FLEXIBLE, LOW POWER, FULL PERFORMANCE ACQUISITION

Pegasus

nanometrics

The intuitive workflows of the Pegasus ecosystem remove the challenges of configuring, deploying, and managing multiple stations in the field, and deliver automatically constructed ready-to-analyze data and metadata.

AN INTEGRATED SOLUTION THAT SCALES WITH YOUR NEEDS

Deliberately designed with every modular component thoughtfully integrated to provide the most intuitive experience possible, every aspect of the Pegasus system is optimized for simplicity and ease-of-use, while ensuring the highest levels of data quality and availability from even the most demanding project environments.

Pegasus is a revolution in size, weight and power consumption; yet it maintains the fidelity and versatility of a modern broadband data acquisition system. With a boot time of a few seconds, Smart Sensor auto configuration and the ability to recover one month of miniseed data in under 10 seconds, Pegasus is the only system that can scale to meet the large-n challenge.
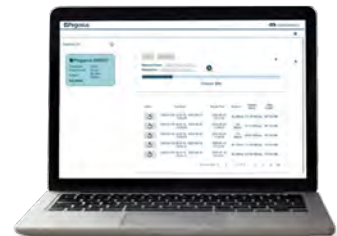
The Pegasus data acquisition ecosystem goes beyond traditional autonomous digital recorders, to deliver an integrated hardware and software solution that eliminates the manual effort and complexity associated with planning, configuring, and managing large-n campaigns.

Pegasus Digital Recorder
(Land or Ocean)

Mobile Application

Harvester Application

Campaign Manager

SMART Battery

Quick Deploy Kit

ANY SENSOR, ANY DENSITY

Flexible and modular, the Pegasus Digital Recorder supports single, dual or 3-component analog sensors including:

- Broadband seismometers

- Geophone sensors

- Strong motion accelerometers

- Microbarometers

- Meteorological sensors

OPTIMIZED FOR: LOW SIZE, WEIGHT & POWER (SWAP)

- Small footprint → More deployments in hard-to-access locations

- Minimal power → Longer duration experiments, smaller solar/battery packs

- Simplified logistics → Rapid deployment

LOWER TOTAL COST OF OWNERSHIP

- High-quality data → Experimental certainty

- Equipment versatility → Ease of use

- True portability → Lower operational costs

BENEFITS

Seamless, End-to-End Workflow

Together, the Pegasus Campaign Manager, Mobile App and Harvester Application make every phase of the campaign, from station planning and configuration to data harvesting, easier and efficient, with reduced chance of error. A secure cloud-based campaign planning and management software tool, Pegasus Campaign Manager simplifies the creation of detailed station configuration plans using pre-defined templates, and set geo-locations using enhanced mapping features.

Easy to Use & Quick to Deploy

Field staff can quickly configure and deploy a portable Pegasus Digital Recorder using an intuitive mobile application that has station planning, configuration workflows, state-of-health, and real-time waveform dashboards to streamline research design, confirmation and station management.

Power & Sensor Flexibiilty

Pegasus provides exceptional flexibility and versatility. This highly adaptable system allows you to conduct experiments with any sensor, at any density, for any duration. Additionally, Pegasus provides the flexibility to select the power source that best suits your experiment. The broad compatibility with any 9 to 17 VDC power source allows you to select batteries that suit the experiment duration, location and logistics.

High Quality, Complete Data Sets

Pegasus redefines the definition of complete data. Easily retrieve data using the Pegasus Harvester Application which streamlines the post-harvesting work required to convert, compile and curate complete data sets. Automatically generated system response, experiment metadata and instrument metadata in stationXML format can be combined with time series data in MiniSEED format to provide a data set that is ready to analyze and archive straight from the field.

Extend Deployment Periods

The Pegasus platform brings true broadband performance with a station size, weight, and power previously available only with geophone deployments. Exceptionally low power consumption significantly reduces battery requirements, as well as overall station size and weight allowing for the efficient deployment of more stations for longer periods of time. Pegasus can also be paired with our full range of low-power, high performance seismometers.

Optional SMART Battery

The Pegasus "SMART" Lithium Ion battery packs greatly simplify power management. "SMART" battery technology permits charging from a wide range of power supplies, managing the charging process to ensure optimum performance and battery longevity. These battery packs can be daisy-chained to facilitate longer project durations or directly connected to a solar panel without needing a charge regulator.

