

# Device part number

MIN-101B

# Device name

MinION Mk1B

# Short description

MinION is a powerful, portable sequencing device that delivers cost-effective and real-time access to gigabases of long-read sequencing data. Small enough to fit in a pocket and powerful enough to deliver up to 30 Gb data, the USB-powered MinION allows researchers to rapidly generate actionable biological insights across a wide range of application areas.

# Product overview

The Oxford Nanopore Technologies® MinION™ is an electronic device that provides the interface between the user's computer (or MinIT device) and the nanopore sensor array. The MinION powers to the application-specific integrated circuit (ASIC), performs temperature control and transfers data to the PC through a single USB 3.0 port. The MinION Mk1B can be used with MinION flow cells and Flongle adapter and flow cells. The MinION device can be used for DNA and RNA sequencing. The MinION is operated using the MinKNOW™ software, which controls the device, experimental scripts and also performs basecalling.

# Technical specifications

Component	Specification
Size and weight	W 105 mm x H 23 mm x D 33 mm; 100 g
Power	5 W
Ports	1 x USB Type-B
Environmental conditions	Designed to sequence at 18°C to 25°C*

\* Functional range of electronics +5°C to +40°C

# Shipping and logistics

The Oxford Nanopore Technologies MinION device is stored and shipped at ambient temperature (2–25°C). MinION devices are shipped either in a padded envelope or a shipping box with flow cells and reagents.

**Please note that the MinION is shipped separately to the kits and flow cells in the Starter Pack.**

Products are shipped to customers within the USA and EU Monday to Thursday. Shipments to Canada, Norway, Korea and Japan are expedited Monday to Wednesday; with Australia and New Zealand leaving our warehouses on a Friday. Shipments to the rest of the world are made on Mondays to allow the full working week for packages to arrive. The delivery charges are calculated when a quote is raised or during checkout. Once an order is made, the delivery ID and delivery information can be tracked in the Store.

# IT requirements

[MinION IT requirements](#)

# Safety and legal info

Oxford Nanopore Technologies MinION Mk1B device is an electronic analysis system for use in scientific research.

**This product is for research use only.**

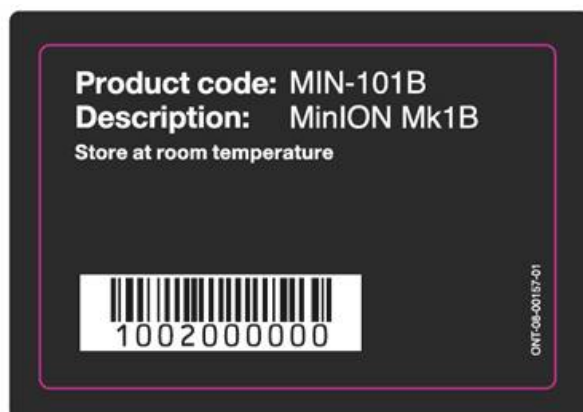
The safety information below provides you with the details needed to install and use the system safely.

## MinION electrical output values:

Supply voltage	5 V
Operating current	800 mA for 10 k 900 mA for 33 k 1 A maximum
Maximum power	5 W

## Labels on the instrument

Label on the MinION Mk1B:



Label on the MinION/GridION Flow Cell:



## Emergency procedures

In case of emergency, switch the computer off at the power switch and unplug the USB 3.0 cable.

## Declaration of conformity

The MinION Mk1B conforms to the EMC and Electrical Safety directives as outlined in the EC Declaration of Conformity.



## EC DECLARATION OF CONFORMITY

(1) Product

Model name(s): MinION MK1B

Model part number(s): MIN-101B / ONT-00-00022-00

Equipment type: Laboratory Equipment

(2) Manufacturer

Name: Oxford Nanopore Technologies plc

Address: Gosling Building, Edmund Halley Road,  
Oxford Science Park, Oxford,  
OX4 4DQ  
United Kingdom

(3) We, Oxford Nanopore Technologies plc, hereby declare under our sole responsibility that the above specified products conform to the following European Directives and applied harmonised standards:

**EMC** 2014/30/EU Electromagnetic Compatibility

**RoHS** 2011/65/EU Restriction of the use of certain hazardous substances in electrical and electronic equipment. Amended by 2015/863

(4) Harmonised standards applied:

**EMC** EN 61326-2-1:2013 using the common technical requirements of EN 61326-1:2013

**RoHS** EN IEC 63000:2018

(5) Signed for and on behalf of Oxford Nanopore Technologies plc.

Signature:

Date: 14th March 2023

Full Name: Rajeev Uppal

Position: Director Quality Assurance

Place of Issue: Oxford, UK

Document: D-0733  
Revision: 2

## International standards

The MinION Mk1B is certified to the following international standards:

Certification	Country
MET; UL61010/CSA-C22.2 No. 61010, third Edition: Electrical Equipment for Measurement, Control and Laboratory Use, Revision: May 11, 2012	USA and Canada

