

Real-time, on-demand
sequencing in the palm
of your hand



MinION

“ 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

Immediate access to gigabases of data

MinION and MinION Mk1C allow you to sequence anything, anywhere — from the bench to the field — with real-time analysis providing immediate access to actionable results. The same DNA and RNA sequencing workflows are available across Oxford Nanopore devices, offering unrestricted read lengths, from short to ultra-long, and complete scalability to suit your needs.



Delivering tens of gigabases of data, MinION devices are suitable for a wide range of investigations, including:

- Low-pass large genomes (e.g. human)
- Complete microbial genomes and metagenomes
- Medium to high plex targeted sequencing
- Quantitative species identification
- Full-length isoform characterisation and quantification
- Base modifications as standard (e.g. methylation)

* 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.

All the benefits of real-time nanopore sequencing in a portable, low-cost device




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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

 Infectious disease

 Microbiology

 Microbiome

 Environmental research

 Transcriptome analysis

 Human genomics

 Clinical research



Image courtesy of Dr. Sarah Stewart Johnson, Georgetown University.

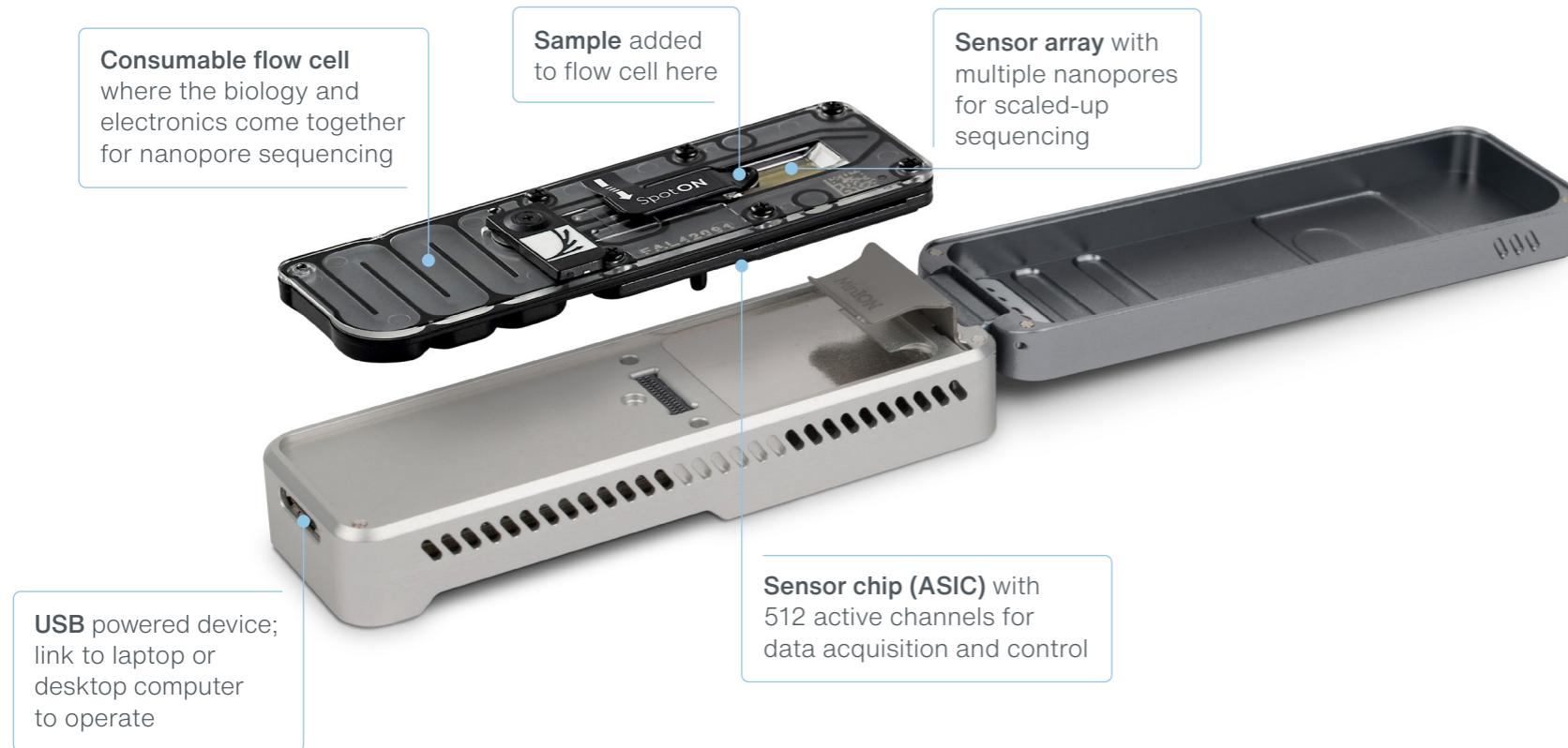
 Plant research

 Animal research

 Cancer research

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.



MinION

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

Choose your MinION Starter Pack

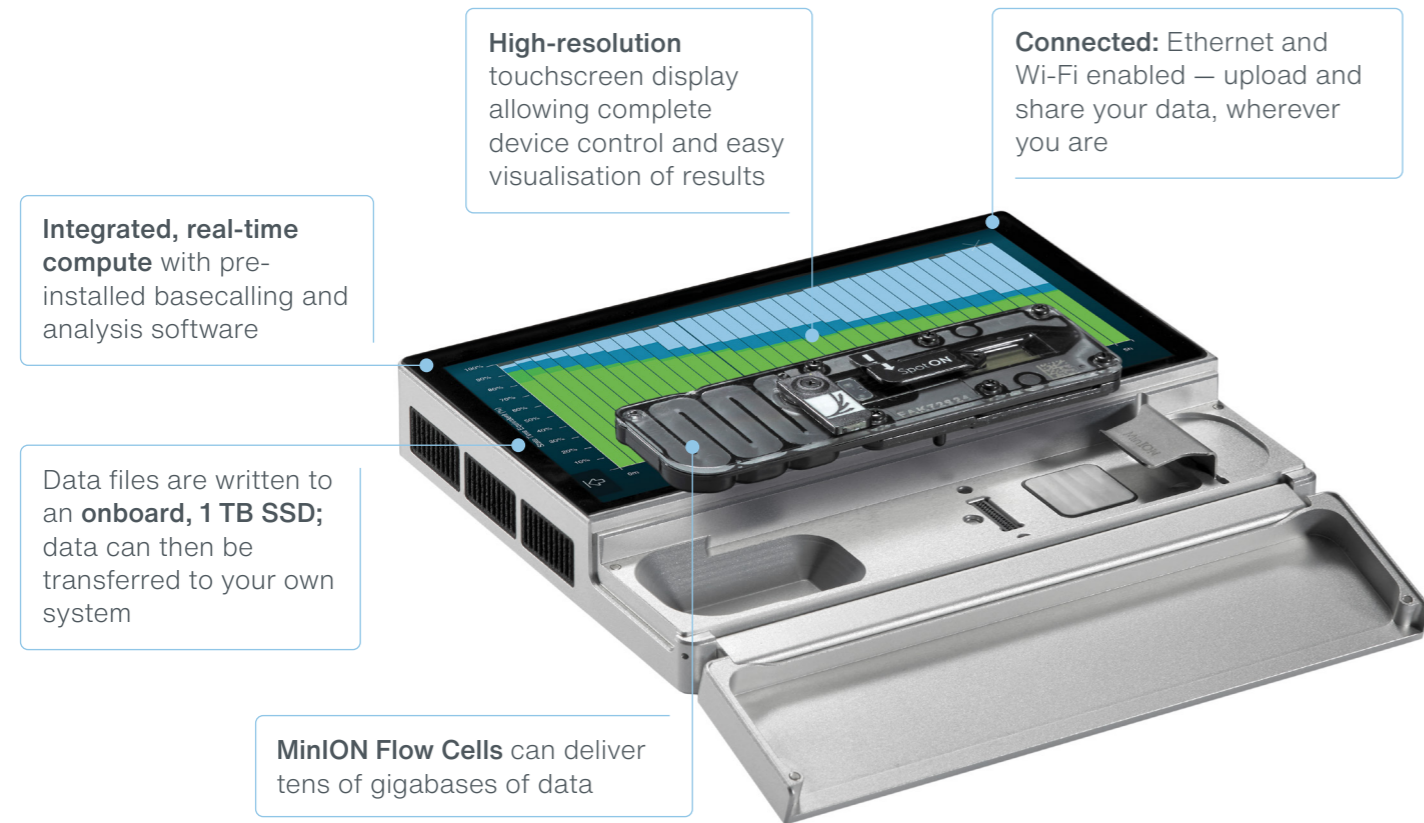
	Starter Pack	Enhanced Starter Pack
MinION device	1	1
Flow cells (R9.4.1)	1	4
Ligation Sequencing Kit (LSK-110)	1	1
Wash kits	1	1
Community Support	Included	Included
VWR Cat. No.	76487-168	76521-796

