

Device part number

PRO-SEQ002

Device name

PromethION 2 Solo

Short description

The PromethION 2 Solo is a small benchtop device designed to run up to two PromethION flow cells. Each flow cell is independently addressable, meaning that experiments can be run concurrently or individually. The PromethION 2 Solo plugs into a GridION Mk1 or user compute for real-time data streaming and analysis.

Product overview

PromethION 2 Solo is a modular nanopore sequencing device using the same technology found in the MinION and GridION devices. It allows up to two sequencing experiments to be run concurrently or individually. PromethION 2 Solo also allows users to offer nanopore sequencing as a service.

The PromethION 2 Solo contains two sequencing ports where PromethION flow cells can be inserted. The device has no integrated compute, but can be plugged into a GridION Mk1 or a stand-alone computer that meets the minimum spec. This allows the device to basecall, in real-time, the data generated by two flow cells. The current chemistry and software enables generation of up to 290 Gbases* of data from a single PromethION flow cell (*theoretical max output based on sequencing at 420 bps for 72 hours).

The device has a USB Type-C port for connecting to external compute (e.g. a GridION device) - as such, setting up a PromethION 2 Solo requires no facility upgrades.



Technical specifications

Component	Specification
Size and weight	152 x 110 x 87 mm, 1.5 kg
Installation ports	1x USB Type-C (3.0 at 5 Gbps) 1x 12 VDC barrel power connector
Software installed	P2 Solo device driver
Compute specification	N/A
Environmental conditions	Designed to sequence at +18°C to +22°C*

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

Shipping and logistics

The Oxford Nanopore Technologies PromethION 2 Solo device is stored and shipped at ambient temperature (15–25°C).

Please note that the PromethION 2 Solo is shipped separately to the kits and flow cells.

IT requirements

[PromethION 2 Solo IT requirements](#)

Safety and legal information

Intended use of the PromethION 2 Solo device

Oxford Nanopore Technologies® PromethION 2 Solo 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

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

Electrical information

Supply voltage	AC mains input: 100-240 VAC \pm 10% (50/60 Hz)
Maximum rated current	5 A
Maximum rated power	60 W

Emergency procedures

In case of emergency, switch the PromethION 2 Solo off at the power switch and unplug the power cables 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 PromethION 2 Solo is shipped together with the necessary cables and Configuration Test Cells to confirm your hardware is functioning as expected.

Configuration is the process of testing that communication between the PromethION 2 Solo device and the control software 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 PromethION 2 Solo is packed into a box that contains everything needed for installing the device. The shipping weight is ~2 kg, meaning no special equipment is required for installing the device in your laboratory.

Product cross-compatibility

The PromethION 2 Solo can be used together with:

Flow cells

- FLO-PRO002
- FLO-PRO114M

Kits

FLO-PRO002 flow cells are suitable for:

- Ligation Sequencing Kit (SQK-LSK110)
- Ligation Sequencing Kit (SQK-LSK109)
- PCR-cDNA Sequencing Kit (SQK-PCS111)
- PCR-cDNA Barcoding Kit (SQK-PCB111.24)
- PCR-cDNA Sequencing Kit (SQK-PCS109)
- PCR-cDNA Barcoding Kit (SQK-PCB109)
- Direct cDNA Sequencing Kit (SQK-DCS109)
- Direct RNA Sequencing Kit (SQK-RNA002)

FLO-PRO114M flow cells are suitable for V14 Sequencing Kits:

- Ligation Sequencing Kit (SQK-LSK114)
- Ligation Sequencing Kit XL (SQK-LSK114-XL)
- Native Barcoding Kit 24 V14 (SQK-NBD114.24)
- Native Barcoding Kit 96 V14 (SQK-NBD114.96)
- Rapid Sequencing Kit V14 (SQK-RAD114)
- Rapid Barcoding Kit 24 V14 (SQK-RBK114.24)
- Rapid Barcoding Kit 96 V14 (SQK-RBK114.96)
- Ultra-Long DNA Sequencing Kit V14 (SQK-ULK114)

Software

Basecalling:

- MinKNOW
- Guppy

Downstream analysis:

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

Change log

Date	Version	Changes made
12th December 2022	V2	- The theoretical maximum output has been updated to say "theoretical max output based on sequencing at 420 bps for 72 hours" - Updated PromethION Flow Cell compatibilities with recently-released V14 kits
21st September 2022	V1	Initial document publication