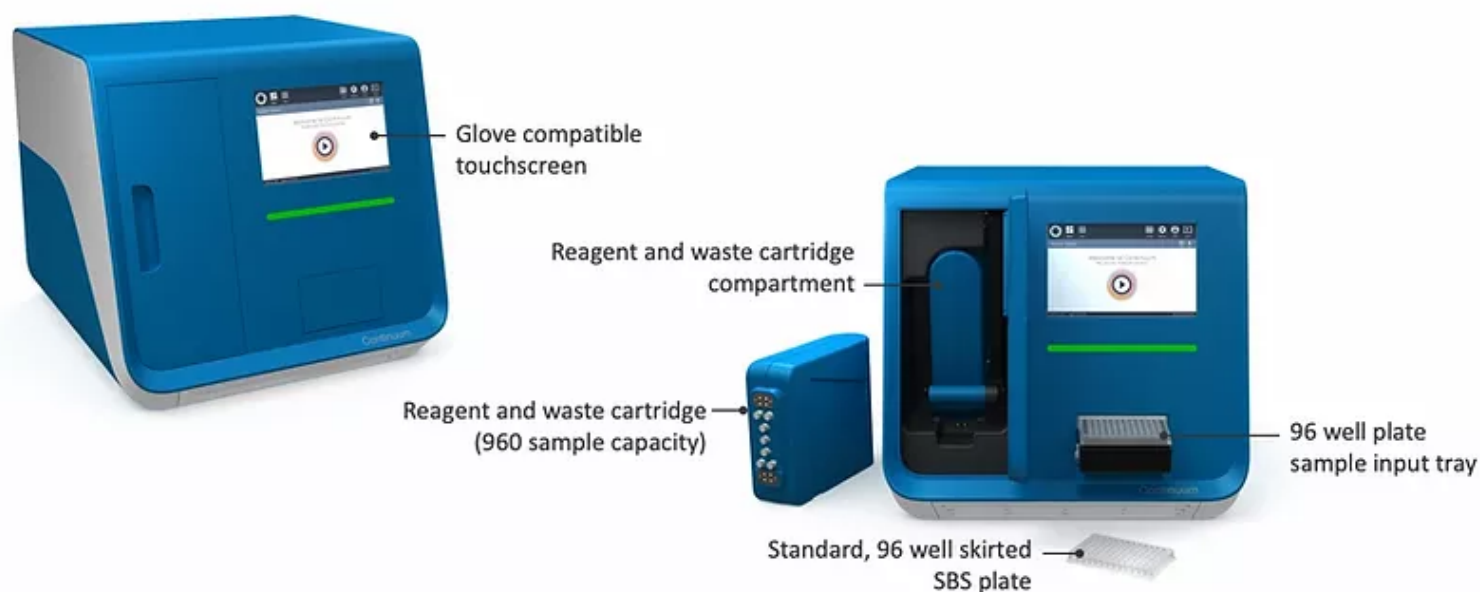




# Continuum Digital Flow PCR System



The development of digital PCR has unlocked new levels of precision and sensitivity for nucleic acid quantification, but high costs and complex workflows have put this technology out of reach for many research and clinical applications. Continuum, the digital PCR system under development at Dropworks, represents a new generation in PCR technology, providing the sensitivity and accuracy of digital PCR within a simple, one-step workflow at costs that are similar to real-time PCR. Continuum will empower scientists by making DNA and RNA quantification faster, easier, more cost-effective, and higher-performing compared to other PCR methods currently available. Key features include:

- In Continuum Digital Flow PCR (dfPCR), droplets are immediately processed upon generation and undergo nearly instantaneous heating and cooling, making amplification more uniform and data interpretation clearer
- All of the steps of digital PCR are contained in a single instrument, giving a familiar real-time PCR workflow, reducing cost, and minimizing droplet loss
- Proprietary chemistry prevents cross-contamination and enables a common flow pathway, eliminating costly consumables and fluid handling steps associated with other digital PCR approaches

## Continuum: Digital PCR for Everyone

# Continuum Platform Benefits



### High Sensitivity and Data Quality

Full digital PCR sensitivity (>35,000 partitions) and absolute quantification without standard curves or technical replicates.



