

 **avantor**[™]
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 **STILLA**[®]

Nio[™]**+**

The next leap forward in digital PCR.

Automation-friendly.

Capacity of 768 chambers.

Continuous loading.

All-In-one.

7 colors.



For Research Use Only. Not for use in diagnostic procedures.

Say hi to Nio™+

When we set out to build our next digital PCR instrument, we aimed to create something truly unique. With the release of Nio™+, we are confident that we have succeeded.

Nio™+ is a versatile, all-in-one, fit-for-throughput, digital PCR instrument with unparalleled user-friendliness.

It is easy to use, fast and highly automated. It also features some of the best hardware and software we have built.

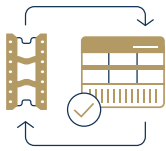
And we cannot wait to see what you will do with it.

The Stilla Technologies team



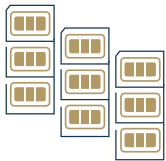
Core capabilities.

Processing hundreds of samples a day? Running highly multiplexed experiments? Doing both? Nio™+ supports labs regardless of size, and has your use cases covered.



Automation-friendly.

Our Chip Plates work much like standard SBS plates. They hold 48 samples, are distanced at 9mm to suit your multichannel pipette, and work nicely with your existing Hamilton, Tecan, Open-trons or other similar liquid handling machinery.



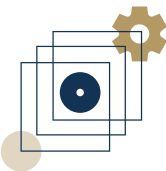
Capacity of 768 chambers.

In any 8 hour span of laboratory work, Nio™+ offers a capacity of 768 chambers processed. With 2 thermocyclers and a smart Chip Plate queue built in, you could process over 768 chambers.



Continuous loading.

Laboratory work is not easy to schedule. Nio™+ allows you to add Chip Plates whenever you want, whether the instrument is running an experiment or not. Your team can prepare experiments on the machine as it is running, or in serenity on any PC in the lab office.



All-In-one.

No messing around with oils, no transferring plates, no nothing. You add sample & mix to the Chip Plates, insert them and press play. Digital PCR in an all-in-one instrument. Measuring just 56cm by 67cm, the Nio™+ fits in any lab.



7 colors.

Nio™+ is the only 7-color instrument on the market, giving you easy access to 7 target capabilities. For even higher plexed assays, you can combine colors to achieve well over 20 targets in a single chamber; natively supported in our software.

Learn more on the following pages →

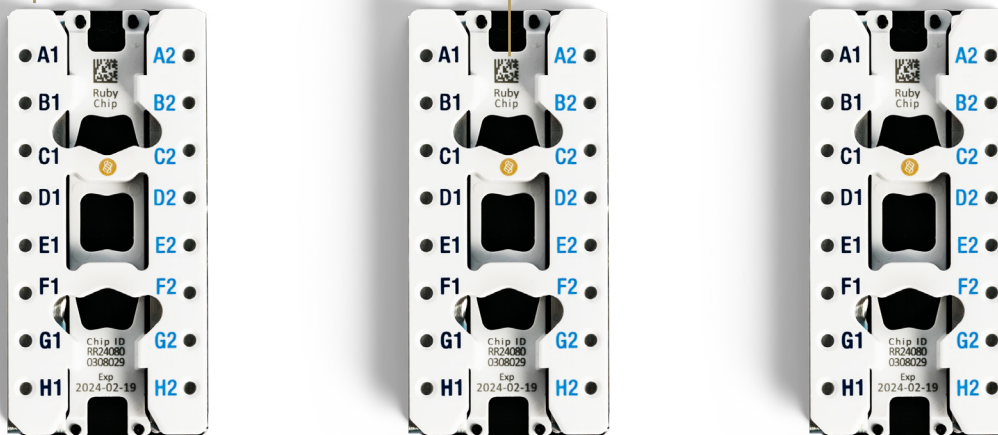
Microfluidics.

Automation-friendly.

The same dimensions as the lab consumables you already use, and compatible with your existing equipment. Our Ruby Chip is the most user-friendly microfluidics consumable we have built to date.

1-to-3 Ruby Chips go on our Chip Plates, which play nicely with our Ruby Chip Automated Liquid Handling Support Device.

Chip & Chip Plate barcodes can be read by Nio™+, to assign experiment files automatically.



Ruby chambers are much like regular wells and spaced at 9mm to be conveniently pipettable with multi-channel pipets.



Pierce chips confidently.

Manually pipetting? We have designed a simple tool that pierces the aluminium seal easily.



