



Line

On-demand sequencing
for applied applications



What is Q-Line?

Rapid, end-to-end sequencing workflows for routine and applied applications

Launching with the GridION™ Q, the ISO9001-qualified Q-Line sequencing portfolio from Oxford Nanopore Technologies delivers all of the benefits of real-time, on-demand nanopore sequencing in a locked-down, standardised format – enabling the implementation of routine, long-term workflows for in-house validated assays.

Benefit from:

- Proven, locked-down technology
- ISO 9001:2015 certified product manufacturing process
- Full operating software and consumable version support and supply for 12 months post purchase
- Clearly defined, visible product update pathway and implementation support
- Same pricing as standard nanopore sequencing devices and consumables



Why nanopore sequencing for controlled environments



Real-time analysis

- Immediate access to actionable results
- Rapid identification of microbes, antimicrobial resistance, gene fusions, and more
- Early sample insights and QC
- Enough data? Wash and reuse flow cell



Your choice of read length

- Match read length to your application — from short to ultra-long
- Enhance microbial discrimination with long reads
- Resolve structural variants, repeats, and phasing
- Call single nucleotide variants



Direct, amplification-free sequencing

- Sequence native DNA not a copy
- Eliminate amplification bias
- Amplification-free targeted sequencing approaches
- Retain and detect modified bases alongside nucleotide sequence



Scalable, on-demand sequencing

- Run five independent flow cells on GridION*
- Sequence what you need, when you need it — no sample batching required
- Small footprint enables easy integration to existing workflows
- Scale your workflows with Flongle™ and/or MinION™*



Streamlined, automatable library prep

- Rapid library prep
- Automatable high-throughput workflows
- High sequencing yields from low input amounts
- Multiplex for even higher sample throughput



Proven technology

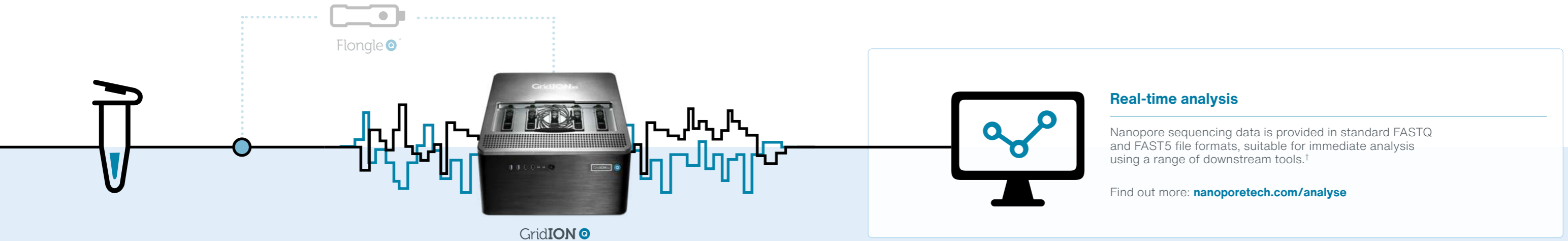
- ISO9001:2005 manufacturing process
- Fixed and clear product upgrade path
- Full operating software and consumable support and supply for 12 months post purchase
- Rapid and comprehensive product support

* Flongle and MinION Q-Line devices coming soon, please enquire.

Fully integrated, fully automated food safety testing using the GridION at Clear Labs, USA.

Enhance your routine workflows

Streamlined sample prep, on-demand sequencing, and real-time analysis.



