

Device part number

MIN-101C

Device name

MinION Mk 1C

Short description

The Oxford Nanopore Technologies® MinION™ Mk 1C is a compact, portable device, combining the hardware for running nanopore sequencing experiments with fully integrated compute used for basecalling and onward analysis. The device is entirely self-contained and requires no other computing resource.

Product overview

The MinION Mk 1C can be used with MinION flow cells and the Flongle adapter and flow cells. Users can operate the system in an offline or online mode, enabling full sequencing and analysis to be performed in the lab and field. A high definition touch screen means users receive constant feedback regarding experiment progression and can easily interact with the device, without additional hardware.

Technical specifications

Component	Specification
Size and weight	H 33 mm x L 142 mm x W 118 mm; 455 g
Power	Supplied with a 6.3-19.6 VDC power supply Max rated current 10 A Max rated power 60 W
Compute spec	1 TB SSD Storage, 8 GB RAM, GPU embedded analysis accelerator
Connectivity	WiFi, USB 2.0, Ethernet
Pre-loaded software	Linux OS, MinKNOW and Guppy
Environmental conditions	Tested to function between 0°C to +40°C. Do not cover vents on the top or sides of the device

Shipping and logistics

The Oxford Nanopore Technologies MinION Mk 1C device is stored and shipped at ambient temperature (15–25° C).

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

The MinION Mk1C comes pre-configured with MinKNOW and with optimised capacity to run the range of MinION experiments. The on-board GPU operates as a basecalling accelerator to drive through the experimental data at an optimal rate.

In addition, the 1 TB SSD storage provides an average capacity of roughly 50 Gbases, stored in .fast5 and/or FASTQ format.

Device connectivity is provided through a number of options: WiFi, Ethernet and USB 2.0. Users can choose the option most suitable to their environment.

The MinION Mk 1C is installed with a Linux OS, and the integral software. MinKNOW Core operates the sequencing experiments on the MinION. It performs data acquisition, real-time analysis and feedback, basecalling, data streaming, providing device control, and ensuring that the platform chemistry is performing correctly to run the samples.

The MinKNOW Graphical User Interface (GUI) can control and configure the MinION to coordinate a sequencing experiment, and is accessed directly via the integrated high-definition touchscreen. The GUI has internal features that allow the user to monitor and define parameters in a sequencing experiment.

Safety and legal info

Intended use of the MinION Mk 1C device:

The Oxford Nanopore Technologies MinION Mk 1C device is an electronic analysis system for use in scientific research. The core technology is built around a nanopore that is able to detect single molecule events including nucleic acids (DNA/RNA), proteins and small molecules.

Special Considerations for MinION Mk 1C power supply units

Customers are advised to use the supplied 6.3-19.6 VDC power supply.

If a different power source is used, it must be safety isolated with a fuse or circuit breaker. This must be in line with the rated values for MinION Mk 1C and be previously approved according to national standards and regulations.

Special Considerations for MinION Mk 1C radio features

FCC ID for MIN-101C: 2ARGS-*****

This product contains FCC ID: VOB-P3310

Warning statement for modifications

WARNING: The FCC requires that you be notified that any changes or modifications to this device not expressly approved by Oxford Nanopore Technologies could void the user's authority to operate the equipment.

FCC Part 15 Statement – unintentional transmitters

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Part 15 Statement – intentional transmitters

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled EM environment. This equipment should be installed and operated with minimum distance 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna

or transmitter.

This product is for research use only

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

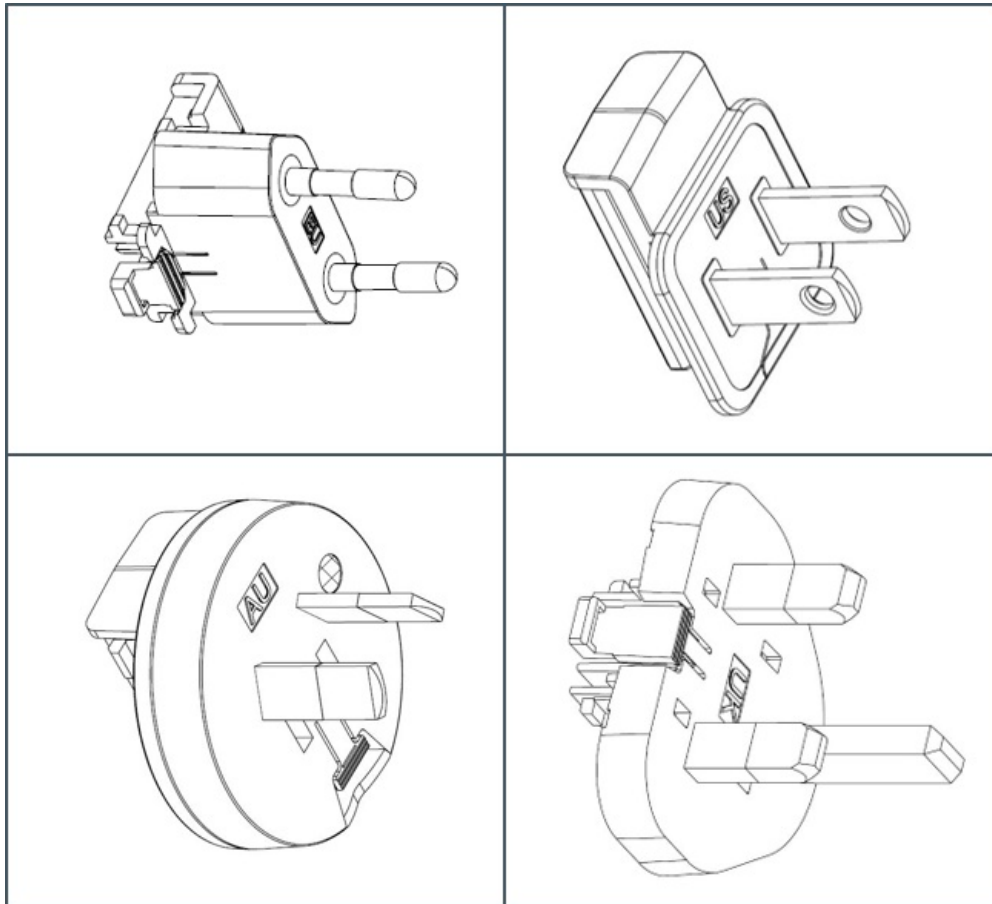
The service contract extends our warranty to cover the instrument after your initial purchase contract has expired.

What's in the box

The MinION Mk 1C is shipped together with an AC/DC adapter, pin-plugs for all regions, a USB cable and a Configuration Test Cell (CTC).

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).





Product cross-compatibility

The MinION Mk1C can be used together with:

Flow cells

- FLO-MINSP6
- FLO-MIN106D
- FLO-MIN107
- FLO-MIN110
- FLO-FLG001

Kits

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

- Ligation Sequencing Kit (SQK-LSK109)
- 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-MIN107 flow cells can be used with 1D² chemistry:

- 1D² Sequencing Kit (SQK-LSK309)

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

- 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