



••• About Axbio •••

Axbio is a semiconductor-biotechnology company developing cutting edge IVD technologies including nanopore sequencing and protein detection using Bio-CMOS electrochemical sensor ICs. It's sequencing and molecular diagnostics products are suitable for academia and industrial users and serve large research laboratories as well as small clinics.



AxiLona AXP-100 Sequencer

Nanopore Sequencing Platform

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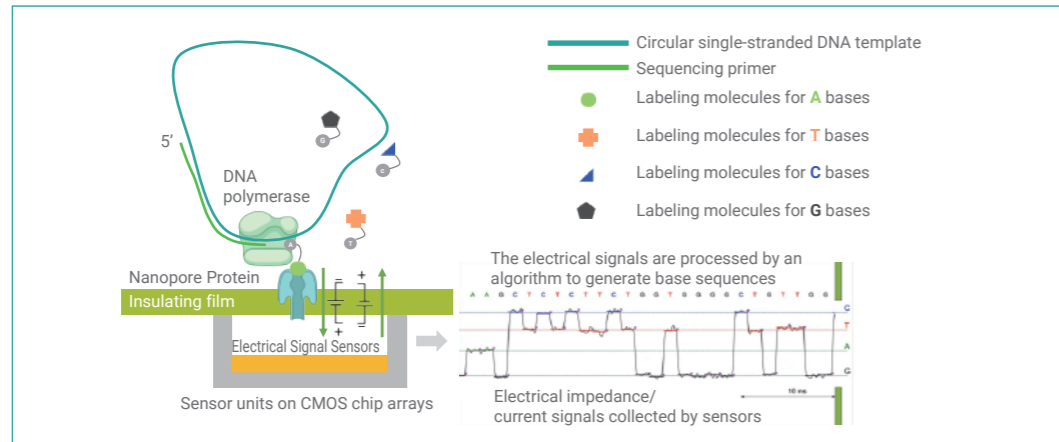
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- ✓ Long read length
- ✓ High accuracy
- ✓ Fast workflow
- ✓ Compact form factor
- ✓ Low sequencing cost

Technical Principles >>>



Schematic diagram of single-molecule nanopore labeling for sequencing-by-synthesis

- Unique sequencing structure**
 single-molecule nanopore-based seq-by-synthesis + cyclization consistency correction + electrical signal detection
- Nanopore-based DNA/RNA sequencing**
 single molecule, single base identification, long read length
- Cyclization consistency correction**
 single-molecule cyclization with multiple sequencing for physical self-correction and higher accuracy
- CMOS chip sensor**
 realizing lower cost, higher throughput with AC impedance detection for higher sensitivity and better anti-interference ability

Product Advantage >>>

- Nanopore + Circular consensus sequencing + electrical signal detection
- Single molecule & single nucleotide detection with real-time base identification

<p>Long read length</p> <p>Screening optimization of core component , read length up to 100Kb</p>	<p>Compact form factor</p> <p>Volume <math><0.013\text{m}^3</math>, weight about 6.85kg</p>
<p>High accuracy</p> <p>Cyclization consistency correction with >99% accuracy</p>	<p>Flexible sequencing</p> <p>Run sequencing on an as-needed basis, sample pooling no longer required</p>
<p>Fast workflow</p> <p>Instantaneous data output up to 1 million reads, sequencing time <4 hours</p>	<p>Cost effective</p> <p>Instrument and sequencing run cost (\$/Gb) are both significantly lower than NGS</p>

Key Applications >>>



Clinical diagnostics

Prevention and control of infectious diseases and birth defects, Cancer research and diagnosis



Scientific research

Human genome research, animal and plant genome research, microbial metagenomic research

Key Parameters >>>

Parameters	Specification
Accuracy	> 99%
Number of reads	≤ 1 million
Read length	1-100 Kbp
Throughput	≤100Gb/run
Sequencing time	<4 hours
Size [mm]	370(L) × 242(W) × 148(H)
Weight	About 6.85 kg
Operating temperature	10 ~ 30°C
Operating humidity	< 85%(RH)
Operating system	OS Windows 10/11; CPU Intel i7 2.5GHz, RAM ≥ 16GB, HDD ≥ 1TB
Power supply	12-15VDC, 10A
Interface	USB 3.1 and USB 2.0

Sequencing chip >>>

- Mature technology**
 65nm process, mature semiconductor process
- Cost-effective**
 The only mass-produced 12-inch Nanopore Sequencing Wafer
- Highest density**
 1 million signal acquisition channels on a single chip, ten-million-level chips are under development