

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
Power	5 W
Ports	USB 3.0
Environmental conditions	Designed to sequence at 18° C to 24° C. Users can adapt this for other temperature requirements

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 SpotON Flow Cell:





Emergency procedures

In case of emergency, switch the computer off at the power switch (or switch off the MinIT at the power source) 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

Manufacturers Name: Oxford Nanopore Technologies Ltd.

Manufacturers Address: Edmund Cartwright House
4 Robert Robinson Avenue
Oxford Science Park
Oxford, OX4 4GA,
Great Britain

Declares that the product:


Model name:	MinION Mk1.0/MinION Mk1B
Model part No.	ONT-00-00020-00/MIN-MAPO02/ MIN-101B
Equipment Type:	Laboratory Equipment

Conforms to the following Directives:

EMC The product as detailed above is declared compliant to the protection requirements of Council Directive 2004/108/EC – the EMC Directive. Compliance based on testing to the following standards:
EN61326-2-1:2013 using the technical requirements of EN61326-1:2013

Electrical Safety The product as detailed above is declared compliant to the principle safety objectives of Council Directive 2006/95/EC – the Low Voltage Directive. Compliance based on testing to the following standard:
EN 61010-1: 2010

We, hereby declare that the equipment specified above conforms to the above directives and standards specified.

Signature:  **Date:** 20 MAY 2016.

Full Name: Alison Farrow
Position: Associate Director of Quality Assurance

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
RCM compliance	Australia and New Zealand

Software license and device warranty

The software licence and device 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](#).

This includes:

- Software updates upon release
- Hardware updates on release
- Return and Replace policy

The service contract extends our warranty to cover the instrument after your initial purchase contract has expired.

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

- FLO-MINSP6
- FLO-MIN106D
- FLO-MIN107
- FLO-MIN110

Kits

FLO-MINSP6 and FLO-MIN106D flow cells are suitable for all 1D sequencing kits:

- Ligation Sequencing Kit (SQK-LSK110)
- Ligation Sequencing Kit (SQK-LSK109)
- Cas9 Sequencing Kit (SQK-CS9109)
- PCR-cDNA Sequencing Kit (SQK-PCS109)
- PCR-cDNA Barcoding Kit (SQK-PCB109)
- Direct cDNA Sequencing Kit (SQK-DCS109)
- Direct RNA Sequencing Kit (SQK-RNA002)
- Rapid Sequencing Kit (SQK-RAD004)
- Rapid Barcoding Kit (SQK-RBK004)
- Rapid PCR Barcoding Kit (SQK-RPB004)
- 16S Barcoding Kit (SQK-RAB204)
- PCR Sequencing Kit (SQK-PSK004)
- PCR Barcoding Kit (SQK-PBK004)
- Field Sequencing Kit (SQK-LRK001)

FLO-MIN110 flow cells can be used with the Ligation Sequencing Kits:

- Ligation Sequencing Kit (SQK-LSK110)
- Ligation Sequencing Kit (SQK-LSK109)

Software

Basecalling:

- MinKNOW
- Guppy

Basecalled reads are available as .fast5 and FASTQ files.

Downstream analysis:

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

Change log

Date	Version	Changes made
Nov 2020	V2	Updates to kit compatibilities