CURIOSIS

CPX™-α

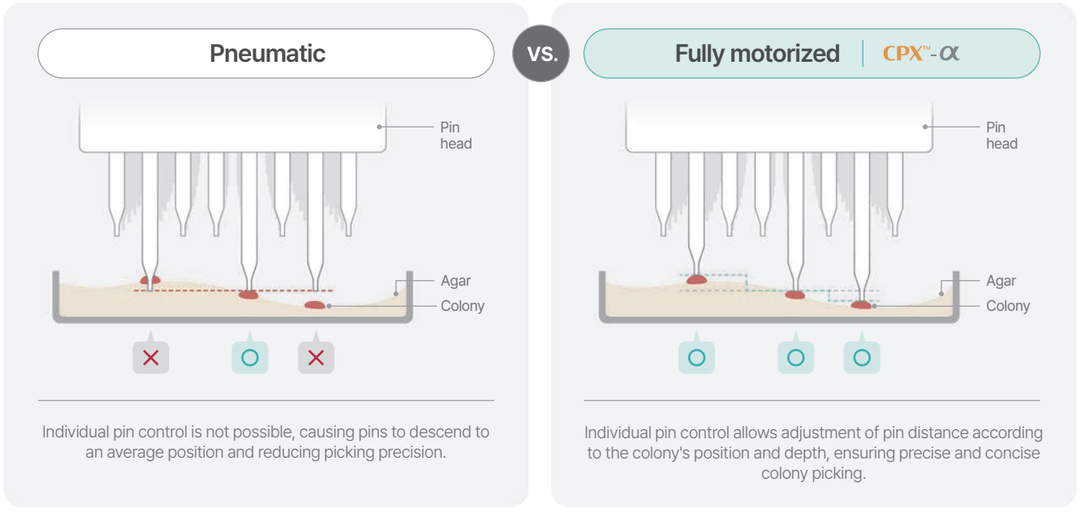
Unmatched precision and speed for
high-throughput colony picking and seamless lab automation

Automated colony picking system

The **CPX™-α** is an advanced **automated colony picking system** designed to bring **unparalleled precision, efficiency, and flexibility** to microbiology and biotechnology workflows. Colony picking plays a crucial role in microbial screening, synthetic biology, and pharmaceutical research, but manual methods are often **slow, inconsistent, and prone to human error**. Automation with CPX™-α eliminates these challenges by ensuring **high-throughput, accurate colony selection**, while seamlessly integrating into **fully automated laboratory environments**. Its **cutting-edge technology and versatile compatibility** make it an essential tool for researchers aiming to **streamline workflows, increase reproducibility, and maximize efficiency**.

Precision colony picking with motorized pin actuation

The CPX™-α utilizes a motorized pin actuating method, ensuring colonies are picked accurately and consistently. Before picking, the system recognizes and maps the exact position of each colony, allowing individual pin control for precise selection. In contrast, competing systems lack independent pin control and maintain a fixed pin stroke, making uniform and accurate picking impossible. With CPX™-α, researchers can achieve superior precision, improving reproducibility in high-throughput applications.

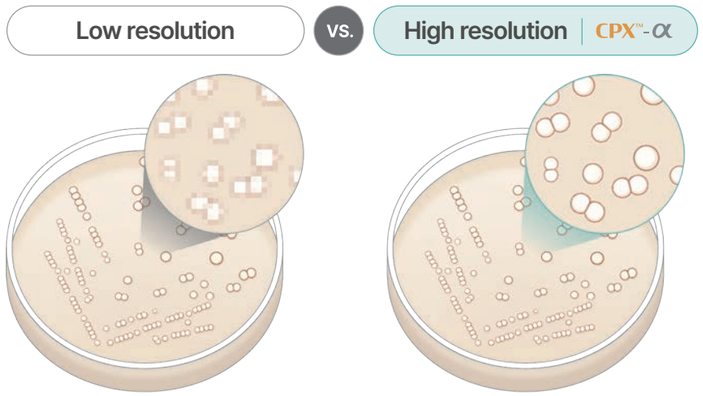


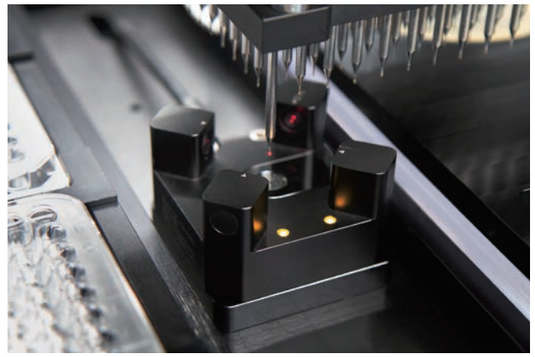
Individual pin control is not possible, causing pins to descend to an average position and reducing picking precision.

Individual pin control allows adjustment of pin distance according to the colony's position and depth, ensuring precise and concise colony picking.

High-resolution imaging for small colony detection

Equipped with an industry-leading 100 pixels/mm resolution, the CPX™-α can detect and pick even the smallest colonies, down to 200 micrometers in size. Many other colony pickers struggle with detecting and processing such tiny colonies, but CPX™-α ensures higher sensitivity and accuracy in microbial screening and selection, making it ideal for applications requiring early-stage colony detection.