Certification	Country
RCM compliance	Australia and New Zealand

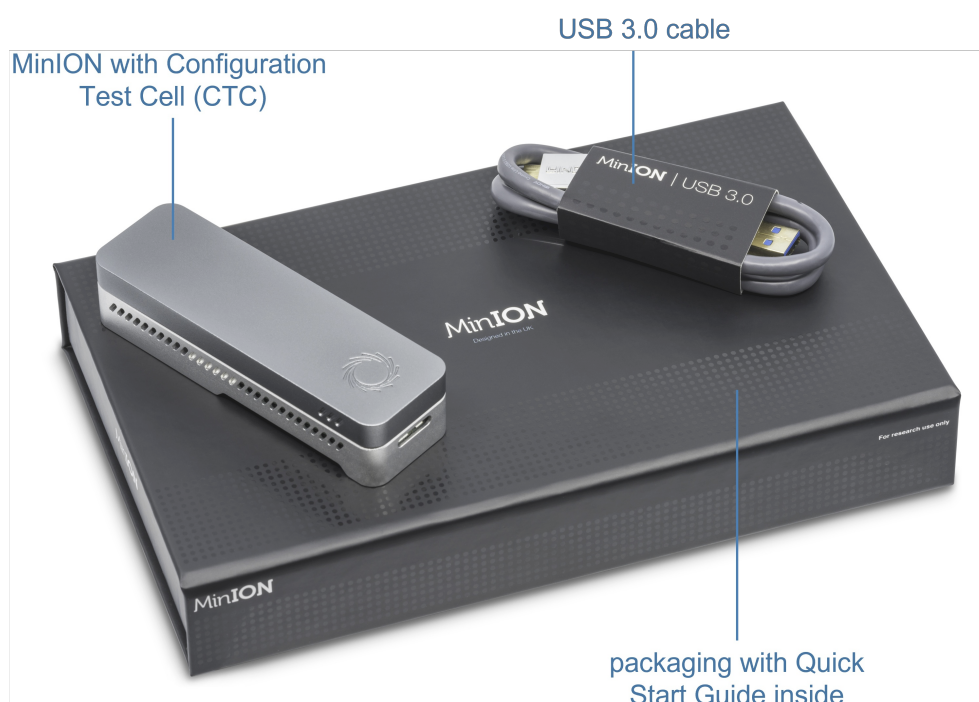
## License and Warranty

The license and warranty contract ensures your instrument is performing optimally by providing the latest up-to-date hardware and software. The contract guarantees that Oxford Nanopore Technologies support obligations are delivered during the contract period as laid out in sections 4 and 7 of the [Nanopore Product Terms and Conditions](#).

For more information, see the [Device Warranty](#) page on the Oxford Nanopore Store.

## What's in the box

The MinION is shipped together with a USB cable and a Configuration Test Cell.



Configuration is the process of testing that communication between the MinION device and the control software on the host computer is operational prior to experimental work being performed. This is carried out in the absence of any chemistry and uses a specific flow cell known as the Configuration Test Cell (CTC).



The USB 3.0 cable is used to connect the MinION device to the host computer. The crimped connector end is attached to the USB 3.0 port on the MinION and the flat end attaches to a USB 3.0 port on the host computer.



## Product cross-compatibility

The MinION can be used together with:

### Flow cells

- MinION/GridION Flow Cell (FLO-MIN114)
- MinION/GridION Flow Cell - RNA (FLO-MIN004RA)
- Flongle Flow Cell (FLO-FLG114)

### Kits

- Ligation Sequencing Kit V14 (SQK-LSK114)
- Ligation Sequencing Kit XL V14 (SQK-LSK114-XL)
- Ultra-Long DNA Sequencing Kit V14 (SQK-ULK114)
- Multiplex Ligation Sequencing Kit XL V14 (SQK-MLK114.96-XL)
- Rapid Sequencing Kit V14 (SQK-RAD114)
- Rapid Barcoding Kit 24 V14 (SQK-RBK114.24)

- Rapid Barcoding Kit 96 V14 (SQK-RBK114.96)
- Rapid PCR Barcoding Kit 24 V14 (SQK-RPB114.24)
- Native Barcoding Kit 24 V14 (SQK-NBD114.24)
- Native Barcoding Kit 96 V14 (SQK-NBD114.96)
- 16S Barcoding Kit 24 V14 (SQK-16S114.24)
- cDNA-PCR Sequencing Kit V14 (SQK-PCS114)
- cDNA-PCR Barcoding Kit V14 (SQK-PCB114.24)
- Direct RNA Sequencing Kit (SQK-RNA004)

### Software

Basecalling:

- MinKNOW
- Dorado

Basecalled reads are available as POD5 and FASTQ files.

### Downstream analysis:

- EPI2ME
- Oxford Nanopore-developed tools and pipelines
- Customer-developed tools and pipelines

## Change log

Date	Version	Changes made
24th April 2024	V6	<ul style="list-style-type: none"> <li>- Corrections made to technical specifications</li> <li>- Updated the Declaration of Conformity</li> <li>- Updated the License and Warranty information</li> <li>- Updated product cross-compatibilities</li> </ul>
26th February 2024	V5	<ul style="list-style-type: none"> <li>- Minor corrections and clarifications throughout the document</li> <li>- List of product cross-compatibilities has been updated</li> </ul>
24th March 2023	V4	<ul style="list-style-type: none"> <li>- The Declaration of Conformity document has been updated</li> <li>- The compatibilities list has been updated</li> </ul>
August 2022	V3	<ul style="list-style-type: none"> <li>- The Technical Specifications table has been updated to say "Functional range of electronics +5°C to +40°C"</li> <li>- Cross-compatibilities have been updated to include the Ligation Sequencing Kit V14 (SQK-LSK114) and the R10.4.1 flow cells (FLO-MIN114)</li> </ul>
Feb 2022	V2	<ul style="list-style-type: none"> <li>- "What's in the box" image has been updated to reflect the new MinION packaging</li> <li>- Updates to kit and flow cell compatibilities</li> </ul>
Nov 2020	V2	Updates to kit compatibilities