












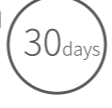


SMARTSOLO®

World's First Smart Seismic Sensor

IGU-16HR 3C Features



IGU-16HR 3C

-  New Generation Smart 3C Seismic Sensor
-  High resolution data with up to 0.25ms sampling and 24-bit delta-sigma ADC
-  Built-in GPS receiver and disciplined high precision clock
-  Based on the most highly regarded DT-SOLO HS geophone with 10Hz and 5Hz options
-  Most cost effective system on the market
-  1.7kg Light weight and compact size
-  Share the same peripherals as IGU-16 Greater equipment investment savings
-  All-In-One Modular design provides maximum productivity, maintenance free operation and easy battery replacement
-  Suitable for one station to million station operations
-  Up to 30 days of continuous recording (see Technical specs for details)
-  Compatible with vibroseis and impulsive energy sources
-  Simple LED State Indicator Green for "good to go" and Red for "no good"

TECHNICAL SPECIFICATIONS

General Specifications		
Parameters	Specification	
Seismic data channel(s)	3	
ADC resolution	24 bits	
Sample intervals	0.25, 0.5, 1, 2, 4 milliseconds	
Preamplifier gain	0dB to 36 dB in 6 dB steps	
Anti-alias filter	206.5 Hz @ 2ms (82.6% of Nyquist)	
DC blocking filter	Selectable - Linear Phase or Minimum Phase	
Operating temperature	-40°C ~ +70°C	
Waterproof	IP67	
Data Storage	32 GB (can be expanded to 64GB)	
Physical Size	w/ High Capacity Battery Pack	w/ Standard Battery Pack
	103mm (L) × 95mm (W) × 187mm (H) (w/o spike)	103mm (L) × 95mm (W) × 150mm (H) (w/o spike)
Weight	2.4kg (Including internal battery and spike)	1.7kg (Including internal battery and spike)
Operating Life@25°C	30 days Continuous 60 days Segmented (12hours ON/12hours SLEEP)	15 days Continuous 30 days Segmented (12hours ON/12hours SLEEP)
Recharge Time	< 6 hours	< 3.5 hours
Charging Temperature Range	+3°C ~ +40°C	





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TECHNICAL SPECIFICATIONS

Channel Performance

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

Maximum Input Signal	±2.5V _{peak} @ Gain 0dB
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%
GPS Time Standard	1ppm
Timing Accuracy	±10µs, GPS Disciplined
Cross Feed	< -110dB

Acquisition Performance

Parameters	Specification
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Natural Frequency	5Hz	10Hz
Spurious Frequency	>170Hz	>240Hz
Distortion	(>150Hz in horizontal sensor)	
	<0.1%@12Hz, (0° ~ 10°)	<0.1%@12Hz, (0° ~ 10°)
Damping	V tilt. <0.15%, (0° ~ 3°) H tilt	V tilt. <0.15%, (0° ~ 3°) H tilt
	0.7	0.7
Sensitivity	76.7V/m/s (1.95 V/in/s)	78.7V/m/s (2.0 V/in/s)
	Remark	Remark
All parameters are specified at +22°C in the vertical position for vertical geophone and horizontal geophone unless otherwise stated.		All parameters are specified at +25°C in the vertical position for vertical geophone and horizontal geophone unless otherwise stated.

DT-SOLO The Heart of SmartSolo

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



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



