

Terabases of long-read sequence
data, analysed in real time



Prometh**ION**

“ The PromethION is a real game changer. Combining ultra-long reads with high sequence output for the production of contiguous, high-quality reference genomes. Using this platform, we sequenced the 2.56 Gb lettuce genome at >100X coverage using just a few flow cells. ”

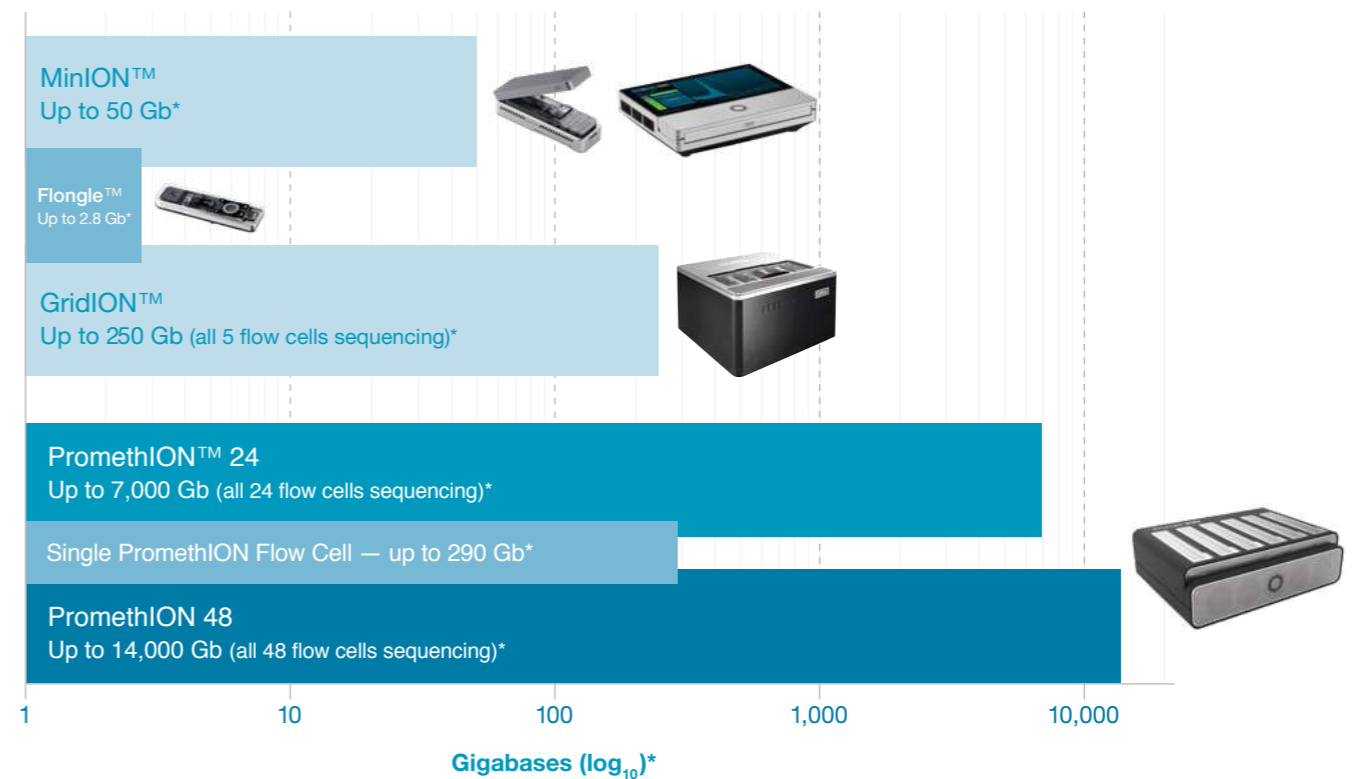
Dr. Alexander Wittenberg
KeyGene, PromethION service provider

“ ...we completed all 2.3 terabases of nanopore data collection in nine days on one PromethION, running up to 15 flow cells simultaneously...In terms of contemporary long-read sequencing platforms, this throughput is unmatched. ”

Shafin, K. et al.
bioRxiv 715722 (2019)

PromethION offers high-capacity benchtop sequencing that enables the delivery of sub-\$1,000 human genomes

PromethION 24 (P24) and PromethION 48 (P48) are designed to run up to 24 and 48 flow cells respectively. Each flow cell can be run independently, providing flexible, on-demand sequencing to suit your specific experimental requirements. PromethION Flow Cells deliver approximately six times the sequencing capacity of MinION Flow Cells.