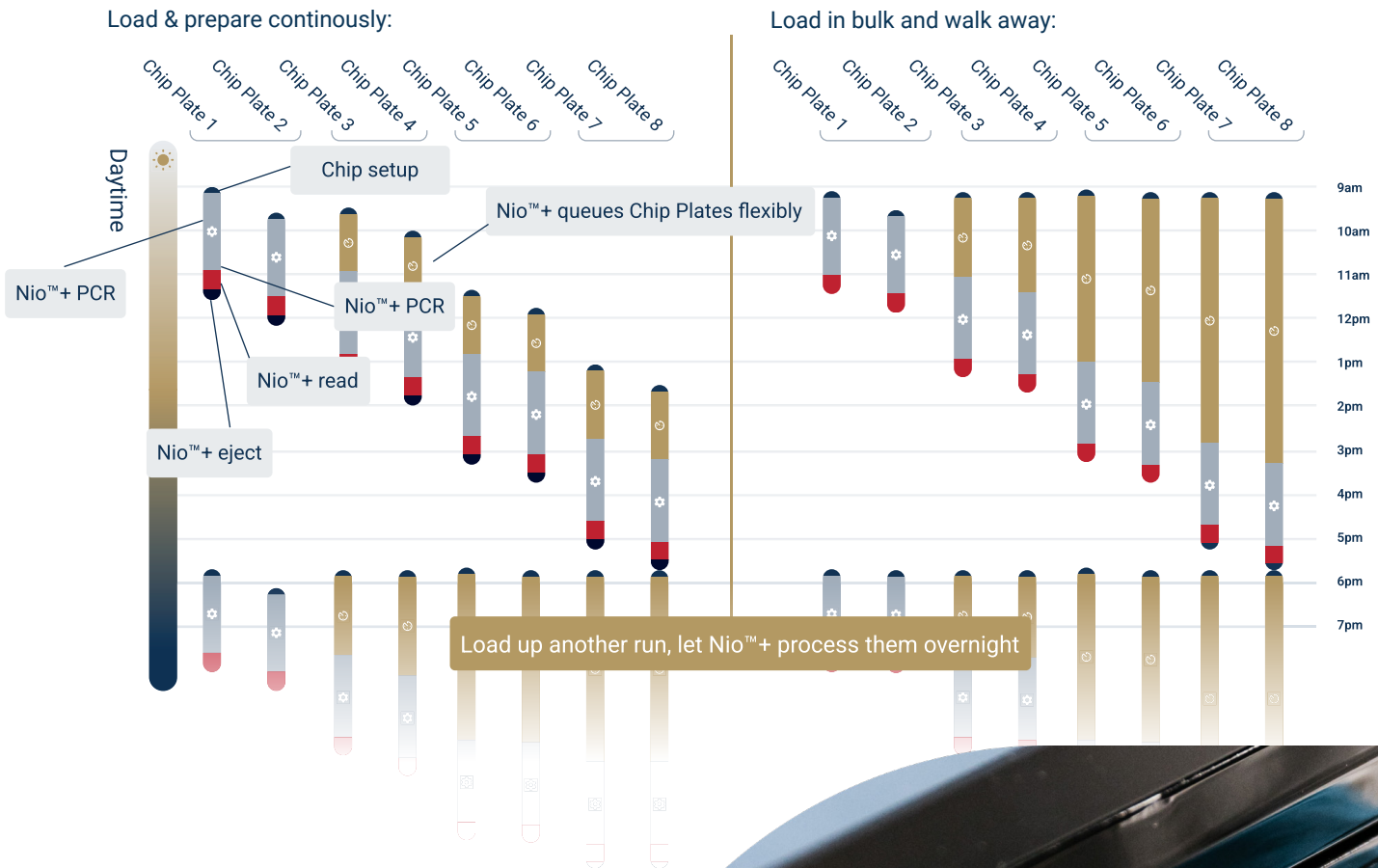
Chip? Plate? Chip Plate.

Holds 1 to 3 chips and allows for simplified handling. Much like a 96-well plate.

Volume for days.

Capacity of 768 chambers.

Nio™+ supports a high-throughput capacity of 768 chambers processed per 8-hour workday. Below are examples of how that capacity can be reached, and the flexibility of Nio™+.



Collaborate with the team

Multiple technicians can prepare experiment files right at their desk while others operate the Nio™+.

On Chip plate insertion, Nio Reader will scan the barcodes and automatically associated any created experiment files.



Ready, when you are.

Continuous loading.

Nio™+ is the only digital PCR instrument that works like labs work: with the capacity to handle samples incoming at changing intervals. Anytime you are ready, for up to 8 Chip Plates, Nio™+ assumes the tempo your lab operates at.

