specified at +22°C in the vertical position and horizontal position for horizontal geophone unless otherwise stated

## Channel Performance

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

Maximum Input Signal	±2.5V <sub>peak</sub> @ Gain 0dB
Instantaneous Dynamic Range	120dB@ Gain 0dB
Common Mode Rejection	>100dB
Gain Accuracy	<1%
GPS Time Standard	1ppm
Timing Accuracy	+ 10μS, GPS Disciplined
Cross Feed	<-110dB
Inter-channel Phase Offset	<0.1ms
Transverse Vibration Rejection	Better than 0.1%
Inter-channel Amplitude Coherence	5%
System Dynamic Range	140 dB
Frequency Response	0~1652Hz

SmartSolo Inc. reserves the right to change specifications without notice while we improve the quality of our products.

# **SMARTSOLO** S C I E N T I F I C

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