Prepare

- Automatable, streamlined library prep
- Same chemistry and kits used for all nanopore devices — pilot new device, consumable, or protocol updates in any nanopore device before applying to controlled Q-Line workflow
- Run smaller sequencing tests and experiments, or cost-effectively check your sample quality using Flongle Q[†]

Sequence

- Control each individual flow cell independently — run as many or as few as you wish and add more whilst others are running
- Sequence what you need, when you need it — no sample batching required
- Eliminate PCR bias through direct sequencing of native DNA

Analyse

- High-performance data processing capability with integrated basecall accelerator delivers real-time local analysis with no burden on existing IT infrastructure
- Real-time data streaming for immediate access to results[†]
- Stop sequencing as soon as result obtained, wash and reuse flow cell

Real-time analysis

Nanopore sequencing data is provided in standard FASTQ and FAST5 file formats, suitable for immediate analysis using a range of downstream tools.[†]

Find out more: nanoporetech.com/analyse

Applications include:

- Rapid species ID for food safety, outbreak surveillance, supply chain monitoring, and industrial diagnostics
- Real-time antimicrobial resistance characterisation
- Routine veterinary diagnostic screening
- Standardised characterisation of human samples, including delineation of complex structural variants and repeat regions

^{*}Coming soon, please enquire. [†]Q-Line analysis tools coming soon.

Library preparation

The first kit to be made available in the Q-Line range is the Ligation Sequencing Kit Q – a versatile library preparation kit combining high sequencing yields and control over read length with streamlined, automatable processing.

Ligation Sequencing Kit Q

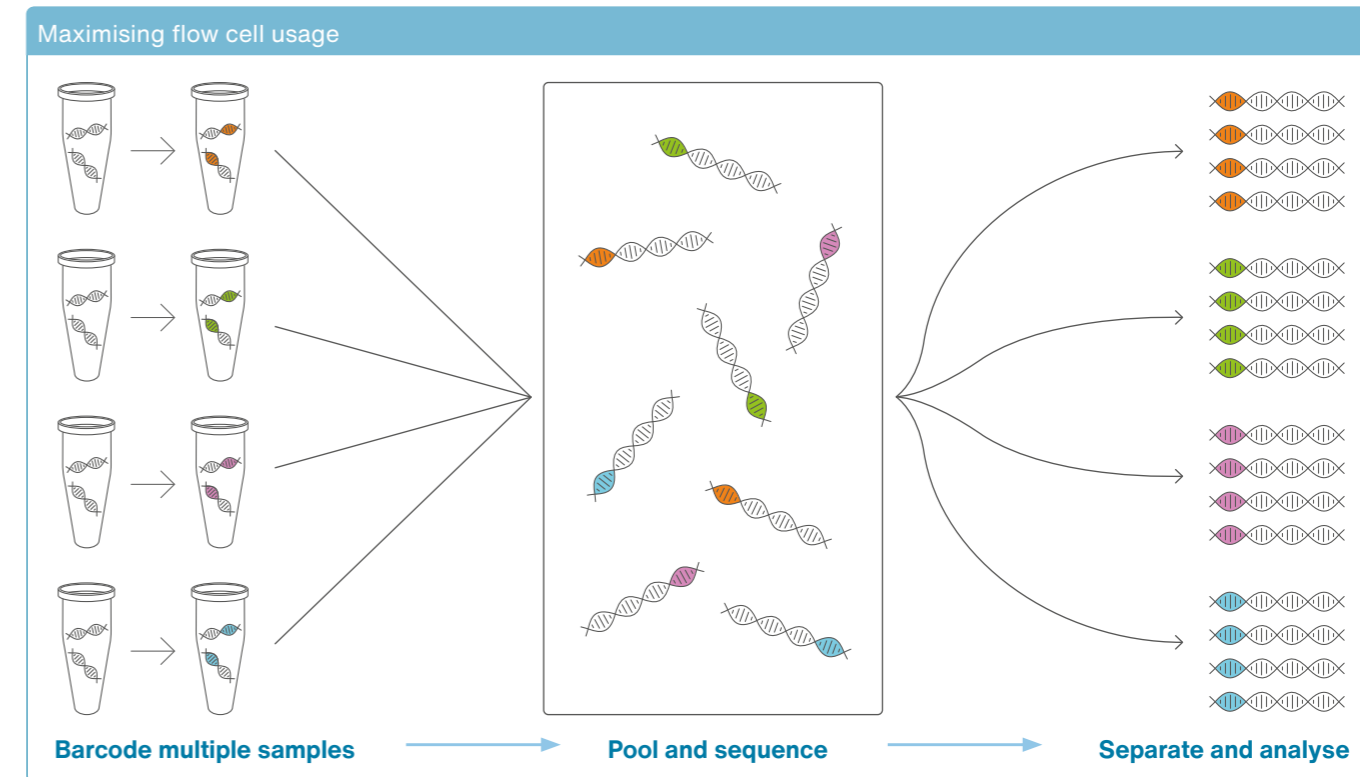
Ligation Sequencing Kit Q
(Q-SQK-LSK-109)