The screenshot shows the STILLA Nio+ runs interface. On the left is a navigation menu with categories: PROTOCOLS (New, Open), ASSAYS (New, Open), EXPERIMENTS (New, Open), and RUNS (Plan & Start, Status, View). The main panel is titled 'Nio+ runs' and features a 'Quick Search' bar. Below the search bar, a list of experiments is shown, each with a progress bar indicating its status: Queued, Thermocycling, Reading, or Done. The experiments listed are:

- Experiment ABC** (Author: eva.schmidt): R4NIO Chip, 2 NCT(s), 72 chambers. Status: Completed.
- Experiment DEF** (Author: julien.lopez): R4NIO Chip, 1 NCT(s), 48 chambers. Status: Completed.
- Experiment ABC #2** (Author: eva.schmidt): R4NIO Chip, 2 NCT(s), 96 chambers. Status: Thermocycling (48/96). ETA: <40min.
- Experiment LJK** (Author: eva.schmidt): R4NIO Chip, 5 NCT(s), 240 chambers. Status: Thermocycling (192/240). ETA: <1h30.
- Experiment LMN** (Author: eva.schmidt): R4NIO Chip, 1 NCT(s), 48 chambers. Status: Thermocycling (0/48). ETA: >4h.
- Experiment OPQ** (Author: eva.schmidt): R4NIO Chip, 2 NCT(s), 72 chambers. Status: Cancelled.

On the right side, there is a 'Selected job information' panel showing details for 'Experiment DEF' by 'lopez.julien', including creation and scan dates, and a list of jobs with their respective IDs and labels.

Nio™ Reader simply queues up the plates and automatically starts up the next run once the reading of the prior chip starts.

Experiment files can be set up for up to eight Chip Plates at once, or one at a time. Nio™ Reader automatically associates the experiment file you prepared.

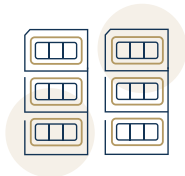
Files can be prepared on Nio™+, or in total serenity on your desktop computer.



Packs a bunch.

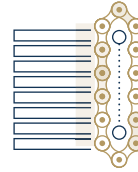
All-In-one.

Nio™+ is the smallest all-in-one digital PCR instrument at its capacity. With a footprint of just 56cm by 67cm, it fits in even the smallest lab.



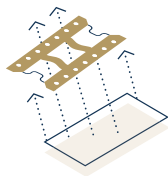
Dual thermocyclers.

Nio™+ has dual thermocyclers that can operate independently.



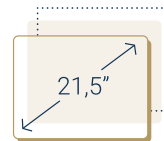
Automated plate queue.

Insert & forget. Nio™+ queues your plates. Even if both thermocyclers are running.



7 color reader.

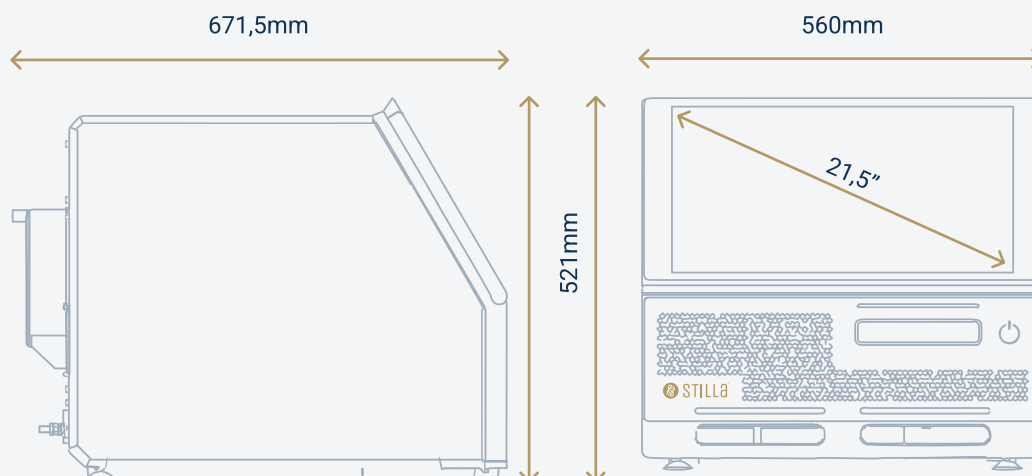
The reader is built right into Nio™+, and automatically reads your chips.



21,5 inch touch display.

Set up your experiments on the machine, or on any Windows computer.

Specifications



Color, full.

7 colors.

