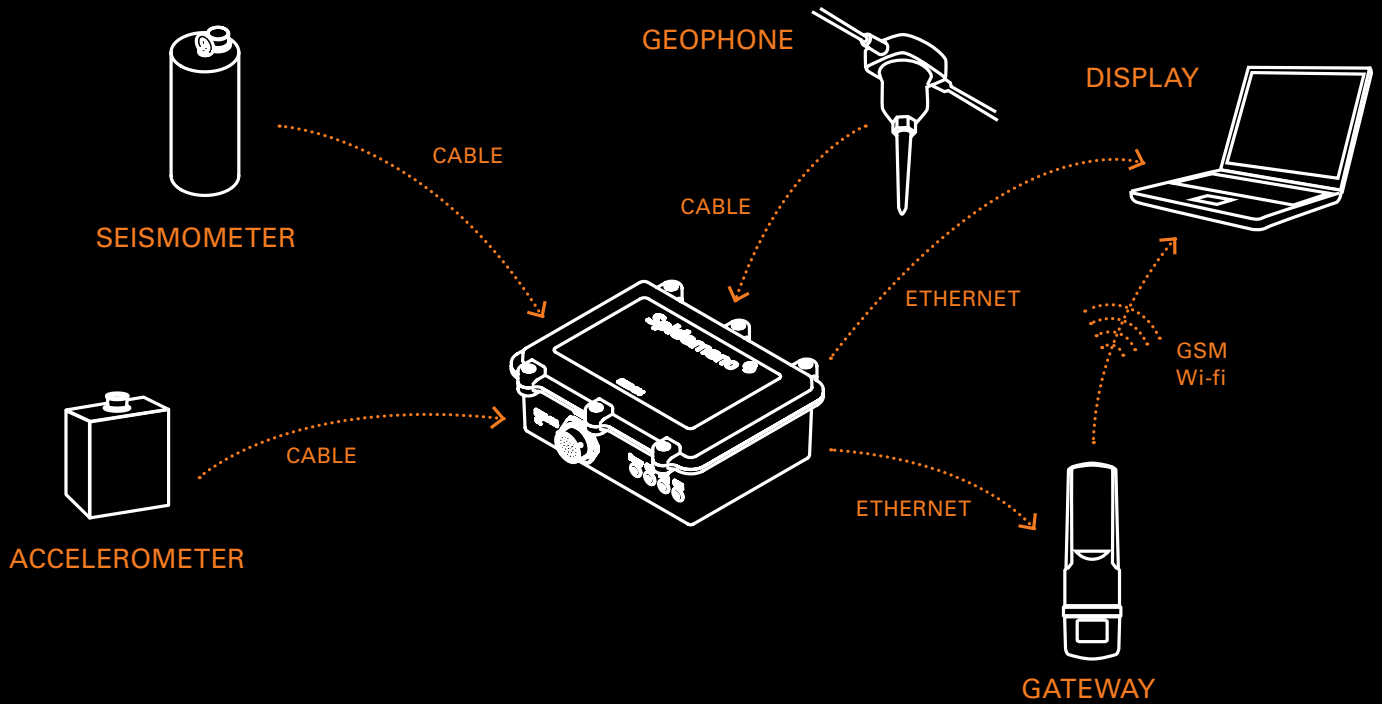
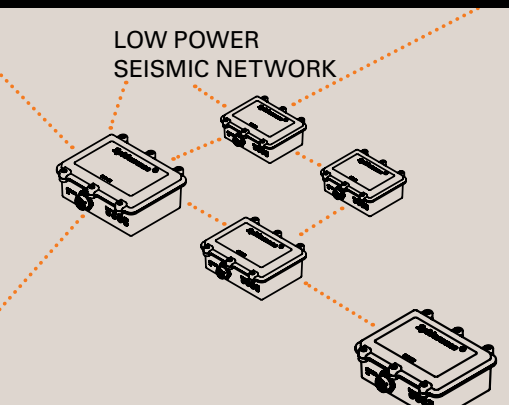


SYSTEM ARCH

SMALL FORM FACTOR, SIMPLE TO CONNECT AND COMPATIBLE WITH SEVERAL GEOPHYSICAL SENSORS MAKES THE UNITS EXTREMELY VERSATILE.



