

Device part number

MNT-001

Device name

MinIT

Short description

MinIT is a simple, preconfigured IT solution for MinION and Flongle sequencing. It performs instrument control, basecalling and EPI2ME real-time analysis workflows — eliminating the need for a dedicated laptop. The device can be controlled using a phone, tablet, or laptop, providing further flexibility for lab- or field-based sequencing.

Product overview

MinIT (MinION IT) is a preconfigured, small-footprint computer that allows running of a single MinION, and removes the need for additional IT infrastructure in a sequencing experiment. It removes the variability generated by a range of IT hardware platforms that are utilised in the field, but not necessarily optimised for MinION. MinIT guarantees throughput and performance, by supporting MinION through all types of available experimentation.



The MinIT is an advanced computational device with the necessary features to co-ordinate basecalling in real-time, via integrated Guppy placed in MinKNOW. Real-time basecalling is governed by the 8 GB RAM for manipulation of sequence data, and the GPU basecalling accelerator drives the basecalling through its significantly powerful, small-footprint processing abilities.

The SSD storage is sufficient for temporary storage of data from a sequencing experiment; we advise the data is moved and managed on a server or larger storage system, due to the quantity of data generated by a MinION run.

Technical specifications

Component	Specification
Size and weight	W 65 x L 120 x D 40 mm, 290 g
Power	30 W
Compute spec	512 GB SSD Storage, 8 GB RAM, GPU embedded compute
Pre-loaded software	Linux OS, MinKNOW, Guppy, EPI2ME
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 MinIT 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

MinIT comes with an advanced GPU, with optimised capacity, to run the range of MinION experiments; this operates as a 'basecalling accelerator' to drive through the experimental data at an optimal rate. The MinIT is capable of reading the bases in real-time over the length of a run.

In addition, the 512 GB SSD storage provides an average capacity of roughly 30 Gbases, stored in FASTQ and/or .fast5 format.

The interface for the MinION can be either the USB 2.0 or USB 3.0 port. The presentation hardware i.e. laptop, tablet or smartphone, for the GUI element of MinKNOW, can be linked via wireless connections. The device is powered by 15 VDC from an AC/DC adapter supplied with a MinIT. The ethernet port is a plated RJ45 for 10, 100 and 1000 MB data transfer ethernet cables.

MinIT is installed with a Linux OS, and the integral software, containing all functional elements to produce basecalled data.

The MinKNOW Graphical User Interface (GUI) can control and configure the MinION to co-ordinate an sequencing assay. Furthermore, it can be presented through three types of hardware: computer/laptop, tablet or smartphone. The GUI has internal features that allow the user to monitor and define parameters in a sequencing experiment.

MinKNOW Core operates the MinION 'behind the scenes' of the MinKNOW GUI. It performs data acquisition, real-time analysis and feedback, basecalling (through integrated Guppy), data streaming, providing device control, and ensuring that the platform chemistry is performing correctly to run the samples.

Please note that software updates are currently only available via an Ethernet connection.

Safety and legal

Intended use of the MinIT device

Oxford Nanopore Technologies® MinIT™ 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.

This product is for research use only

Electrical information

Supply voltage	14–17 VDC input. 90–264 VAC – wall adapter input, 47–63 Hz – wall adapter input
Operating current	up to 2 A (dependent on basecalling load)
Maximum power	30 W

Labels on the instrument

The labels on MinIT:



Label on the SpotON Flow Cell:



Emergency procedures

In case of emergency, switch the MinIT off at the power source and unplug the power cable from the back of the device.

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 MiniT is shipped together with a power supply and adapters for multiple countries:



Product cross-compatibility

The MiniT can be used together with the MiniON Mk 1B.

Change log

Date	Version	Changes made
13th Aug 2019	V1	Initial version

Date	Version	Changes made
18th May 2020	V2	Removed Bluetooth compatibility