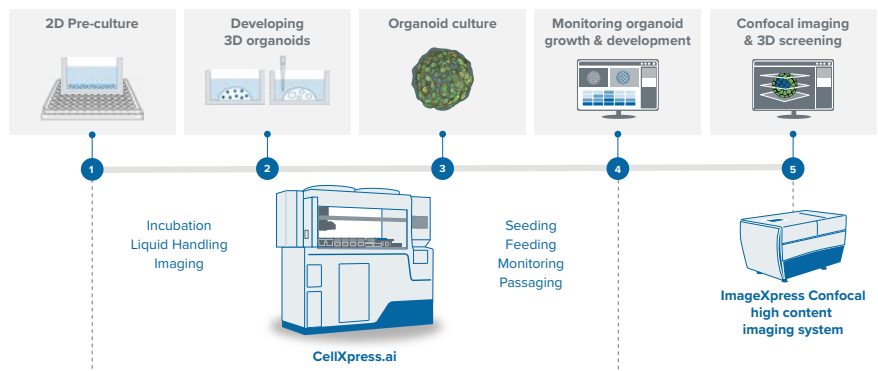# CellXpress.ai
Automated Cell Culture System

A new cell culture paradigm

CellXpress.ai™ cell culture system is an AI-driven innovation hub that automates processes, improves workflows, and makes assays more reliable and reproducible. It's a revolutionary system that gives your team total control over demanding feeding and passaging schedules—reducing hands-on time in the lab while maintaining a 24/7 schedule for growing and scaling multiple PDO/iPSC cell lines, spheroids, or organoids.

With the CellXpress.ai cell culture system, you get both an advanced instrumentation solution that's built to reliably manage the entire cell journey, and powerful, integrated software designed to help you navigate and monitor even the most complex cell culture workflows—including built-in protocols for generating organoids.
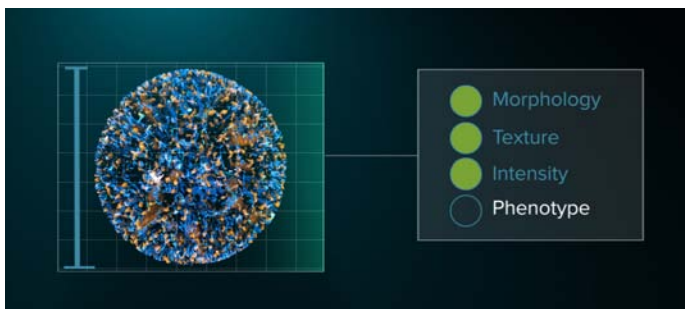

| 2D Pre-culture | Developing 3D organoids | Organoid culture | Monitoring organoid growth & development | Confocal imaging & 3D screening |

1   2   3   4   5

Incubation
Liquid Handling
Imaging

Seeding
Feeding
Monitoring
Passaging

ImageXpress Confocal high content imaging system

CellXpress.ai

Expand your workflow with external devices

Automation scheduling software

Robot arm

Automated centrifuge

SpectraMax microplate readers/SoftMax Pro Gxp software

FLIPR Penta High-Throughput Cellular Screening System

CellXpress.ai cell culture system organoid workflow.

Key Features

- Scale up complex cell culture workflows with actionable imaging and turnkey protocols for reliable organoid feeding, monitoring, and passaging.

- Give your lab the confidence in experimental outcomes to make key decisions sooner, achieve milestones faster, and get to clinic earlier with lower attrition rates. All of it backed with the assurance of a full event log to confirm on-time feedings and critical task execution with complete digital microscopy records.

- Improve productivity and optimize hands-on time with image-based, deep-learning decision-making. Real-time feedback alerts users to milestones or events and can generate automated tasks to resolve them.

- Develop traceable and reproducible cell cultures specific to your desired assay endpoint with a unified software environment using data-driven visualization tools.

In addition, powerful collaboration capabilities leverage built-in and custom protocols that can be easily exported and shared. During protocol development, CellXpress.ai cell culture system offers the flexibility of decision-making triggered by the operator or through machine learning-powered algorithms. Your team can then leverage these fully automated workflows to achieve reproducible results across multiple team sites.

Automated cell culture and image analysis workflows run 24/7 – even when your lab is closed.

CellXpress.ai cell culture system features and options

Incubator

Capacity (choose)	44 plate max – 2 rack capacity
	154 plate max – 7 rack capacity
Decontamination	Automated hydrogen peroxide decontamination
Environmental control	CO_2, temperature, and humidity control

Imager

Objectives	2X through 40X objectives available
Imaging modes	TL and up to 6 FL channels
Acquisition mode	Time lapse, Z-stack, optional Digital Confocal*
LED light source	7 LEDs ranging from 365 to 730nm
Available filter cubes	DAPI, FITC, TRITC, TxRed, Cy5, Cy7, CFP, YFP
Environmental control	Temperature and CO_2 control
Camera	24 megapixel camera
Acquisition speed	Rapid whole plate acquisition

Liquid handler

Pipette head	Span 8
Deck locations	9 positions: plate cooling, heating, and tilting
Cell culture media	Heated and cooled positions for low-volume and bulk media
Decontamination	Automated on-deck UV decontamination

Waste

Liquid waste	10L liquid waste capacity with volume tracking
Solid waste	60L solid waste capacity with automated lid

System

Transfer ports	2 plate transfer ports
Enclosure	HEPA filtered with anti-clog sensor
On-system display	15" touchscreen display
External workstation	10 Tb workstation with 27" LED monitor
Size	2250 mm W x 954 mm D x 2155 mm H
Weight	1,042 kg / 1,100 kg
Power consumption	2000W max, 2ea 10A lines
Certifications	CSA, CE

Software

Cell culture protocol manager	Pre-defined and user-defined protocols
Experiment manager	At-a-glance experiment manager
Cell journey	Phase-based cell journey with film-strip viewer
Decision making	Rule-based decision making to advance, stop cell culture
System dashboard	At-a-glance dashboard informs the user of immediate or upcoming actions needed
User alerts	Configurable alerts keep the user informed about the state of the cell culture

*CellXpress.ai cell culture system uses AutoQuant 2D Real Time Deconvolution

Visit us at www.CellXpress.ai to learn more.

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Check our website for a current listing of worldwide distributors.

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United Kingdom	+44.118.944.8000	Japan	+81.3.6362.9109
Europe*	00800.665.32860	South Korea	+82.2.3471.9531
China	+86.4008203586	India	+91.73.8661.1198

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