Terabases of sequence data, analysed in real time
Offering the flexibility of 24 (PromethION 24) or 48 (PromethION 48) independently controllable, high-output flow cells and leveraging state-of-the-art algorithms and GPU technology, PromethION provides single or multiple users with on-demand access to terabases of sequencing data — ideal for large- and production-scale sequencing projects.

Flexible, high-capacity benchtop sequencing offering any read length you need, in real time

...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.

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.

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

Dr. Alexander Wittenberg
KeyGene, PromethION service provider

PromethION™ 2 and 2 Solo†
Up to 580 Gb (both flow cells sequencing)*

PromethION 24 and 48
Up to 7,000 Gb (P24) or 14,000 Gb (P48) (all 24 or 48 flow cells sequencing respectively)*

PromethION™ 24 and 48
Up to 7,000 Gb (P24) or 14,000 Gb (P48) (all 24 or 48 flow cells sequencing respectively)*

GridION™
Up to 250 Gb (all 5 flow cells sequencing)*

Flongle™
Up to 2.8 Gb*

MinION™
Up to 50 Gb*

* Theoretical max output (TMO). Assumes system is run for 72 hours (or 16 hours for Flongle) 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.
† PromethION P2 and P2 Solo devices are currently available for preorder, with Early Access devices expected to ship in 2022.

10^100
1,000
10,000
Gigabases (log_{10})*

1
10
100
1,000
10,000
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
- Any read length you need — from short to ultra-long (>4 Mb achieved)
- 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 (e.g. methylation)

**Analyse**
- PromethION data acquisition unit contains state-of-the-art NVIDIA Ampere GPU cards for basecalling acceleration
- Discover 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

---

**Bioinformatic capability needed:**
Use the cloud-based or local EPi2ME platform for real-time analysis workflows.
[nanoporetech.com/analyse](nanoporetech.com/analyse)

Explore your data and develop your bioinformatics skills with interactive tutorials and best practice workflows.
[nanoporetech.com/analyse](nanoporetech.com/analyse)

Run open-source tools written and developed by the Nanopore Community.
[nanoporetech.com/community](nanoporetech.com/community)

Access the latest research algorithms from Oxford Nanopore or use your own custom analysis pipelines.
[github.com/nanoporetech](github.com/nanoporetech)

**EPi2ME™**

**EPi2ME Labs**

**Community-developed tools**

**Research software and custom analysis**

---

1. Internal data generated using the Ultra-Long DNA Sequencing Kit.
Choose your PromethION plan

<table>
<thead>
<tr>
<th></th>
<th>PromethION 24</th>
<th>PromethION 48</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Starter Pack</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow cells</td>
<td>192</td>
<td>288</td>
</tr>
<tr>
<td>Sequencing kits</td>
<td>42</td>
<td>48</td>
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<tr>
<td>Wash kits</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Software licence and device warranty†</td>
<td>12 months</td>
<td>12 months</td>
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<tr>
<td>Assurance and Familiarisation</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td>Advanced Nanopore Training (see page 9)</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td><strong>CapEx</strong></td>
<td>$225,000</td>
<td>$310,000</td>
</tr>
</tbody>
</table>

* Device purchase.
† Extended warranties available.

Service provider certification is also available for the PromethION.

Expand your downstream analysis capacity with the NVIDIA DGX Station A100, incorporating four high-performance GPUs. Now available from Oxford Nanopore: nanoporetech.com/products
Get up and running quickly with comprehensive Assurance and Familiarisation

Our experienced technical services team are dedicated to supporting your success and will be with you every step of the way as you set up and start using your PromethION device.

Pre-delivery remote consultation
- PromethION installation assistance
- PromethION configuration assistance
- Experimental workflow discussion and guidance

Assurance and Familiarisation
- Installation and configuration review
- Hardware check
- Continued project and technical discussions
- Confirmation of consumable shipment schedules

Post-assurance follow-up
- Project progress review
- Q&A

PromethION Advanced Training – included as standard

All PromethION 24 and 48 purchase plans include PromethION Advanced Nanopore Training — a comprehensive, personalised course for up to four attendees. An Oxford Nanopore expert will provide in-depth technology training with practical hands-on experience, running up to four of your own samples.

PromethION Advanced Nanopore Training

<table>
<thead>
<tr>
<th>Location*</th>
<th>Oxford Nanopore labs, your site, or online</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>2.5 days</td>
</tr>
<tr>
<td>Experimental design and QC</td>
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<tr>
<td>Library preparation</td>
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</tr>
<tr>
<td>Flow cell priming and loading</td>
<td>✔</td>
</tr>
<tr>
<td>Configuring and running the PromethION</td>
<td>✔</td>
</tr>
<tr>
<td>Introduction to basecalling, analysis tools, and resources</td>
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</tr>
<tr>
<td>Flow cells included</td>
<td>8</td>
</tr>
<tr>
<td>Sequencing kits included</td>
<td>2</td>
</tr>
</tbody>
</table>

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

Training also available as a standalone package for new starters and existing PromethION users.

More information nanoporetech.com/services
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.

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 2.2 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

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 MiniION Flow Cell
• 64,200 (P24) or 128,400 (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

A100 Data Acquisition Unit
• 2.2 kW max power consumption
• 60 TB SSD data storage
• 512 GB RAM
• Latest generation CPU
• 4 x NVIDIA A100 GPUs
• Preloaded with Ubuntu 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

* 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.

More information nanoporetech.com/promethion-requirements.pdf

Buy now store.nanoporetech.com

A100 Data Acquisition Unit
• 2.2 kW max power consumption
• 60 TB SSD data storage
• 512 GB RAM
• Latest generation CPU
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• Preloaded with Ubuntu OS and MinKNOW
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