Real-time, on-demand sequencing in the palm of your hand
Nanopore sequencing technology is advancing at an unprecedented pace, promising a future where portable sequencing will be routine in surveillance and many other fields.

Jana Batovska, La Trobe University

MinION ~5 kb amplicon run basecalling all done at 34.28 Gb, I'll take that :)  

Dr. John Tyson, University of British Columbia
All the benefits of real-time nanopore sequencing in a portable, low-cost device

**Any length read**
Short to ultra-long reads (>4 Mb) to suit your requirements — complete genomic characterisation; SNVs, SVs, repeats, phasing, and transcript isoform resolution

**High yields**
As much as 50 Gb* data suitable for all applications — from whole genomes and transcriptomes to high-throughput targeted analyses

**Real time**
Immediate access to actionable results — from pathogen and antimicrobial resistance identification to fusion transcripts

**Portable**
Sequence samples at source — combine with VolTRAX™ for portable sample preparation

**Accessible**
Starter Packs from just $1,000 (MinION) and $4,900 (MinION Mk1C) — with no capital investment or complex IT infrastructure required

**Direct**
Study native DNA and RNA, not a copy — eliminate amplification bias and detect base modifications (e.g. methylation)

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*Theoretical max output (TMO). Assumes system is run for 72 hours at 420 bases / second. Actual output varies according to library type, run conditions, etc. TMO noted may not be available for all applications or all chemistries.
How will you use your MinION?

From the bench to the field, MinION devices are being utilised throughout the world to deliver new insights and actionable, real-time results for a range of applications.

Whole genome sequencing
Targeted sequencing
RNA sequencing
Metagenomics
Epigenetics

Microbiology
Microbiome
Environmental research
Transcriptome analysis

Infectious disease

Microbes

Plant research
Animal research
Cancer research
Clinical research
Human genomics

Image courtesy of Dr. Sarah Stewart Johnson, Georgetown University.
Your personal, portable DNA and RNA sequencer

Get complete control and creativity over when, where, and how often you sequence. MinION provides the power of nanopore sequencing in an accessible, fully portable device. Weighing only 100 g and running off a laptop, MinION generates tens of gigabases of real-time data in the field or lab.

USB powered device; link to laptop or desktop computer to operate

Sensor chip (ASIC) with 512 active channels for data acquisition and control

Sensor array with multiple nanopores for scaled-up sequencing

Sample added to flow cell here

Consumable flow cell where the biology and electronics come together for nanopore sequencing

Choose your MinION Starter Pack

<table>
<thead>
<tr>
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<th>Basic</th>
<th>Enhanced</th>
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<tbody>
<tr>
<td>MinION device</td>
<td>1</td>
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<tr>
<td>Flow cells</td>
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<td>Sequencing kits</td>
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<td>Wash kits</td>
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<td>Community Support</td>
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$1,000 $3,250

A wide range of training and support services are available, for more information visit store.nanoporetech.com.

Specification

Weight: 87 g (103 g with flow cell)
Size: W 105 mm | H 23 mm | D 33 mm

Buy now store.nanoporetech.com
MinION Mk1C provides the power of nanopore sequencing in a fully portable device with integrated real-time basecalling and data analysis, touchscreen operation, and wireless connectivity. Sequence and analyse your samples in the lab or field, and easily standardise assays across multiple sites or collaborators.

Choose your MinION Mk1C plan

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<th>Basic</th>
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<tbody>
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<td>Flow cells</td>
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<td>Wash kits</td>
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<td>Software licence and device warranty†</td>
<td>12 months</td>
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<td>Community Support</td>
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* Device purchase.
† Extended warranties available.

$4,900 $9,559 $9,300

A wide range of training and support services are available, for more information visit store.nanoporetech.com.

Use Flongle for smaller tests and analyses, or MinION Flow Cells for tens of gigabases of data

Integrated, real-time compute with pre-installed basecalling and analysis software

High-resolution touchscreen display allowing complete device control and easy visualisation of results

Data files are written to an onboard, 1 TB SSD; data can then be transferred to your own system

Specification

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<th>Weight</th>
<th>Size</th>
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<td>420 g</td>
<td>W 140 mm</td>
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MinION Mk1C COVID Starter Pack also available for simple, scalable, and rapid sequencing of SARS-CoV-2 samples.
A complete and streamlined workflow for rapid access to actionable results

**Prepare**
- Streamlined library preps — in as little as 10 minutes, with multiplexing options
- Scale according to your needs — same chemistry and kits used for Flongle, MinION, GridION, and PromethION
- Automate library preparation using the portable, USB-powered VolTRAX

**Sequence**
- Sequence what you need, when and where you need it
- Read lengths determined by your sample and experimental needs
- MinION devices sequence DNA and RNA directly — meaning no amplification bias and retained modification information (e.g. methylation)
- Run smaller sequencing tests and experiments or cost-effectively check your sample quality using Flongle on MinION

**Analyse**
- Real-time results for time-critical applications such as pathogen identification
- User controlled run time — stop sequencing when sufficient data generated, wash and reuse flow cell
- Portable data analysis using MinION Mk1C or combine MinION with a laptop
- Output raw signal or basecalled .fastq files for use in custom analysis pipelines

**Applications include:**
- Rapid metagenomic species identification and antibiotic resistance profiling
- Accurate high-coverage microbial genome assemblies (DNA and RNA)
- Enhanced large genome analysis (e.g. cancer samples) through accurate mapping of structural variation, repetitive regions, and phasing
- Quantify and characterise RNA splice variants, isoforms and fusion transcripts

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Bioinformatic capability needed:

- Use cloud-based or local EPI2ME platform for real-time analysis workflows. nanoporetech.com/analyse
- Explore your data and develop your bioinformatics skills with interactive tutorials and best practice workflows. nanoporetech.com/analyse
- Run open-source tools written and developed by the Nanopore Community. community.nanoporetech.com
- Access the latest research algorithms from Oxford Nanopore or use your own custom analysis pipelines. github.com/nanoporetech

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**More information** nanoporetech.com/products
Enhance your MinION sequencing workflow... with end-to-end analysis workflows

**Prepare**
Automated library preparation for nanopore sequencing.
- Small, USB-powered device
- Minimal hands-on time
- Reproducible results

nanopore.com/products

**Sequence**
Adapting MinION devices for smaller, rapid tests and analyses. Delivering as much as 2.8 Gb* data, Flongle is suitable for:
- Smaller samples (e.g. targeted regions and smaller genomes)
- Rapid sample ID or quality checking
- Low-cost regular testing

nanopore.com/products

**Analyse**
Providing straightforward, best-practice data analysis workflows and interactive tutorials — from basic quality control to genome assembly.
- Minimal installation requirements
- Interactive tutorials for your data
- Fully customisable

nanopore.com/analyse

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EPI2ME and EPI2ME Labs offer a rapidly growing number of streamlined, best practice analysis pipelines.

**EPI2ME:**
Simple, real-time data analysis workflows accessed through the cloud or locally using MinION Mk1C.

**EPI2ME Labs:**
Interactive tutorials and workflows allowing you to explore your data and develop your bioinformatics skills

**Workflows include:**
- SARS-CoV-2 analysis
- Metagenomic species ID
- Antimicrobial resistance profiling
- 16S-based microbial ID
- Structural variation analysis
- Plasmid sequencing
- Variant calling
- Clone validation
- Reference alignment

*Theoretical max output (TMO). Assumes system is run for 16 hours at 420 bases / second. Actual output varies according to library type, run conditions, etc. TMO noted may not be available for all applications or all chemistries.

† Local EPI2ME workflows on MinION Mk1C coming soon.