CHARACTERISTICS



STATE OF THE ART, 24 BITS
3 CHANNEL SEISMIC DIGITIZING
UNIT

TRULY PORTABLE

USER FRIENDLY

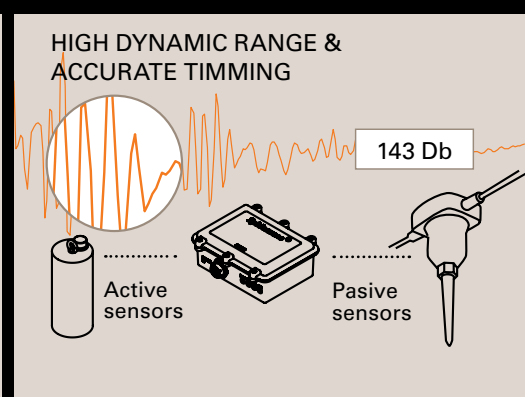
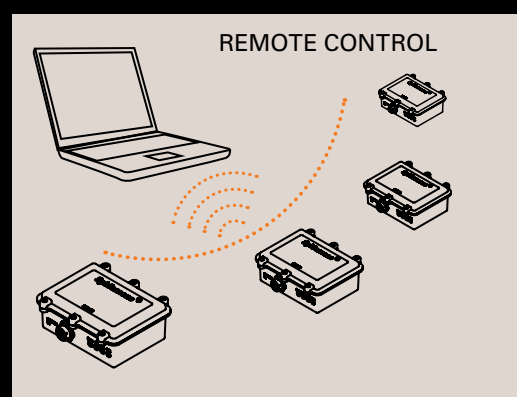
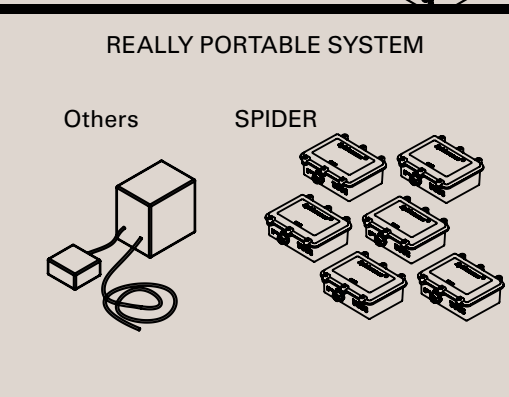
WIRELESS COMMAND AND
CONTROL POSSIBILITIES

LOW POWER, LESS THAN
0,5 MW CONSUMPTION

OUTSTANDING DYNAMIC
RANGE

SD DRIVE RECORDING MEDIA

WEB BROWSER USER
INTERFACE



INNOVATIVE SOLUTION FOR MULTIPLE APPLICATIONS

MARKETS

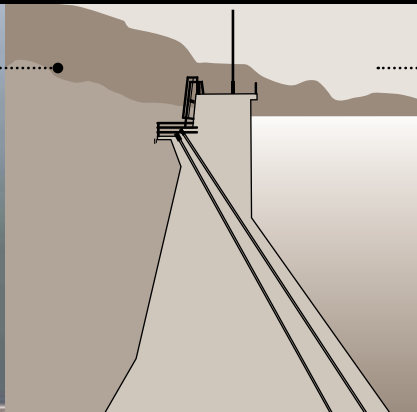
SOLUTION & APPLICATIONS

OIL & GAS



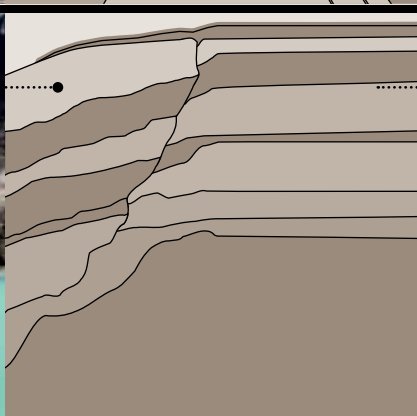
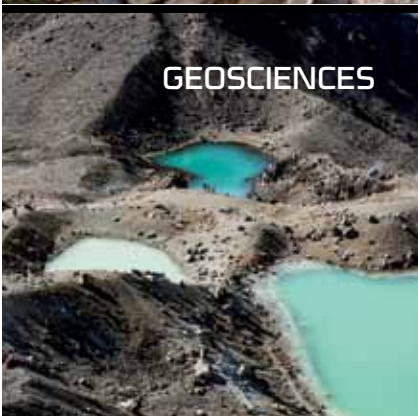
- RESERVOIR EXPLORATION
- MICROSEISMICS
- SBA
- RESERVOIR MONITORING