WORKFLOW

Redefining Portable Experiments

Pegasus introduces streamlined workflows that produce complete, ready-to-use datasets increasing your efficiency and effectiveness while providing unparalleled outcome certainty. Create quick and efficient deployments on any scale.
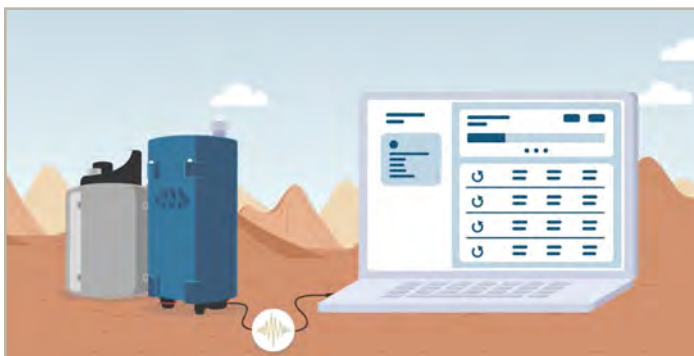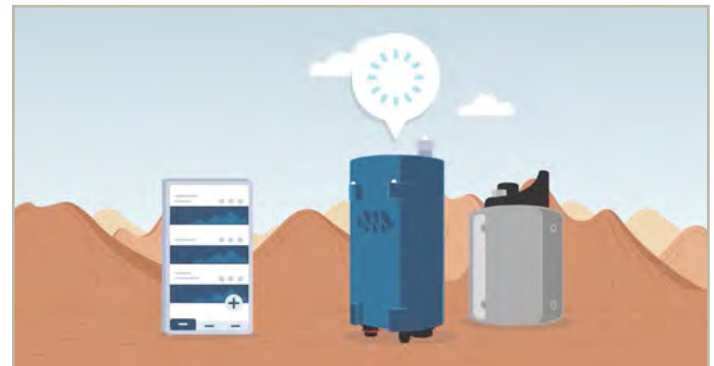

Plan

The benefits of the Pegasus system start before you even go out into the field. Easily design your campaign and preconfigure equipment from the comfort of your office, then use the mobile app or a laptop to pull up the campaign during deployment.

Deploy

In the field, the Pegasus Digital Recorder boots in a matter of seconds and automatically syncs with your campaign plan. The details of each station, with equipment serial numbers, and including any in-field adjustments are synced back to the cloud.

Harvest

When it's time to harvest your data, it can be quickly retrieved in a ready-to-use format that doesn't require any post-processing efforts. Quickly and easily collect data using the Pegasus Harvester Application on a laptop via USB3.0.

PEGASUS CAMPAIGN MANAGER

A secure cloud-based campaign planning and management software tool (desktop and mobile), Pegasus Campaign Manager simplifies the creation of detailed station configuration plans using pre-defined templates, and set geo-locations using enhanced mapping features.
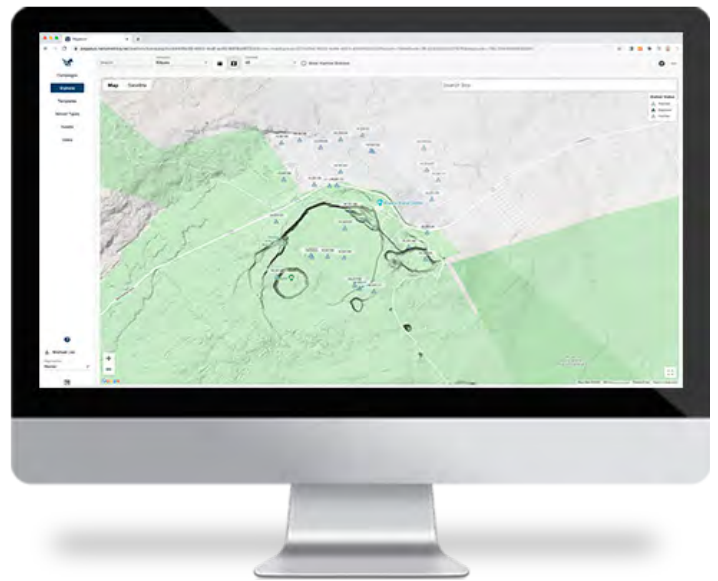
FUNCTIONALITY

Plan:

- Create detailed plans with station profiles that include station geolocations and templates for instrument configurations

- Predefined station templates optimize the speed and efficiency of field deployments

Review & Verify:

- Share access to the plan, experiment metadata, and state of health checks with the research team in the field and in the office

- Automatically record the serial numbers for Nanometrics Smart Sensors

Maintain:

- Map and table views provide fleet summary and station drill-down visibility of configurations

- Easily view deployment information by instrument, earth location, or SCNL context

PEGASUS DIGITAL RECORDER

Low Power:

- <200mW

- 60% less power consumed than with a typical sensor and digital recorder station

Compact:

- 85 mm (L) x 97 mm (W) x 165 mm (H)

- <40% volume of Centaur

Low Weight:

- 0.5 kg

Channels:

- Available with 3 or 4 input channels

- 3-channel Sensor A port

- 1-channel Sensor B (This optional port is available on 4-channel models only)

Smartphone Compatible:

- BLE 5.0 Interface for optimal user interface
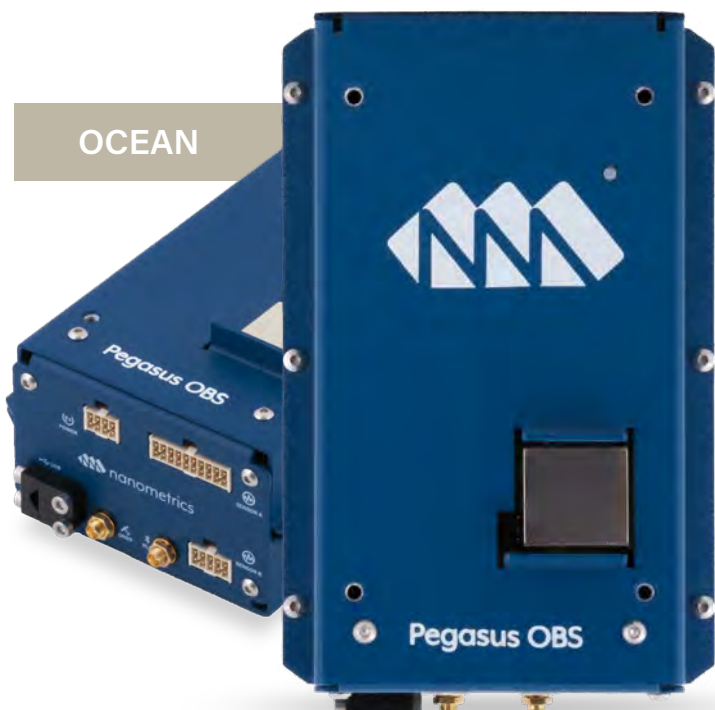
- Pegasus Mobile App for Android and iOS

Performance:

- 135 dB dynamic range @ 100 sps, 142 dB @ 20 sps

Models Available:

- With or without polar certification* (LAND)

- With or without Seascan Time Base Module (OCEAN)

*Certified for operating temperatures down to -45°C

LAND

OCEAN

PEGASUS MOBILE APP

Optimize campaign management with the Pegasus Mobile Application (Android & iOS). Effortlessly configure profiles, deploy in the field, and verify state-of-health all from one centralized platform.
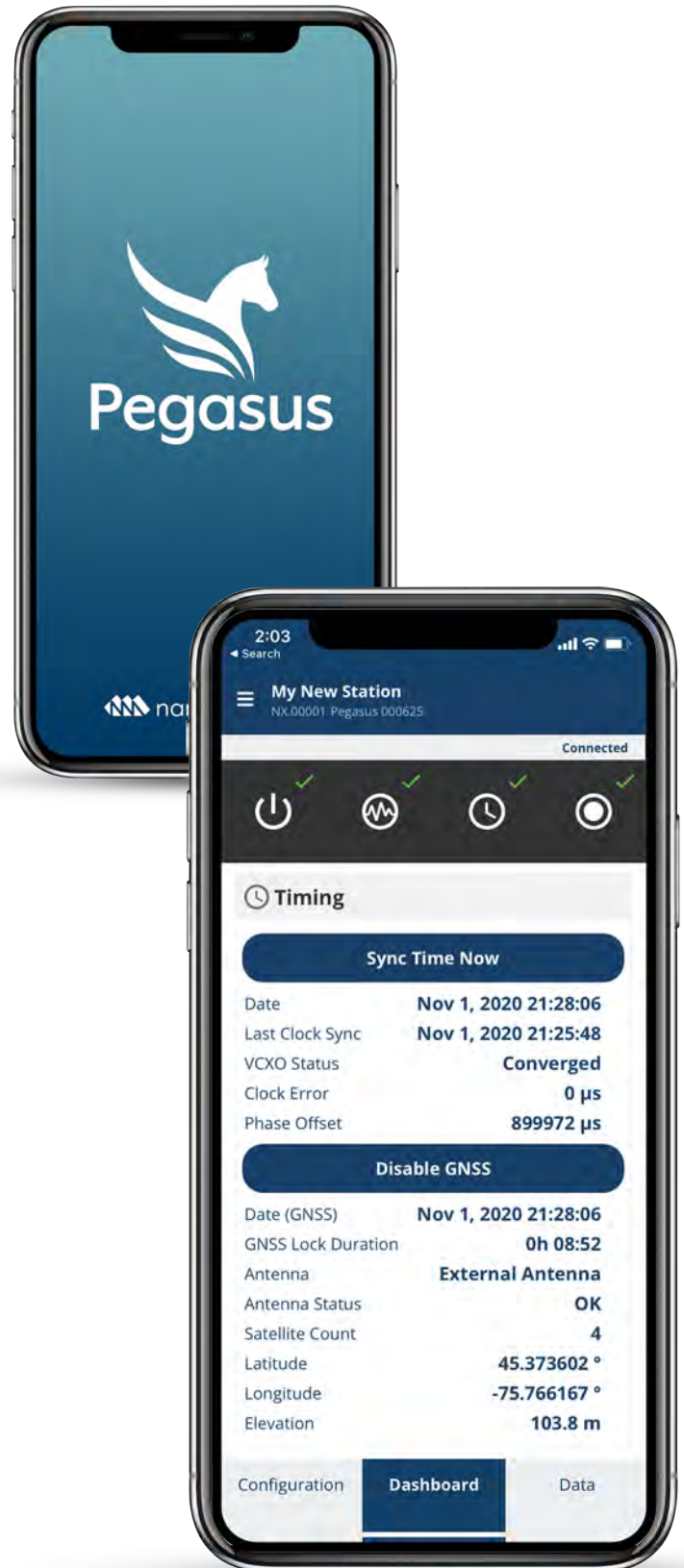
FUNCTIONALITY