* Theoretical max output when system is run for 72 hours (or 16 hours for Flongle) at 420 bases / second. Outputs may vary according to library type, run conditions, etc.

PromethION gives you control to start sequencing individual samples as and when you wish, generating data and providing immediate insight — on demand



Prepare

- Straightforward and streamlined library preps — in as little as 10 minutes
- Multiplex your samples with barcoding kits
- Same chemistry and kits used for Flongle, MinION, GridION, and PromethION — check your sample quality on a MinION or Flongle, before running the experiment on PromethION

Sequence

- Define your experiment to suit you — use a single flow cell or group multiple flow cells to obtain more data
- Start your experiment when you choose — no need to wait to fill the device
- Control each individual flow cell independently — run as many or as few as you wish at the same time, or add more whilst others are running

- Read lengths are determined by your sample and experimental needs — no need to fragment your sample, therefore making assembly, structural variation detection, and phasing easier
- PromethION sequences DNA and RNA directly — meaning no amplification bias and retained modification information

Analyse

- PromethION data acquisition unit contains a state-of-the-art basecall accelerator which gives you upwards of 200 (P24) or 400 (P48) TFLOPS of computing power
- Discover EPI2ME and EPI2ME Labs for streamlined, best practice analysis pipelines and tutorials.
- Choose to output the raw signal or basecalled .fastq files, so you can use your own custom analysis pipelines

Choose your PromethION plan



PromethION sequencing device and compute

Flow cells

Sequencing kits

Wash kits

Software licence and device warranty†

On-site Assurance and Familiarisation‡

* Device purchase.
† Extended warranties available.
‡ May be provided remotely where unable to access customer site.

	PromethION 24		PromethION 48	
	Starter Pack	CapEx*	Starter Pack	CapEx*
PromethION sequencing device and compute	1	1	1	1
Flow cells	120	-	192	-
Sequencing kits	20	-	32	-
Wash kits	10	-	10	-
Software licence and device warranty†	12 months	12 months	12 months	12 months
On-site Assurance and Familiarisation‡	Included	Included	Included	Included
	\$195,455	\$335,455	\$285,455	\$530,000

[Buy now](#) | store.nanoporetech.com

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



Service provider certification is also available for the PromethION.

PromethION on-site set-up — everything you need to start

On-site Assurance and Familiarisation* is included with all PromethION purchase plans — ensuring the set-up and configuration of your system is optimal. An Oxford Nanopore Technical Specialist will work with you to fully test the PromethION device after installation.

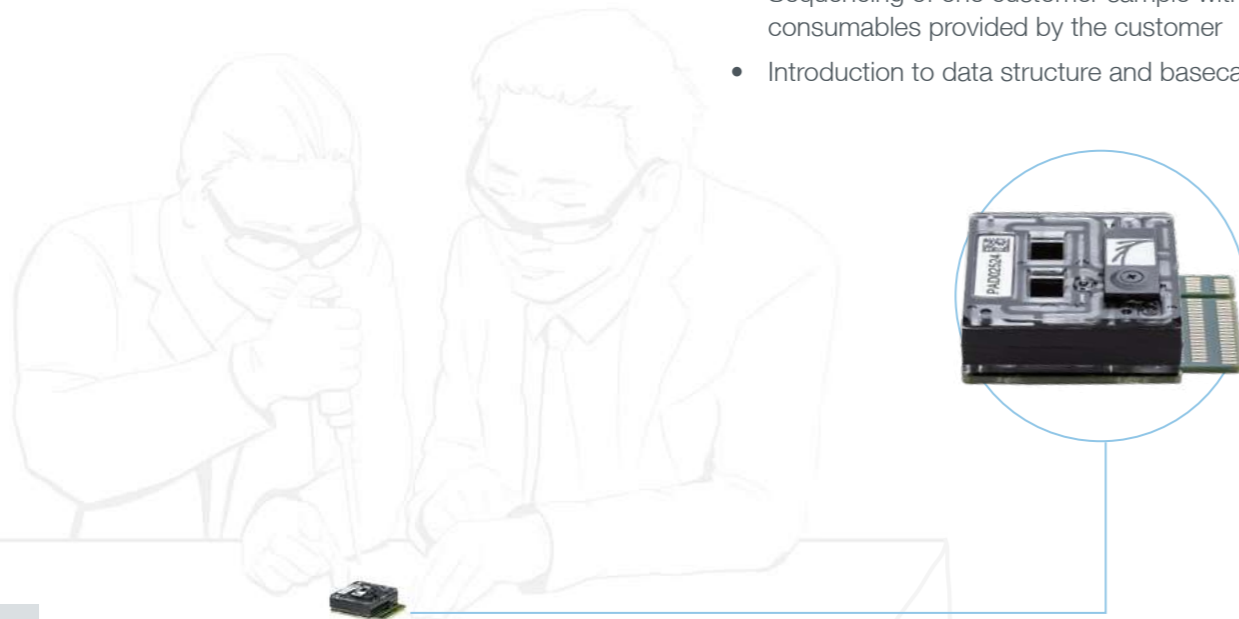
* May be provided remotely where unable to access customer site.

