

# qNano

## NANOPARTICLE ANALYSIS TECHNOLOGY

The revolutionary qNano particle analyser brings Izon's proprietary Scanning Ion Occlusion Sensing (SIOS) platform to your bench top.

- Single particle detection
- Real-time measurement
- Robust & portable
- Cost-effective
- Particle-by-particle detailed information

qNano is a particle analyser that provides detailed measurement of both biological and synthetic particle sample mixtures, tunable from micro to molecular scales.

Combined with Izon's dynamically adjustable nanopores, qNano delivers users a cost effective, portable and accurate toolkit for particle analysis. This highly portable, robust and flexible instrument enables particle size, concentration and relative surface charge to be simultaneously determined.

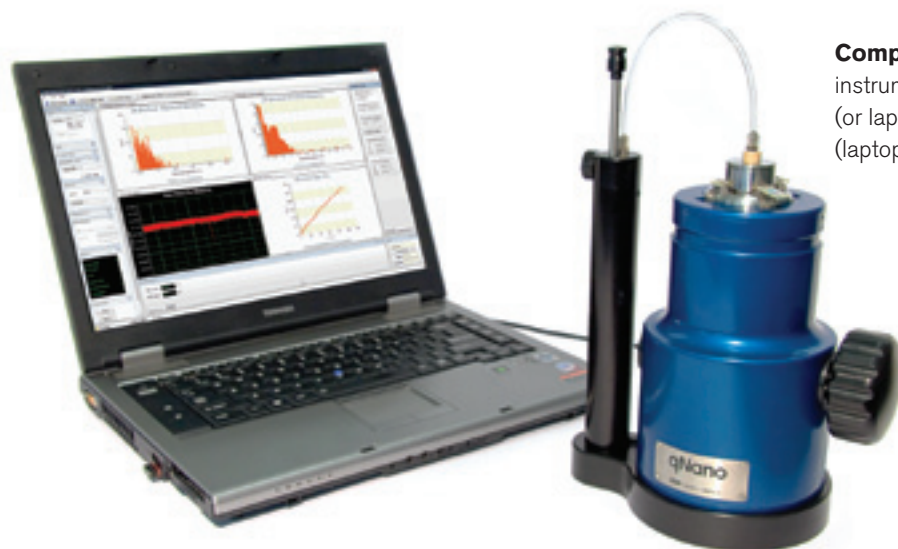
qNano incorporates a sensitive manual control to dynamically adjust Izon nanopores, enabling highly accurate, resistive pulse sensing for a wide range of particle sizes.

Data acquisition software allows raw or analysed data to be viewed in real-time. All recorded data is available to the user both with and without post processing, allowing manipulation to suit individual user requirements.

qNano has been designed to enable modularised upgrades such as feedback control capability, pressurised control of flow and automated fluid control systems.

The qNano platform provides easy access to SIOS technology, enabling researchers to create new IP, bioassay and diagnostic platforms, or publish novel science.





**Complete portable solution.** qNano instrument connects via USB to PC (or laptop) for real time data collection (laptop not supplied).

## Applications

### Particle sizing

qNano provides a single particle measurement solution for accurate size distribution analysis of particle populations.

### Concentration analysis

qNano (in conjunction with additional pressure control capability using the Variable Pressure Module) provides a state of the art solution for measuring particle concentrations in both synthetic and biological particle samples.

### Particle interaction monitoring

qNano allows real-time identification and analysis of particle-particle, particle-biomolecule and aggregation interactions.

### Fundamental research into nanopores and nano/microfluidic systems

The qNano combined with Izon's unique tunable nanopore technology opens up new frontiers for scientific investigation.

## Software

The Izon Control Suite software provides a comprehensive interface to our nanopore technology platform for both data acquisition and particle analysis.

The latest version (Version 2.0) includes significant functionality in a number of areas:

**Integrated size and concentration measurements of single or multiple particle samples.** Absolute sizing and concentration are obtained by calibration of the nanopore, with accurate standards, at the time of measurement.

**Greater accuracy** achieved through a sophisticated multi-pass algorithm which automatically detects particles transiting the nanopore; enhanced particle analysis; standard operating procedures and advanced data filtering.

**Simplified user interface** incorporating step-by-step instructions for performing a standardised particle measurement.

**A comprehensive set of analysis and reporting tools** is incorporated in the software, including: charting tools to view translocation traces, histograms and scatter plots of single or multiple data sets; flexible filters to include or exclude single or multiple particles from analyses; detailed statistics on each data set; full reporting and export of data, statistics and charts.

## Sample Types

**Particle size:** 50nm–10µm+ (diameter)

**Particle composition:** Any synthetic or biological particle dispersed in a conducting fluid, typically an aqueous electrolyte

**Examples:** Silica, Polystyrene, Magnetic, Metallic, Polymers, Liposomes, Exosomes, Bacteria, Viruses, Microvesicles, Micelles, Titania, etc.

**Concentration range:** 10<sup>5</sup>–10<sup>12</sup> particles per mL

**Fluid composition:** requires samples in an electrolyte solution. Some organic solvents may not be suitable. Please contact us for further advice.

## Technical Specifications

**Footprint:** Ø125mm

**Height:** 215mm **Weight:** 5kg

**Data connection:** USB

**Power connection:** Plug pack

**For further enquiries please contact us at [sales@izon.com](mailto:sales@izon.com)**

Izon is continually developing and advancing its technology. For the latest information about new developments and upgrades please visit us at [www.izon.com](http://www.izon.com)