CIVIL



- SHM
- GEOTECHNICS
- NUCLEAR PLANTS
- HYDROELECTRICAL PLANTS

GEOSCIENCES



- VOLCANOS
- EARTHQUAKES
- PASSIVE SEISMICS
- TECTONICS
- AFTERSHOCK

Spidernano^W

by WORLD ^W SENSING
Industrial

Spidernano

by WORLD  SENSING
Industrial

ULTRA LOW POWER SEISMIC RECORDING UNIT



.....● LOW POWER SEISMIC NETWORK

.....● HIGH RESOLUTION ADC

.....● ROBUST INTEGRATED NODE

THE **SPIDERNANO** DATA ACQUISITION SYSTEM IS AN ADVANCED 3 CHANNEL BROADBAND, HIGH RESOLUTION ULTRA-LOW POWER SEISMIC SYSTEM INCORPORATING EMBEDDED SOFTWARE, IP NETWORKING CAPABILITIES AND ULTRA-RUGGED FLASH RECORDING.

THE **SPIDERNANO** USES SPECIFICALLY DESIGNED 24-BIT A/D FOR SEISMIC ACQUISITION. THE SOLUTION INCLUDES GPS RECEIVER, SD RECORDING, POWER MANAGEMENT, SENSOR TEST AND REMOTE COMMAND/CONTROL.



ADVANCED SENSING TECHNOLOGIES AND M2M CREATE OPPORTUNITIES IN SEISMIC ACQUISITION MARKET

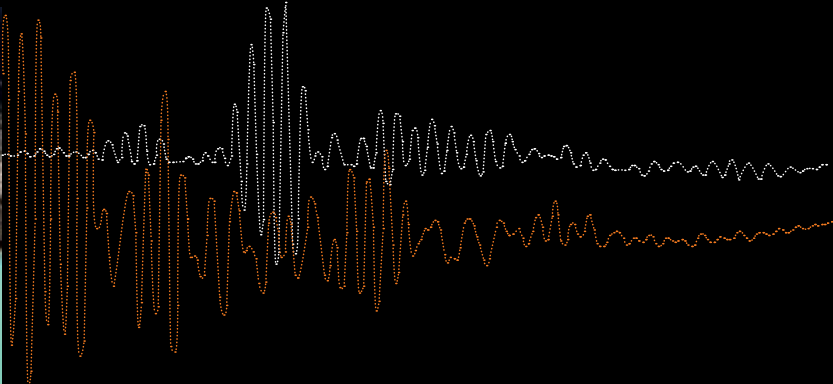
① OIL & GAS



② CIVIL



③ GEOSCIENCES



CURRENT CHALLENGES

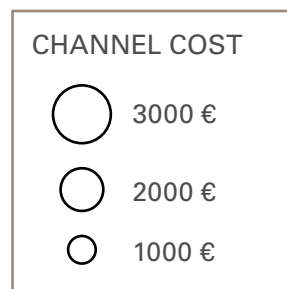
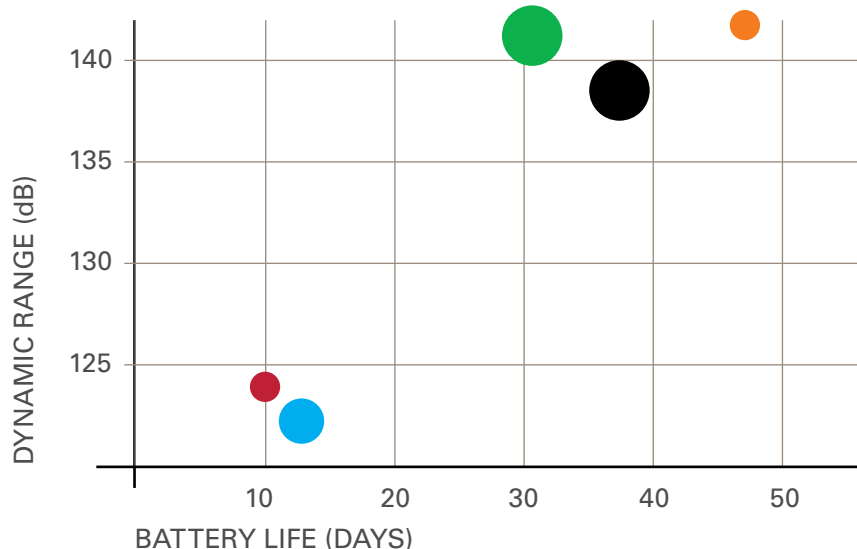
- | | | |
|---|--|--|
| <p>①</p> <ul style="list-style-type: none"> Increasing Operational costs. Need for predictive maintenance and enhanced production. Shale gas revolution. | <p>②</p> <ul style="list-style-type: none"> Increasing control on real time operation. Need on predictive maintenance. | <p>③</p> <ul style="list-style-type: none"> 24/7 inspections needed. Inaccessible sites. Reduced budgets. |
|---|--|--|

