Node X Series—Intelligent Node Seismic System

--Higher precision, smaller and more intelligent

Node X is a series of high-precision intelligent node seismic acquisition systems independently developed and produced by Beijing Orangelamp Geophysical Exploration Co., Ltd., It can also carry out unattended autonomous acquisition through wireless management system, configuration parameters and real-time monitoring; built-in time synchronization system, battery and large-capacity memory.

The whole system is light, durable, IP68 protection grade, and has a compact appearance design, which is suitable for harsh environments in the wild.

The system contains a variety of configurations, which can be used for different methods and scenarios. It can be used for active and passive source seismic exploration, seismic monitoring, structural monitoring, disaster monitoring, etc. 4G / 5G cloud platform management, real-time monitoring, remote data download, etc. through the expansion unit.

Features

➤ Real Time Quality Control

Built in Wi-Fi, Android / PC real-time monitoring, acquisition progress, GPS status, battery status, storage card using status, etc., so that field construction personnel can carry out work with high quality and quantity.
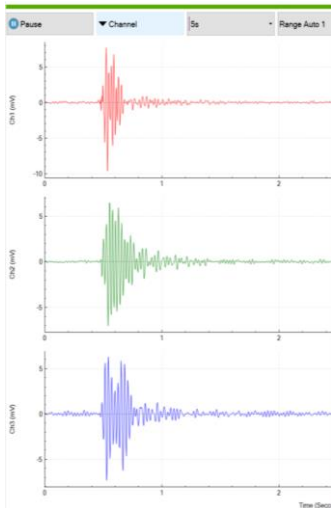
➤ High-accuracy Acquisition

32bit A/D converter, ultra-low background noise.

➤ BD / GPS Time Service

BD / GPS precise time service of each host, and the synchronization accuracy of multiple hosts is less than 3μs.

➤ Ultra-small volume and micro power design

The device is small and light, with micro power design, and the built-in battery can support long-time continuous operation.

➤ Flexible Equipment Deployment

IP68 protection grade design, adapt to the field working environment.

➤ Support Built-in and External Detectors

It can be equipped with built-in tri-component 4.5/2Hz/0.1Hz detector or accelerometer, or external 3 / 4-channel seismic sensors, such as detector, accelerometer, broadband seismometer, strong seismometer, etc.
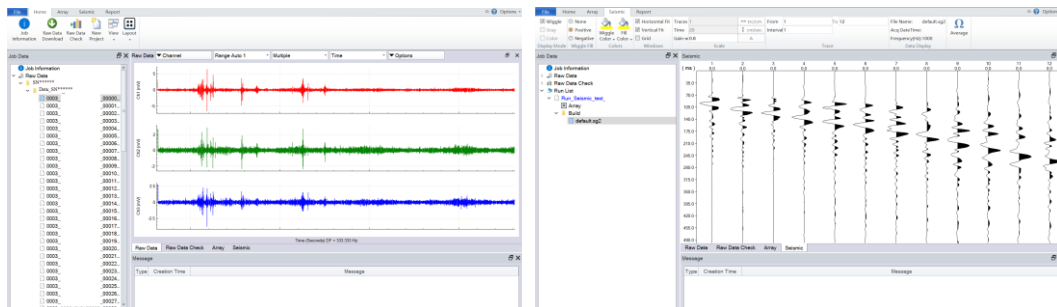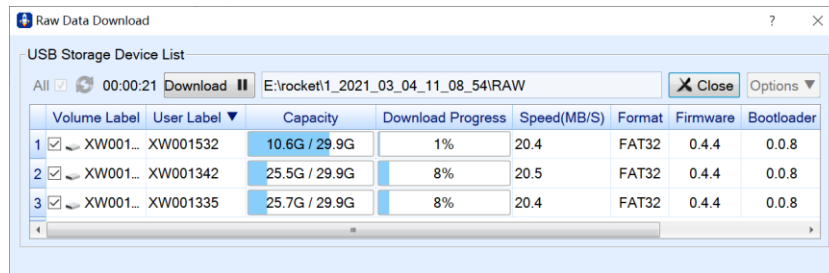
➤ Extensive Use Scenarios

Self collection and self storage.It can be used in active and passive source earthquakes, earthquake disaster monitoring, structural monitoring and other fields.
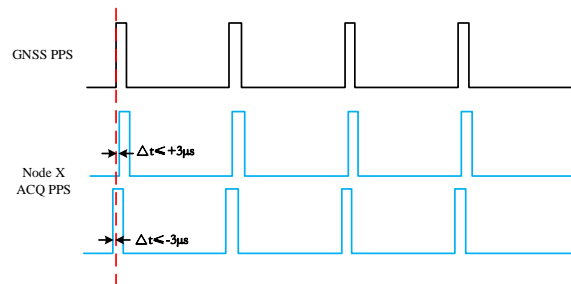
➢ Simple Data Management Software

Rocket data management software for seismic data management and preprocessing, data inspection, online update, etc.