Enquire for pricing, and training and support services.

Buy now [vwr.com](https://www.vwr.com)

Your all-in-one, portable DNA and RNA sequencer

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.



MinION_{Mk1C}

Specification	
Weight 420 g	Size W 140 mm H 30 mm D 114 mm

Choose your MinION Mk1C plan

	Starter Pack	Enhanced Starter Pack	CapEx†
MinION Mk1C device	1	1	1
Flow cells (R9.4.1)	6	12	-
Ligation Sequencing Kit (LSK-110)	1	2	-
Wash kits	1	1	-
Software licence and device warranty*	12 months	12 months	12 months
Community Support	Included	Included	Included
VWR Cat. No.	76487-170	76521-798	76487-172

* Extended warranties available.
† Device purchase.

Enquire for pricing, and training and support services.



MinION Mk1C COVID Starter Pack also available for simple, scalable, and rapid sequencing of SARS-CoV-2 samples. **Discover more at [vwr.com](https://www.vwr.com).**

Buy now [vwr.com](https://www.vwr.com)

A complete and streamlined workflow for rapid access to actionable results



Prepare

- Streamlined library preps — in as little as 10 minutes
- High DNA/RNA yields from low input amounts
- Sample multiplexing for maximum throughput
- Application-specific kits (e.g. SARS-CoV-2 and 16S sequencing)

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)
- Adaptive sampling — on-sequencer target enrichment; reject or accept reads on a strand-by-strand basis

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

Streamlined library preparation for all applications...

A comprehensive range of library preparation kits are available, including direct, amplification-free DNA and RNA approaches that minimise potential bias and retain base modification information. Multiplexing (barcoding) options allow multiple samples to be analysed in a single sequencing run, maximising data generation while minimising costs.

Kit	DNA			RNA		
	Ligation	Rapid / Field	PCR	PCR cDNA	Direct cDNA	Direct RNA
Prep time	60 min	10 min	60 min + PCR	165 min	270 min	105 min
Input	1,000 ng ds DNA	From 50 ng HMW gDNA	100 ng dsDNA	1 ng RNA	100 ng poly-A ⁺ RNA	500 ng poly-A ⁺ RNA
PCR required	No	No	Yes	Yes	No	No
Output	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
Multiplexing	Yes	Yes	Yes	Yes	Yes	In dev.

Also available

- **New:** Ligation Sequencing Kit (Q20+) — our latest chemistry, optimised for modal raw read accuracy of Q20+ (99%+)
- Ultra-Long DNA Sequencing Kit — optimised for ultra-long DNA fragments and reads
- Field Sequencing Kit — all the benefits of rapid sequencing plus ambient shipping and storage
- Cas9 Sequencing Kit — streamlined, PCR-free enrichment of long targeted regions, retaining base modifications
- Application-specific library preparation kits (e.g. SARS-CoV-2 and 16S sequencing)
- Automatable workflows

For a full list of kits, including sample multiplexing options, visit vwr.com

...and end-to-end analysis workflows

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
- Plasmid sequencing
- Structural variation analysis
- Variant calling
- Clone validation
- Reference alignment

* Local EPI2ME workflows on MinION Mk1C coming soon.





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