### Simple, Single-step Workflow

Load your 96-well plate, perform a simple 5-minute setup using the intuitive software, hit run, and walk away.



### Low Cost

Acquisition costs are similar to mid-range qPCR instruments, and operating costs for the system per sample are on par with qPCR at any

scale, given the reduced need for technical replicates and standard curves.



### High Throughput with Rapid Turnaround Time

Results for the the first sample are returned in about 25 minutes, with results for each subsequent sample returned 2.5 minutes later. An entire 96-well plate can be processed in about 4.5 hours.



### Four Channel Multiplexing

Our advanced optics allow for up to four optical channels to be quantified simultaneously per well, increasing throughput and enabling complex gene expression and cancer biomarker assays.



### Small Footprint

Integration of partitioning, thermal cycling, and signal measurement into a single instrument gives a compact footprint not much larger than a qPCR machine, saving critical bench space.

## Specifications Table

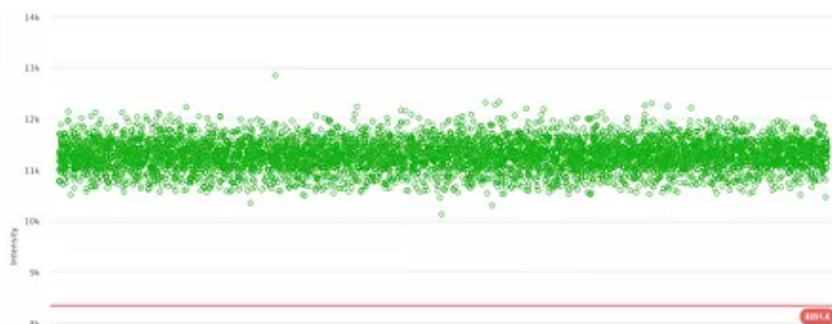


<b>Capacity</b>	1-96, 25 $\mu$ L samples
<b>Droplets per sample</b>	> 30,000
<b>Throughput</b>	96-well plate in < 4 hours
<b>Turnaround time</b>	< 30 minutes
<b># of independent channels</b>	4
<b>Compatible dyes</b>	FAM, HEX/JOE, ROX, and Cy5
<b>Linear Dynamic Range</b>	5 orders of magnitude
<b>Continuum instrument dimensions</b>	(W) 60cm, (D) 60cm, (H) 50cm

Cy™ is a trademark of GE Healthcare. FAM™, JOE™, and ROX™ are trademarks of Life Technologies Inc.

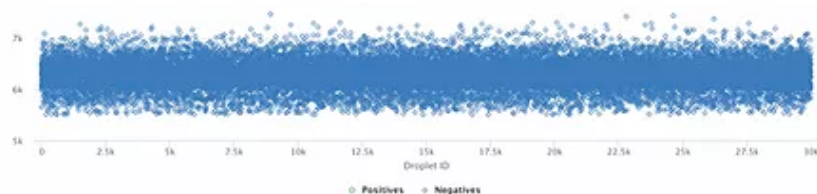
For Research Use Only. Not for use in diagnostic procedures.