Pre-visit remote consultation

- PromethION installation assistance
- PromethION configuration assistance

On-site Assurance and Familiarisation*

- Installation and configuration review
- PromethION device and software introduction
- Loading PromethION Flow Cells
- Sequencing of one control sample with consumables provided by the customer
- Sequencing of one customer sample with consumables provided by the customer
- Introduction to data structure and basecalling



PromethION Advanced Training available when you need it

PromethION Advanced Training is a comprehensive, personalised course for up to four attendees. Two Oxford Nanopore experts will provide in-depth technology training with practical hands-on experience, running up to seven of your own samples. The training will provide participants with the tools to successfully complete nanopore sequencing experiments on PromethION devices.

PromethION Advanced Training	
Location	Oxford Nanopore labs or your site
Duration	2 days
Introduction to nanopore technology	✓
Experimental planning and sample QC	✓
PromethION Flow Cell loading practical	✓
Control experiment	✓
Oxford Nanopore software	✓
User-provided samples processed	Up to 7 samples
Flow cells included	8
Sequencing kits included*	2
Data analysis	✓
	\$19,998

*Third party reagents are provided only when training at Oxford Nanopore labs.

[Buy now](https://store.nanoporetech.com/training) store.nanoporetech.com/training

Customer network, data storage, and power requirements for PromethION operation

PromethION connection to customer network

2 x 10 Gbps fibre or copper ports

PromethION power requirements

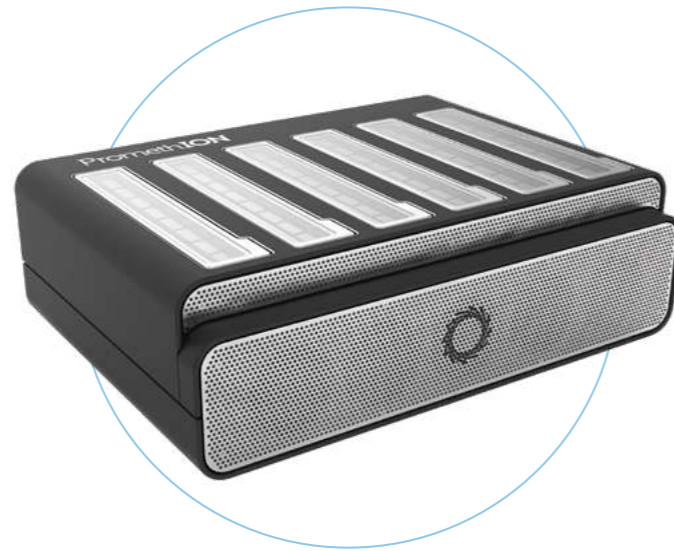
3 x power supplies:

- 1 x 1200 W for sequencing unit
- 2 x 2 kW for data acquisition unit

Real time and offline storage

Two types of customer data storage is recommended:

1. **Real time:** high-speed data streaming to local infrastructure
2. **Local:** offline long-term data storage



Product specifications

Sequencing Unit

- Up to 24 (P24) or 48 (P48) individually addressable flow cells
- Up to 72 hour run time
- Each flow cell has approximately six times the sequencing capacity of a MinION Flow Cell
- 72,000 (P24) or 144,000 (P48) channels across device can be sequencing at once
- As much as 290 Gb* per flow cell

Weight: 28 kg

Dimensions: W 590 mm, H 190 mm, D 430 mm

* Theoretical max output when system is run for 72 hours at 420 bases / second. Outputs may vary according to library type, run conditions, etc.

Data Acquisition Unit

- 2 kW max power consumption
- 32 TB (P24) or 64 TB (P48) SSD data storage
- 384 GB RAM
- Latest generation CPU for OS and orchestration
- State-of-the-art basecall accelerators
- Preloaded with Linux OS, PromethION OS, and MinKNOW
- Dual 10 Gbps fibre or ethernet connection (20 Gbps bandwidth)

Weight: 25 kg

Dimensions: W 178 mm, H 440 mm, D 470 mm

[More information](https://nanoporetech.com/promethion-requirements.pdf) | nanoporetech.com/promethion-requirements.pdf

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