Plan:

- Available for in-field campaign planning

- Connects seamlessly over Bluetooth to sync any in-field configuration changes back to the Pegasus Campaign Manager

- Predefined station templates optimize the speed and efficiency of field deployments

Review & Verify:

- Sync with the Pegasus Campaign Manager to access the plan, experiment metadata, and state-of-health checks with the research team in the office

- Make adjustments to the plan in the field and sync with Pegasus Campaign Manager when a network connection is available

- Check real time waveforms

Maintain:

- Map and table views provide fleet summary and station drill-down visibility of configurations

- Easily view deployment information by instrument, earth location, or SCNL context
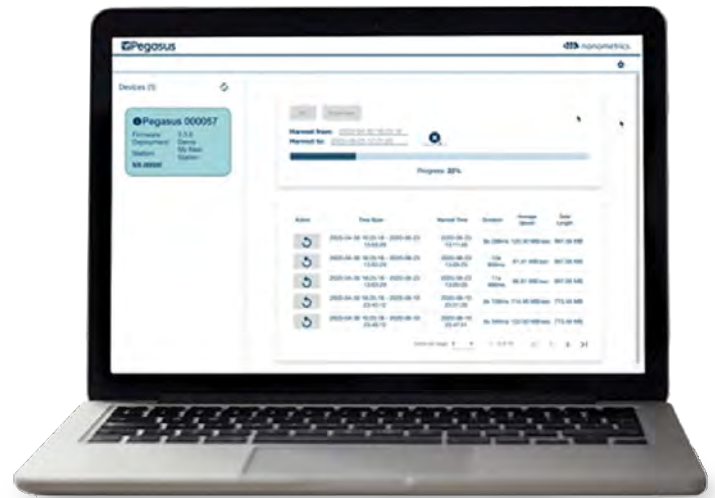
PEGASUS HARVESTER APPLICATION

Revolutionize your data management with our powerful desktop application. The Pegasus Harvester Application transfers and organizes experiment data with speed, efficiency and outcome certainty.

FUNCTIONALITY

- Lightning fast data collection over USB3.0 (1 month of data in under 10 seconds)

- Complete, high quality broadband data sets which includes all experiment data - MiniSEED waveforms, instrument responses, Station XML metada, logs, field notes, photos

- Centralized and organized storage of all experiment data

- Automatic linear time correction for OBS data

- Runs on the following minimum operating systems: Microsoft Windows 10 Professional, macOS 11 Big Sur (x86_64 processors only), Ubuntu 18.04 LTS Bionic Beaver, CentOS and Linux 7.9-2009

- State of health, seismic time series data and metadata are harvested via USB to local storage or a memory device

Harvest Summary

Start time:**2020-01-09 21:07:05**

Complete time:**2020-01-09 21:07:20**

Average Speed:**71.36 MB/sec**

Operation Duration:**2s 890ms**

Size of harvested data:**206.25 MB**

QUICK DEPLOY KIT

Provides a convenient, compact, standalone broadband station.

Compact & Standalone:

- A full broadband station contained in a briefcase-sized IP67 case

- Minimizes the time and overhead of packing and facilitates transportation

Low Power:

- Together the Pegasus Digital Recorder and Trillium Compact Horizon consume less than 400 mW of power

Low Weight:

- <10kg, makes shipping & carrying easier

SMART BATTERY

Scale & Adapt:

- Large capacity of 216 Wh, capable of longer deployments on a single charge*

- Can be daisy-chained with additional battery units to extend duration

Robust Design:

- IP68 ingress protection for water immersion

- Durable, impact-resistant, corrosion-proof case

Global Shipping Certified:

- UN38.3 Lithium Ion Testing

- IATA Dangerous Goods Regulations

*For example, the SMART battery can power an autonomous deployment with a Trillium Compact Posthole continuously for up to 22 days without solar charging.