Prep time	60 mins
Input amount	1,000 ng dsDNA
Fragmentation	Optional
Read length	Equal to fragment length
PCR required	No
Multiplexing options	Native Barcoding Expansion pack

- DNA ends are repaired and dA-tailed
- Sequencing adapters are ligated onto the prepared ends
- Fragment lengths can be controlled by fragmentation or size selection

Sample multiplexing

Q-Line Native Barcoding Expansion packs enable up to 24 samples to be run on a single flow cell – allowing maximum data generation and lowering the cost per sample. As PCR is not required, samples can be multiplexed without loss of base modification information.



Q-Line multiplexing kits:

- Native Barcoding Expansion 1-12 Q (Q-EXP-NBD104)
- Native Barcoding Expansion 13-24 Q (Q-EXP-NBD114)
- Coming soon: 16S Barcoding Kit Q and Rapid Barcoding Kit Q

GridION Q

A locked-down version of our flexible, high-throughput benchtop system with integrated compute.

With the capacity to run five independent flow cells, the GridION Q offers the same flexibility, specifications, and pricing as the established GridION Mk1 platform, but with fixed software and chemistry updates — allowing users to set-up robust, long-term, in-house validated sequencing workflows. Integrated high-performance compute alleviates data analysis bottlenecks.

Up to 2,560 active channels can be sequencing at one time on the GridION

Consumable flow cell where the biology and electronics come together for nanopore sequencing

Onboard data analysis offering real-time local analysis

Sample added to flow cell here

Specification

Weight
11 kg

Size
W 370 mm | H 220 mm | D 365 mm

5 flow cells can be operated individually or together, generating up to 250 Gb* of data



*Theoretical max output when system is run for 72 hours at 420 bases / second. Outputs may vary according to library type, run conditions, etc.

Choose your GridION Q plan



- GridION Q device
- Flow cells
- Sequencing kits
- Wash kits
- Software licence and device warranty[†]
- Remote Installation Assurance[‡]

* Device purchase.
[†] Extended warranties available.
[‡] A wide range of training and support services are available, visit store.nanoporetech.com/services for more information.

