

## CENTAUR GEN5 SERIES OF DATA LOGGERS

# Centaur

The Future of Data Acquisition



 nanometrics

# NEW! CENTAUR GEN5 DATA LOGGER

The Centaur Gen5 series of best-in-class data loggers, powered by StrataOS, builds upon Nanometrics' almost 40-year legacy of providing high quality seismic instrumentation and systems. The Centaur Gen5 delivers a comprehensive solution for digitizing, processing, recording, and streaming data. Experience a seamless and efficient approach to Earth science research with Centaur Gen5. Its performance, enhanced features and intuitive design simplify station design and data acquisition, allowing you to focus on your scientific goals.

# GEN5

## Empower your Data Driven World

- **Efficiency and Cost Savings:** Reduce operational costs and streamline workflows with intuitive operation, low power consumption, and simplified deployment.
- **Enhanced Data Quality and Security:** Acquire high-fidelity data with confidence, knowing that your information is protected by advanced security measures, including a memory-safe operating system and support for OpenVPN and HTTPS.
- **Intuitive and Easy to Operate:** Enjoy a faster boot-up time and more responsive UI (user interface) with optional dark mode, a new sensor-centric configuration workflow and other enhancements.
- **Unprecedented Flexibility:** Meet your unique data acquisition needs with a range of analog and digital sensor interfaces, advanced customization capabilities and a robust, full-featured real-time streaming protocol.
- **Reliability and Robustness:** Proven reliability and robustness, with an IP68 rating and wide operating temperature range for deployment in the harshest environments.

## Centaur Gen5 Series Offers Three Versatile Models

- **8-Channel:** Our most versatile data logger yet, for multidisciplinary science and complex monitoring scenarios where diverse sensor integration is required.
- **6-Channel:** Optimized for dual-sensor deployments, typically used to deliver broadband and strong motion seismic monitoring.
- **3-Channel:** Ideal for single-sensor monitoring applications where space and power efficiency are critical.

# Go Beyond Seismic with Centaur Gen5 8-Channel Model

For those seeking maximum flexibility and versatility, the 8-channel model offers expanded sensor integration interfaces to support concurrent acquisition from a broad range of analog and digital sensors.

- **Multidisciplinary Sensing:** Connect a wide array of sensors, including seismometers, accelerometers, geophones, microbarometers, weather stations, GNSS receivers, environmental sensors and more.
- **Expanded Capabilities:** Combine data from diverse scientific disciplines to gain a holistic understanding of complex systems and phenomena.
- **Single Data Logger:** Station design and network operations simplified for multidisciplinary monitoring with a unified, low power, real-time data acquisition system.
- **Future-Proofed Research:** Easily integrate new sensors and adapt to evolving research needs with the highly flexible *StrataOS*.

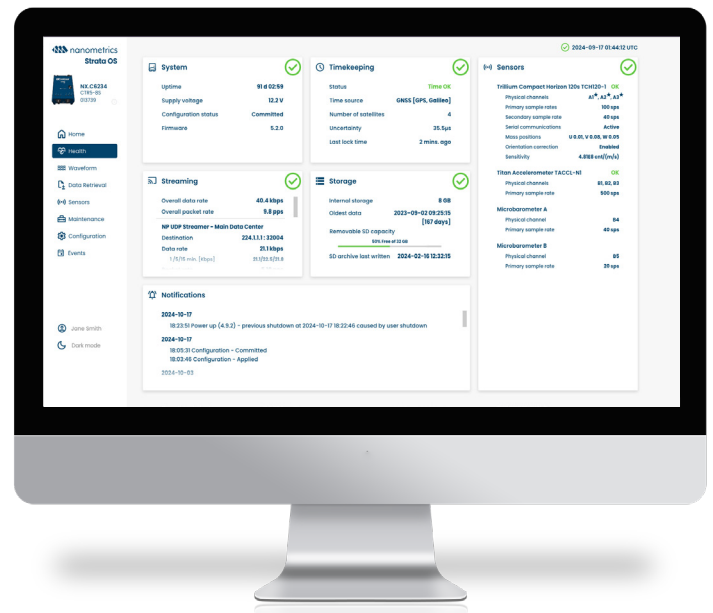


## Introducing *StrataOS*: The Foundation for Reliable, Secure, and Efficient Data Acquisition

### Elevating Data Acquisition with Intelligent Software

*StrataOS* is the powerful new operating system that drives the Centaur Gen5 series of data loggers. With a focus on ease-of-use, security, and performance, *StrataOS* unlocks the full potential of your data acquisition workflows.

