Nanometrics introduces the **Centaur** digital recorder: combining ease of use with industry leading performance

Centaur

Portable Seismic Acquisition System

Centaur

Nanometrics

Status | Link | Time | Media | Sensor A | Sensor B

Sensor A | Sensor B

651-07A16-2650-0

*Model shown includes long range WiFi option

Java POWERED

Centaur simplifies high performance seismic deployments in both remote and networked environments

Deployments and Data Returns have never been easier

- ➤ Intuitive web interface accessible via WiFi or Ethernet connection.
  - ➤ Easily accessible with standard tablets, smartphones, laptops
  - ➤ User interface supports multiple languages
- ➤ Integrated LEDs provide comprehensive overview of instrument status
- ➤ Direct write of data to MiniSEED or SEGY archive
- ➤ Removable media (SD card, USB)
- ➤ Comprehensive real-time communications options including SEEDLink support

Exceptional Performance

- ➤ Sample rates of up to 5000sps to support geo-thermal and/or passive seismic data acquisition
- ➤ Ultra-low noise floor for use with high performance broadband seismometers
- ➤ True 24-bit performance available in 3 or 6 channel configurations
- ➤ Rugged field enclosure rated for continuous submersion

Onboard Data Processing

- ➤ Advanced bandpassed triggering
- ➤ Derived data products, including: PGA, PGV, PGD
- ➤ Acquisition and data management of high precision GPS data (BINEX)

OSOP
Distributor of Nanometrics Products

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Specifications subject to change without notice.

SENSOR INPUTS

Channels	3 or 6, internal
Sampling	Simultaneous
Resolution	24-bits per channel
Input voltage range	40V, 20V, 10V, 4V, 2V, 1V, 0.5V peak-to-peak differential

SENSOR COMPATIBILITY

Sensor Types	Broadband active and short period passive Seismometers and/or geophones
Control Lines	6 per connector – typically used for Cal enable, mass centre, mass lock/unlock, and XYZ/UVW select
Sensor Power	Supply power pass-through to sensor (9-36 VDC, 1 A) Over-current and surge protected
Serial Interface	Supports digital management of Nanometrics sensors

DIGITIZER PERFORMANCE

Type	24-bit ADC per channel
Digital Filter	140 dB attenuation at output Nyquist
Filter Type	Linear phase (other options available upon request)
Dynamic Range	>140 dB @ 100 sps, measuring full-scale sinewave amplitude to RMS shorted-input noise
Sample Rates	10, 20, 40, 50, 80, 100, 200, 250, 500, 1000, 2000, 5000 sps
Dual Sample Rate	Decimate primary rate by factor 2, 4, 5, 10, 20, 50, 100, 200, 250
Hardware Gain	Nominal gain accuracy within ± 0.5%
High Pass Filter	User configurable in mHz

CALIBRATION

	16-bit DAC with 30 ksps output Variable Output attenuation: 1, 10, 100, 1000 Playback standard .wav files (step & sine wave provided) Custom waveforms may be used

RECORDING

Modes	Continuous
Formats	MiniSEED, SEGY, Nanometrics NP, ASCII
Internal Media	8 GB flash memory (other capacities available upon request)
Removable Media	SD Card up to 64 GB, USB flash drive

DATA RETRIEVAL

Methods	File transfer via ethernet, USB, WiFi or cellular Media Exchange: SD card field-swappable with no loss of data
Data Products	Peak Ground Motion (i.e. PGA, PGV, PGD) statistics available on instrument

REAL-TIME DATA COMMUNICATIONS

Real-time Data Products	Time series data (continuous or triggered) State-of-health information Ground Motion Data Products
Data Formats	Nanometrics NP or SEEDLink (optional)

TIMING

Timing System	Internal DCXO clock disciplined to GPS
Timing Accuracy	<100 µsec (with **GPS duty cycle mode** set to **Automatic**) <5 µsec (with **GPS duty cycle mode** set to **Always On**)
GPS Receiver	Internal 12 channel receiver
Duty cyle selectable	Always On Automatic (power save option): GPS only turned on when necessary, will maintain timing accuracy to within 100 µsec
GPS (standard)	Internal GPS receiver via external antenna
PTP (optional)	High precision network timing via PTP Master on same LAN (available option)

COMMUNICATIONS

Web-based UI	Supports standard PC, tablet and mobile platforms
Interfaces	10/100 Base-T Ethernet, WiFi
Optional Interfaces	Internal cellular, internal Spread spectrum or Internal WiFi (see also Centaur XT)
IP Addressing	Static, dynamic (DHCP) or link-local IP address
Protocols	UDP/IP unicast/multicast, HTTP data streaming (inbound or outbound)

EVENTS

Triggers	Bandpassed STA/LTA, Threshold
Captured Data	MiniSEED, SEGY, ASCII
Data Products	Peak Ground Motion (i.e. PGA, PGV, PGD) statistics calculated on the instrument

CONNECTORS

Power	3-pin mil-circular
Ethernet	Watertight RJ-45 connector
USB	2.0 Type A receptacle behind media bay door
GPS Antenna	TNC Connector with 3.3 V supply for active antenna receiver
Sensor	26-pin, shell size 16, Mil Circ, female MIL-C-26482 Series 1 Mates to MS3116J16-26P

POWER CONSUMPTION

	Ethernet Active: <1.4 W* Ethernet Inactive: <1 W* *3 channel continuous data acquisition

PHYSICAL CHARACTERISTICS

Housing	Aluminum
Weather Resistance	Rated to IP-68
Humidity	0-100%
Operating Temp.	-20°C to +70°C
Storage Temp.	-40°C to +70°C
Weight	2.0 kg (4.4 lb)
Size	196 mm (L) x 137 mm (W) x 88 mm (H)

For more information, please email us at

sales@osop.com.pa www.osop.com.pa

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