Nio[™]+ is the only instrument that allows for the reading of 7 colors. State of the art imaging system, with support for the colors and dyes you use today:

LED	Excitation wavelengths [nm]	Emission wavelengths [nm]
Blue	450-490	505-535
Teal	510-530	540-560
Green	533-557	574-596
Yellow	564-586	600-640
Red	610-640	655-685
Infra-Red	645-695	707-752
Long Shift- NEW	500-540	655-685

Quantify 4x more targets in a single assay using color combination

In simple color multiplexing, a target is detected using a single fluorophore in a single channel. In color combination multiplexing, a target is detected using two separate fluorophores detected in 2 different channels. Such a strategy allows the development of assays to detect and individually quantify much more targets using Nio[™]+. Thanks to a population editor based on fluorescence co-localization criteria, our software seamlessly integrates the analysis of color combination assays. A 16-target example:

Targets	FAM	YY [®]	Atto550	ROX	Cy [®] 5	Cy [®] 5.5	DY-521-XL
T1							✓
T2	✓	✓					
T3	✓		✓				
T4	✓			✓			
T5	✓				✓		
T6	✓					✓	
T7		✓	✓				
T8		✓		✓			
T9		✓			✓		
T10		✓				✓	
T11			✓	✓			
T12			✓		✓		
T13			✓			✓	
T14				✓	✓		
T15				✓		✓	
T16					✓	✓	



Instrument that gets you started.

Reagents, accessories & kits to keep you going.

Nio™+ comes with everything you need to get started. From PCR mix to kits.



naica® PCR MIX (EvaGreen® compatible)

Available in both 5X and 10X concentrations.

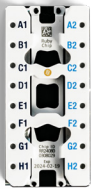


naica® multiplex PCR MIX (TaqMan® compatible)

Available in both 5X and 10X concentrations. For use with probe-based chemistries.

Ruby Chip

16 samples per chip, 12 chips in a box.
5µl of input / chamber, with up to 17000+ droplets. Dynamic range of detection (95%) ~ 5 logs.



Your cell and gene therapy assays

Validate your cell/ gene therapy's viral vector integrity and build out your QC assays with our team.

Crystal Digital PCR® Assays

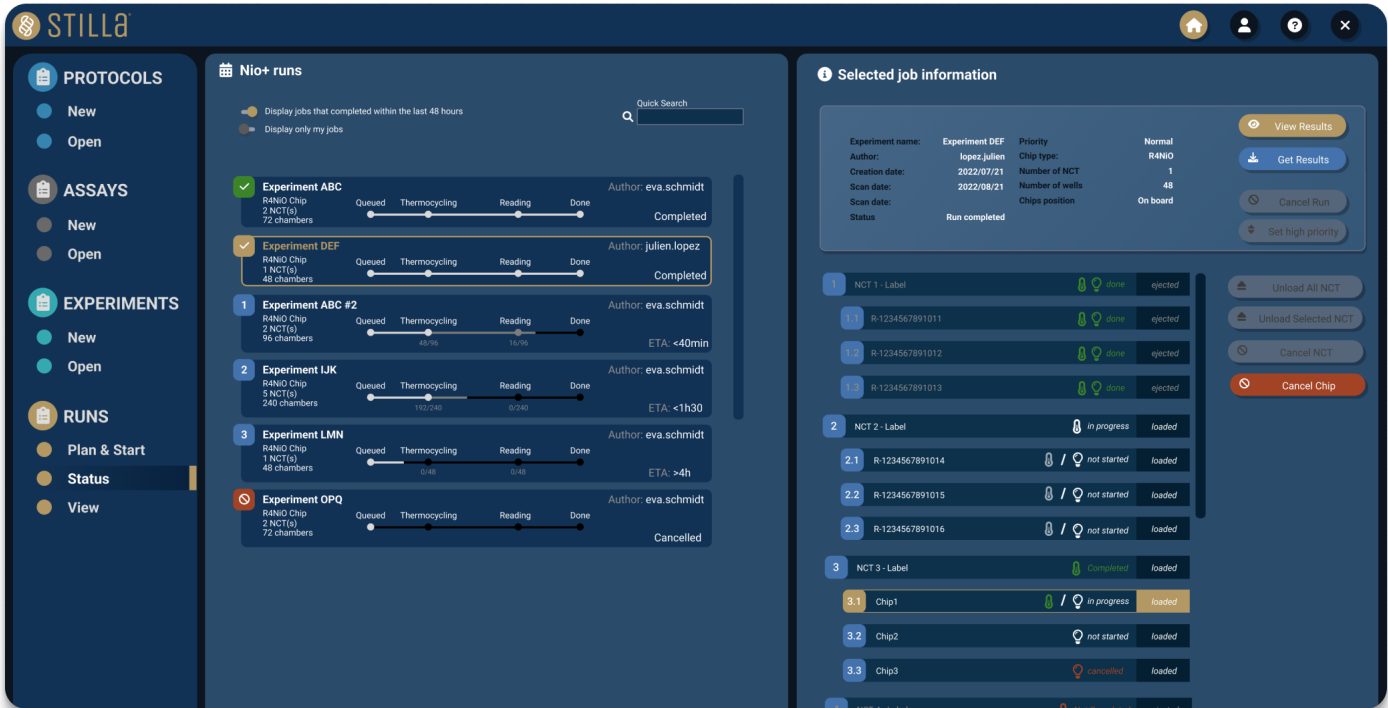
Allowing researchers to detect and quantify nucleic acids with ready-to-use, pre-designed assays for fully-validated target panels.