- **Intuitive User Interface:** Experience an advanced UI, featuring streamlined workflows, sensor-oriented configuration, optional dark mode and other enhancements.
- **Enhanced Security:** Safeguard your valuable data with robust security measures, including a memory-safe operating system and HTTPS support for secure communication.
- **Optimized Performance:** Increased processing efficiency delivers higher sample rate support, improved system responsiveness and faster boot-up times.
- **Unprecedented Flexibility:** Easily adapt to evolving research and operational needs with advanced customization capabilities, including integration of new digital sensors, workflow automation and more.



# SPECIFICATIONS

For more detailed specifications, please refer to our data sheets for the 3 & 6-channel models and the 8-channel model.

<b>Sample Rates</b>	User-selectable sample rates up to 10000 sps on high-resolution channels
<b>Resolution</b>	User-selectable 24-bit up to 32-bit
<b>Dynamic Range</b>	146 dB
<b>Communications</b>	Web-based graphical UI, 10/100 Base-T Ethernet, WiFi (optional), Serial via USB, UDP/IP, TCP/IP, SNMP, OpenVPN®
<b>Recording</b>	8 GB internal storage, expandable up to 256 GB; External SD card continuous / event MiniSEED archiving
<b>Streaming Formats</b>	Nanometrics NP (UDP and Websocket), SeedLink, CD-1.1, QSCD20
<b>Data Types</b>	Waveform, state-of-health, event/trigger data, raw TCP streams (ex. BINEX), data products
<b>Power Consumption</b>	850 mW (3 channel), 1.2 W (6 channel), 1.4 W (8 channel)
<b>Dimensions</b>	196 mm (L) x 137 mm (W) x 88 mm (H)
<b>Weight</b>	2.2 kg (2.4 kg for models CTR5-6A/S, CTR5-6AS/H)
<b>Operating Temperature</b>	-20°C to +70°C (Standard unit) / -45°C to +70°C (Polar certified unit)
<b>Environmental Rating</b>	IP68
<b>Timing Accuracy</b>	<5 µsec (GNSS Always On or PTP)
<b>Additional Features</b>	Orientation correction for azimuth & tilt, event processing, on-board calibration

## 8-Channel Model

<b>8 High-Resolution Analog Channels</b>	3 channels on Sensor A and 5 channels on Sensor B+
<b>9 Analog Channels (18-bit)</b>	3 on each Sensor port and 3 on the External SOH connector; available for sensor mass positions, sensor status, miscellaneous single channel analog sensors, tamper switches, etc.
<b>2 Dedicated Serial Ports</b>	A new auxiliary connector provides two dedicated serial ports for direct integration of serial sensors, such as weather stations
<b>Optional Centaur Breakout Box</b>	Highly flexible assembly to facilitate physical connectivity between external sensors and the Centaur Sensor B+, Auxiliary and External SOH connectors. Custom cable harnesses for specific use cases also available on request.

*Specifications subject to change without notice.*

## APPLICATIONS

### Go Beyond Seismic

- Multidisciplinary remote sensing
- Multi-parameter geophysical monitoring
- Volcanology and geothermal research
- Hydrological and environmental monitoring
- Atmospheric and climate science

### Demanding Real-Time and Permanent Networks

- Earthquake and volcano early warning
- Nuclear test ban monitoring
- Global seismic networks
- Strong motion networks
- Ocean bottom cabled arrays

## CENTAUR GEN5: EMPOWERING YOUR DATA-DRIVEN WORLD

Centaur Gen5 is a powerful, efficient, user-friendly and secure data acquisition platform that drives innovation and discovery for multidisciplinary remote sensing research and operations.