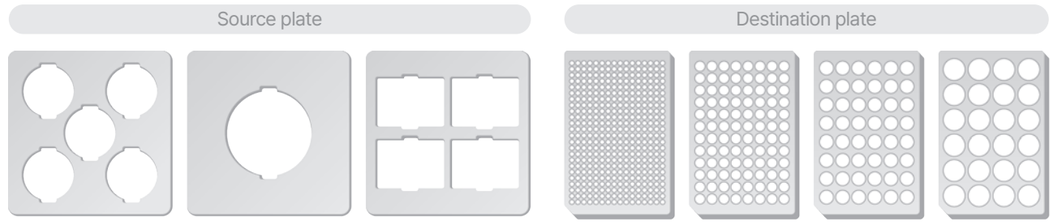


Cross-laser pin calibration for 99% accuracy

CPX™-α features an advanced cross-laser pin calibration method, allowing for precise alignment and positioning of picking pins. This innovative calibration system ensures a 99% picking accuracy, setting it apart from conventional colony pickers. With this level of precision, researchers can significantly reduce errors, ensuring high-quality results in microbiology and biotechnology workflows.

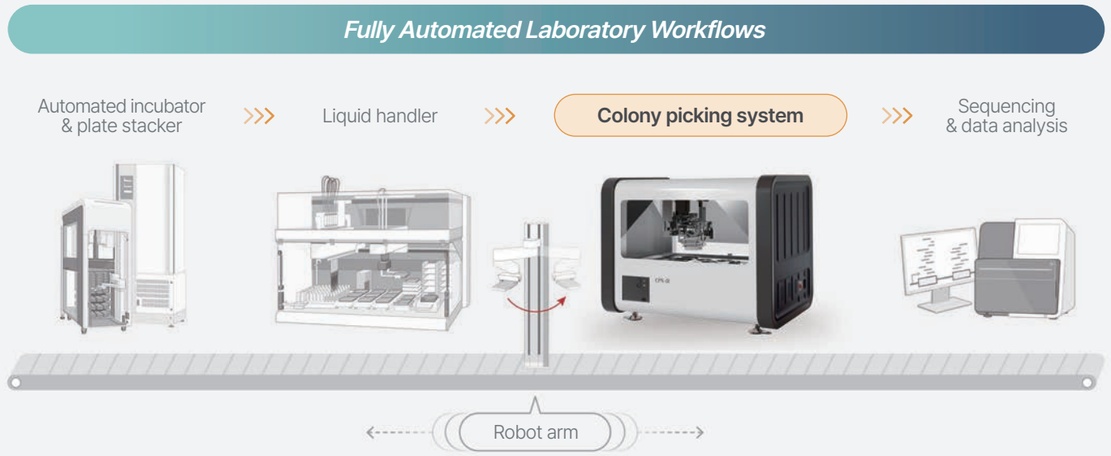
Versatile Source & Destination plate compatibility

Designed for maximum versatility, the CPX™-α supports a wide range of source and destination plates, thanks to its vessel holder system. Users can choose from 9 cm and 15 cm Petri dishes, OmniTrays, and various 24-, 48-, 96-, and 384-well plates (shallow or deep), making it adaptable to different experimental needs. Whether working with microbial cultures, cell lines, or synthetic biology applications, the CPX™-α provides flexibility for diverse research requirements.



Seamless integration into Fully Automated Laboratory workflows

The CPX™-α is designed to be easily integrated into laboratory automation lines, enabling a fully automated workflow. It can be seamlessly connected with liquid handlers, robotic arms, sequencing instruments, and other lab automation systems. This capability allows researchers to enhance efficiency, reduce manual handling, and achieve full automation in high-throughput screening and colony management processes.



Specification

Picking head	Fully motorized 96-pin picking head (interchangeable heads for other applications)
Picking throughput (speed)	Up to 3,000 colonies per hour
Picking accuracy (%)	> 99%, Fully automated Cross-laser pin calibration
Pin types	Interchangeable stainless-steel pins
Pin cleaning	3 x static wash bathes, proprietary halogen pin drying station
Source plate capacity	1 × 15 cm petri dish, 5 × 9 cm petri dishes, 4 x OmniTrays
Source plate compatibility	9, 15 cm petri dish, OmniTrays
Destination plate capacity	Picking: 4 plates, Replicating and re-arraying: maximum 8 plates
Destination plate compatibility	Various, 24-, 48-, 96-, or 384-well (shallow or deep) plates
White light imaging	Trans-illumination, image resolution: 100 pixels/mm
Fluorescent imaging (optional)	Epi-illumination, Customizable fluorescent channels Simultaneous white and fluorescent imaging Blue (EX : 375/28, EM : 460/50) Green (EX : 470/40, EM : 540/50) Red (EX: 562/40, EM: 641/75)
Colony selection criteria	Size, proximity, shape(roundness), fluorescence intensity, blue/white
Field of view	54.75 × 36.52 mm
System cleanliness	Ultraviolet germicidal irradiation(UVGI), Optional HEPA filtration
Dimensions (WxDxH)	1200 × 784 × 910 mm

Contact us for more information about the system

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