Software that works with you.

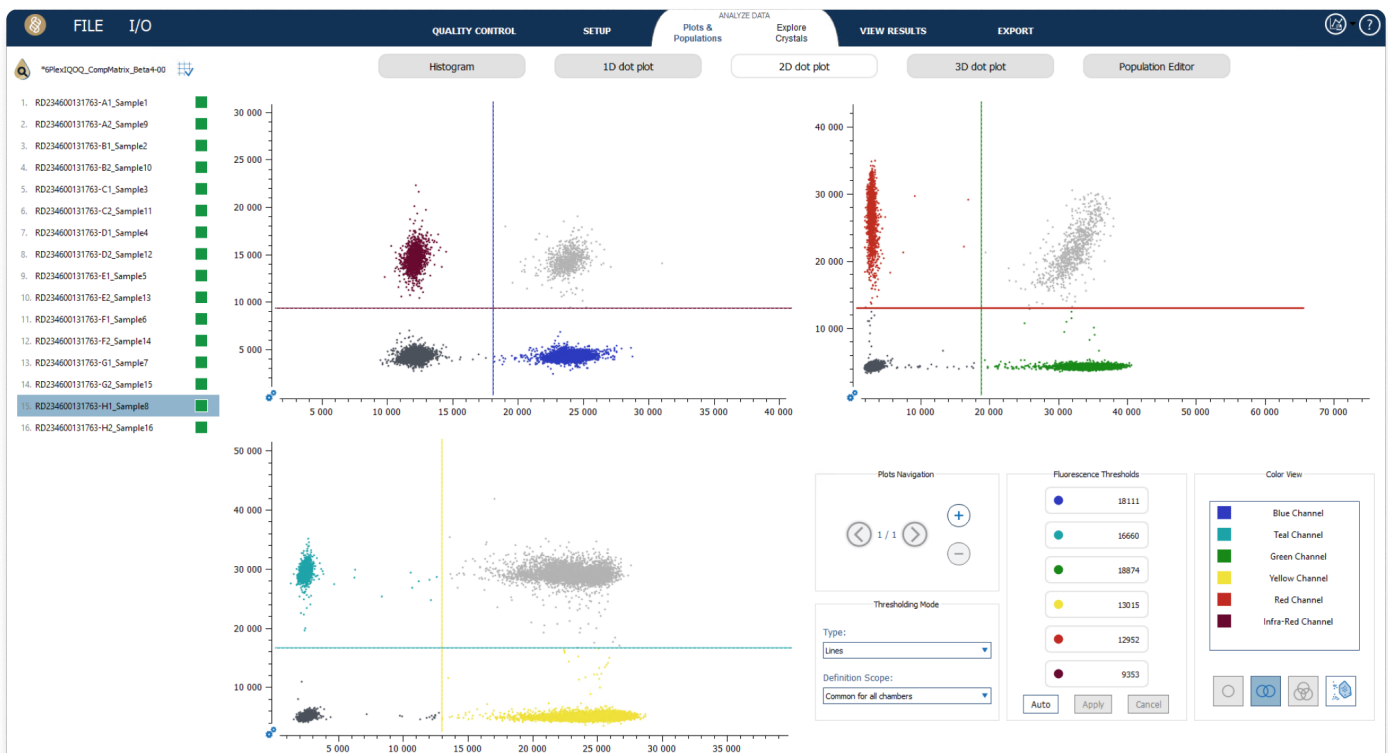
Nio™ Reader software

Configure multiple experiments right from your desk or directly on the Nio™+.



Nio™ Analyzer software

Visualise data across dimensions, automated or manual thresholding and export your data.







Get started with digital PCR.

Get in contact with our **experts.**

Getting started with digital PCR or want to expand your lab's capabilities? Our application and R&D teams are ready to get you set up. With a range of training services, co-development and more, we will ensure your digital PCR experiments are a success.



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