## Performance Highlights



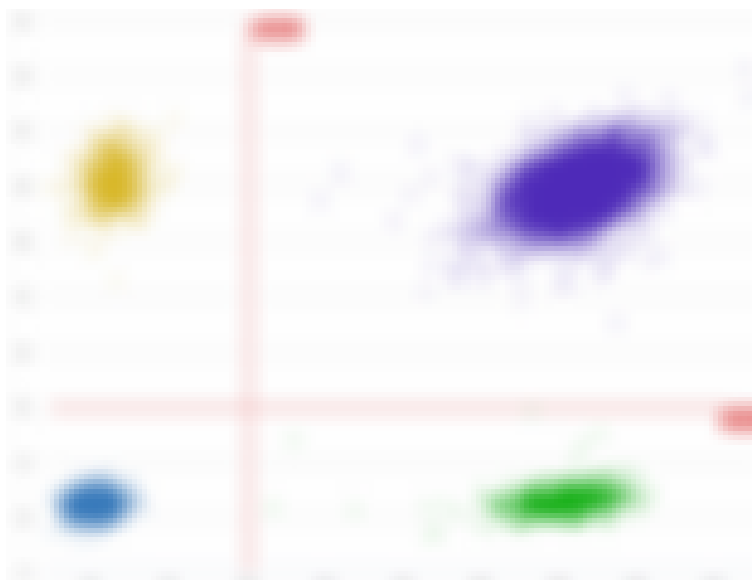
### Uniform and stable droplets enable clear separation of positive and negative data points

Continuum provides the full power of digital PCR, measuring over 35,000 partitions per sample to give highly precise and sensitive results. On-demand droplet formation and



## All-in-one instrument eliminates cross-contamination

Our self-contained instrument and surface-stabilized partitions eliminate cross-contamination between samples introduced when transferring between digital PCR steps, proven by consistent, clean no-template controls that give you confidence in the integrity of your data.

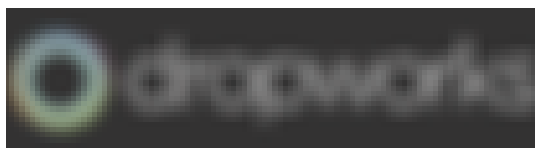
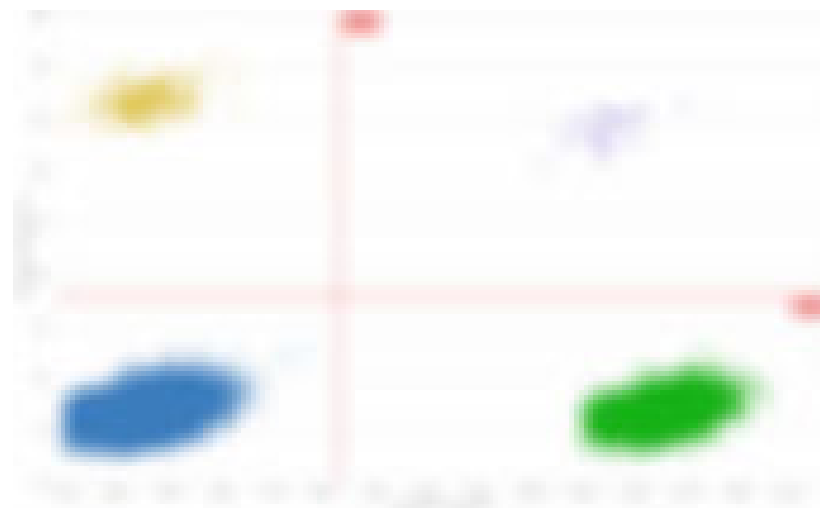


## Strong multiplexing capabilities

Continuum has the ability to measure fluorescent signals in up to 4 different optical channels for each sample, and it can accept both intercalating dyes and hydrolysis probes, either separately or simultaneously. On-demand droplet generation and uniform processing give distinct amplification, making cluster identification in our software straightforward, as can be seen in the assay for two different regions of the CMV genome (left).

## Instantaneous and uniform picoliter heating improves repeatability in complicated SNP assays

Competing primer pairs in SNP assays can make achieving reliable clustering in digital PCR difficult, obscuring results. The unique nature of our continuous flow process ensures each partition achieves target temperature nearly instantaneously, making assay tuning simpler and more reliable. To the right, rare SNV genes in a high wild-type background for an EGFR lung cancer assay show clean clustering, even for partitions with an occupancy greater than one.

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