OPPORTUNITIES

- | | | |
|--|--|--|
| <p>①</p> <ul style="list-style-type: none"> Shorter exploration cycles. Microseismics. Lower operational costs. | <p>②</p> <ul style="list-style-type: none"> Increased safety. Compliance with regulations. Lower costs. | <p>③</p> <ul style="list-style-type: none"> Increased safety. Need for more and more data. Lower costs. |
|--|--|--|

BENEFITS

- FLEXIBILITY
- ULTRA LOW POWER
- SMALL FORM FACTOR
- COMPATIBILITY WITH MULTIPLE SENSORS





DATASHEET

FEATURES

- **3 Channels 24 bit.**
- **Simultaneous sampling.**
- **2 Input modes**, 5v and 40v peak to peak differential. Means better resolution for active and passive sensors.
- Built-in self tests (analog part also). Means always sure that the unit is working like first day.
- **Status return and controlling** guarantees unit integrity.

SEISMIC RECORDING UNIT

The Spider Remote Unit (SRU), thanks to its **outstanding characteristics**, offers Broadband Seismic Recording capabilities and storage from **geophysical sensors**. The SRU nodes are designed to be very simple to use and operate. They are very **low power** (only 0.5W), **compact, light and robust**. Its hardware is optimized for short field campaign as well as for permanent setup as monitoring stations.



SPECIFICATIONS

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> •• Maximum input signal level
1.768 VRMS @ x1 gain •• Total System Dynamic Range
143 dB @ 2 msec •• Instantaneous Dynamic Range
125 dB @ x1 gain
124 dB @ x4 gain
117 dB @ x16 gain
106 dB @ x64 gain | <ul style="list-style-type: none"> •• Total Harmonic Distortion
0.0003% @ 7.1825 Hz. •• Crossfeed isolation >110 dB. •• Common Mode Rejection
>100 dB. •• Equivalent Input Noise @2 msec
0.93 μV @ x1 gain
0.27 μV @ x4 gain
0.14 μV @ x16 gain
0.13 μV @ x64 gain | <ul style="list-style-type: none"> •• Anti-alias filter
Passband edge (0.01dB ripple)
0.75 Nyquist.
Stop band attenuation
>130 dB at Nyquist.
-3dB point at 0.825 Nyquist.
Linear or minimum phase. •• Channel gain matching
Better than 1% •• Supply Voltage
12V |
|--|--|--|

- Connectivity through **ethernet**. Means standard connectivity built in. We also offer a peripheral that brings **wifi** and **3G/GPRS** networks.
- Led indicators for in field easy-status reporting.
- **Continuous, triggered, and scheduled recording**.
- **Build-in GPS** for self discovery.
- Military circular connectors.
- **GPS disciplined clock**, continuous frequency adjustment obtaining time **accuracy of less than 10 microseconds**.
- **Really low power consumption, average 0.5W fully working** (with GPS every 5 minutes); 0.7W when GPS always on. Means small solar panel and carrying small batteries.
- Sample interval: 2, 4, 10, 20 milliseconds.
- Powered from a car battery (65Ah@12V) offers more than 50 days of continuous operation.
- Operating temperature **-40 °C to +85 °C** and 0 to 100% of humidity.
- **Rugged** aluminum enclosure.
- Gain selections: x1, x2, x4, x8, x16, x32, x64



EMBEDDED
DISPLAY TO EASY
COMMAND
AND OPERATION
IN THE FIELD