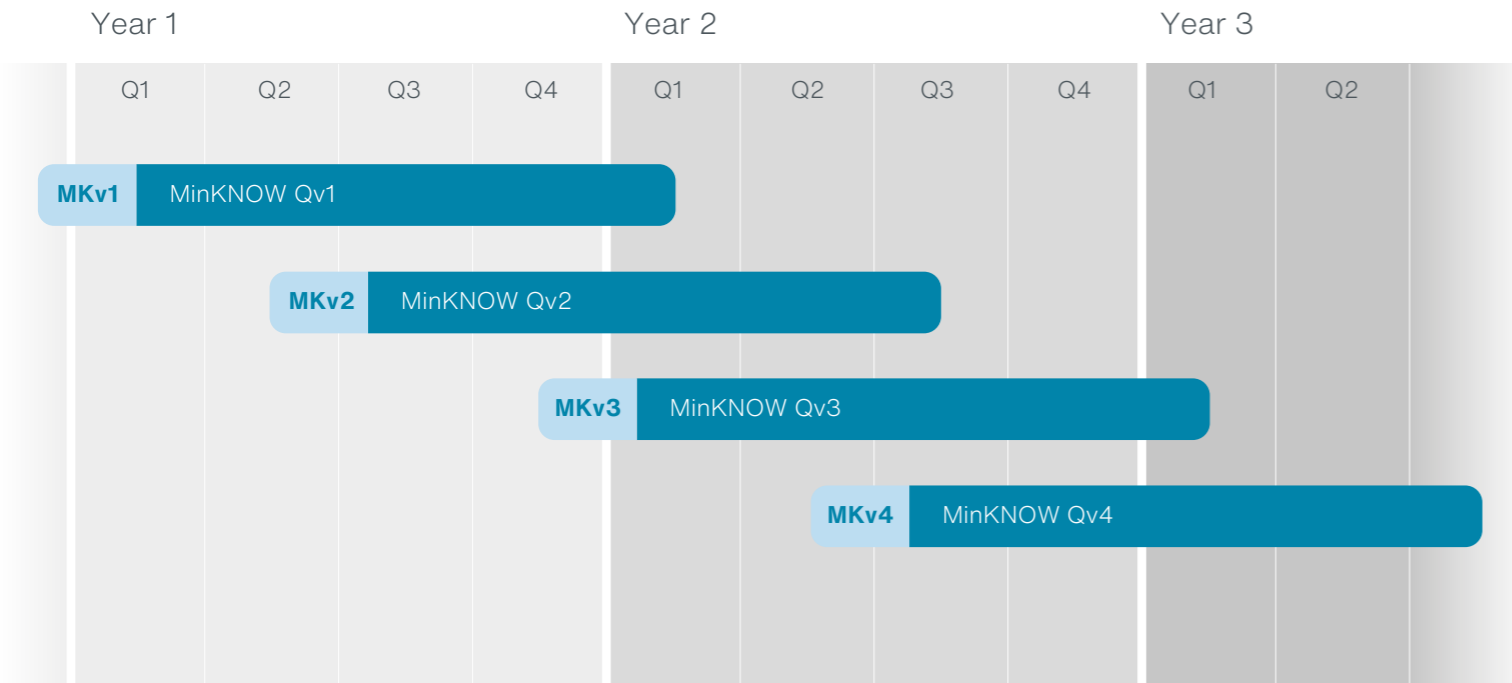
	Starter Pack	CapEx*
GridION Q device	1	1
Flow cells	60	-
Sequencing kits	10	-
Wash kits	5	-
Software licence and device warranty [†]	12 months	12 months
Remote Installation Assurance [‡]	Included	Included
	\$49,955	\$69,955

Clearly defined product update path

Q-Line products benefit from extensive testing in the field prior to release.

Q-Line will deploy versions of kits, flow cells, and software that have already been extensively used by the Nanopore Community as research-grade products. Users can test out assays on Oxford Nanopore research products and use the Q-Line roadmap to identify when specific features will be frozen and implemented.

The MinKNOW™ operating software and incorporated base caller, plus all consumables, are fully supported for 12 months post release, reducing the requirement to revalidate routine workflows. Optional software updates are available every 6 months, allowing novel features to be integrated more rapidly if desired (see figure).



Rapid access to comprehensive support

All GridION Q purchase plans provide comprehensive and rapid support, enabling confident integration into routine, long-term workflows.

Installation support:

- Customer Services initial set up call
- Technical Support experimental set up call
- Remote walk-through and an overview of nanopore sequencing with Q&A
- Remote installation and configuration assistance
- Remote platform QC check

On-demand technical support



First response
within 24 hours
(Monday-Friday)



Technical call
within 48 hours
of first response



Device replacement
for unresolved cases within
5 days (from first response)

All information correct at time of publication. May be subject to change.

Rapid sequencing workflows for routine and applied applications

Locked-down Q-Line products are suitable for all long-term, internally validated sequencing workflows and environments where rapid and reliable results are required.



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