➢ Multiple Expansion Functions

It can expand 4G data communication, ad hoc network communication, high-power Wi-Fi real-time data transmission, wireless trigger and other functions.

Solar UPS   Long-range WIFI   5G communication   Cloud Unit Manager

Node XE Intelligent Node Seismic System

Number of Channels: external 3 / 4 channels
Sensor Type: geophone / seismometer / accelerometer
Input Range: ± 2.5vp- p@gain1
Dynamic Range: better than 160db
Frequency Band: DC-1652Hz
Data Type: continuous time series
Sampling Rate: 125-1khz
Background Noise: 5nV@sqrt (Hz)
Real Time Display: win / Android
Storage Capacity: 32g
Condition Monitoring: GPS, battery, SD card, config
Communication Mode: wireless,USB, scalable 4G+
Time System: GPS / Beidou / Galileo
Synchronization Accuracy: better than 3μs

Node XI Intelligent Node Seismic System

Number of Channels: built in 3 channels
Sensor Type: 3-C detector
Main Frequency: 4.5hz/2hz/0.1hz
Sensor Sensitivity: 4.5Hz:82V/(m/s),optional 230V/(m/s);
      2Hz:260V/(m/s)
      0.1Hz:1500V/(m/s)
Input Range: ±2.5Vp-p@gain1
Dynamic Range: better than 160dB
Frequency Band: DC-1652Hz
Data Type: continuous time series
Sampling Rate: 125-1KHz
Background Noise: 5nV@sqrt(Hz)
Real Time Display: WIN / Android
Storage Capacity: 32G
Condition Monitoring: GPS, battery, SD card, config
Communication Mode: wireless and USB, scalable 4G+
Time System: GPS / Beidou / Galileo
Synchronization Accuracy: better than 3μs

Node XACC Intelligent Acceleration Seismic System

Input Channel: built in 3 channels
Sensor Type: 3-C accelerometer
Input Range: + / - 10G
Dynamic Range: better than 160db
Linearity: better than ± 0.03%
Frequency Band: DC-400Hz

Node XSeries—Intelligent Node Seismic System

Data Type: continuous time series
Sampling Rate: 125-1kHz
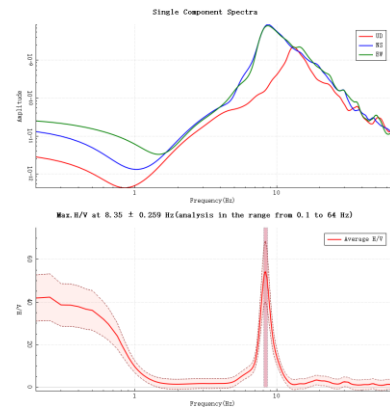**Real Time Display:** WIN / Android
Storage Capacity: 32G
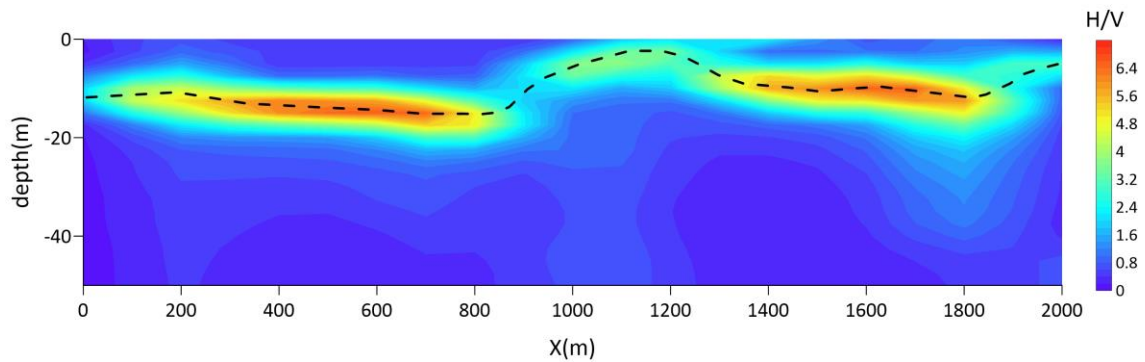**Condition Monitoring:** GPS, battery, SD card, config
Communication Mode: Wireless, USB, scalable 4G+ Mesh
Time System: GPS / BD/ GALILEO
Synchronization Accuracy: better than 3μs

Investigation project of surface matrix layer in Hebei (H/V)

Passive surface wave survey in a goaf in Shanxi (ESPAC)