

*Automated Solutions  
for Life Science*

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Converging Intelligence  
Surpassing Imagination



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# iMagicOS Scientific Operation System

## A key to the door of laboratory automation

iMagicOS is an intelligent laboratory digital operational platform which is independently researched and developed by XImaging Technology. It takes central integrated control unit and friendly human-machine interface. The system has the functions such as drive, dispatch, surveillance, traceability and management with high efficiency and high quality. It can be easily connected to instruments in laboratories for data collecting, data analysis of instruments or equipment. The system is flexible to linked with different kind of experiment scenarios such as life science, clinical diagnosis and chemical testing as well as the other management and control scenarios of hardware equipment. It can supply one stop and one integration experience. The system will contribute the construction of intelligent laboratories.

## iMagicOS To open the gate of laboratory automation

- Experimental equipment planning is full of experience.
- Experimental program design is simple and visual.
- The operation of exreliable and high efficiency.
- The data management and storage are compliant and safe.

### The drive program bank of iMagicOS will be connected once plug with power.

It contains over 300 drives of instruments including functional testing equipment such as micro-plate reader or cell imager, the fluid treatment equipment such as fluid workstation, nanolier dispenser and assist instrument like cell incubator, centrifuge etc. Also, special "manual" device drivers are compatible.

### Reliable technical strength, no worries for development of new drive

XImaging can supplies the automated interface development service of new instruments according to the requirements of customers. The drive program bank of iMagicOS supports the interface insert of new equipment drive.

Yourgene Health  
 Roche Porvair Science Inheco  
 Perkin Elmer AB SCIEX Biotek Iomics  
 ThermoFisher Cytena Shimadzu  
 Hamilton **Factory** Beckman Coulter  
 Hettich MolecularDevices Tecan  
 ABB ONLINE Agilent Anjie  
 Beckman Coulter  
**300+**  
**instrments and equipment**  
 LC-MS ATC TripleQ 5500  
 LightCycler 480 Qsep400 EDX  
 LightBench Agilent5400 Echo 650  
 c.Wash Cellinsight CX7  
 Cytation5 **Equipment** EL406 Cytomat  
 SpectraMax ABI QuantStadio  
 TripleQ 6500 Xpeel HPLC  
 Rotanta460

## Laboratory from automation to digitalization



- iMagicOS robot dispatching system
- iMagicOS equipment management system
- Laboratory environmental monitoring control system
- CMS compound management system
- WMS reagent consumables samples management system
- iMagicOS cell maintenance system

## Laboratory from automation to intelligence



### Voice Interaction

Hello XImaging, please check  
Is the chloride determination result of water  
sample 5 abnormal?

Hello, after checking, the chloride  
detection result of sample 5 is normal,  
with a value of 200mg/ml.



### Portable experiment

Portrait experiment: Your 10th sample has been completed  
and is now starting the 11th experiment

Dummy Experiment: Your "Device A" is experiencing  
abnormalities, please check as soon as possible

# XImaging Robotic Teaching System and Open Source API

The software system for robot control is independently developed by XImaging Technology and it can support both online and wireless teaching methods. In this system, the teaching pendant is connected to the control cabinet or motion controller through communication cables/network cables. By setting motion parameters and writing the motion path of robot, the robot can work according to the written processing file, and can perform real-time monitoring, adjustment, safety emergency stop and other operations on the robot's motion.



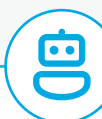
## User-Friendly

The user interface of the teaching pendant is clear and intuitive. The process management and shortcut management help the efficient operation of the robots.



## Light Speed Control

It's unnecessary to drag and drop lengthy cables when surf the web pages and debug. And it also supports remote control on multiple client platforms.



## Intelligent Implementation

The software utilizes 3D simulation technology to simulate the motion of a robot, allowing for intuitive editing of the motion process. The software comes with visual points to assist in on-site implementation that is "visible and tangible"



## High Universality

This teaching system is suitable for all models of robot and supports third-party model expansion.

# HelenX Laboratory Collaborative Robot

The space of laboratory is limited and experiments' activities are various. HelenX bases on the common collaborative activities from grip, transfer, placement to test.

All details, such as cover of joint or gripper, are all designed strategically. The aim is to adapt to the collaborative robot in the laboratory which covers chemistry, analysis, test and biological research.

## HelenX is customized for laboratory scenarios.

### Plug and play Gripper bank

Different kinds of gripper for consumables  
The software which contains different parameters of consumables

### Sample absence detection and error report

The detection of torque of gripper, sample series number, scanning code for double verification

**The positioning accuracy is the same as the size of hair.**  
Position error: 0.05mm

### Security collaboration with high space usage

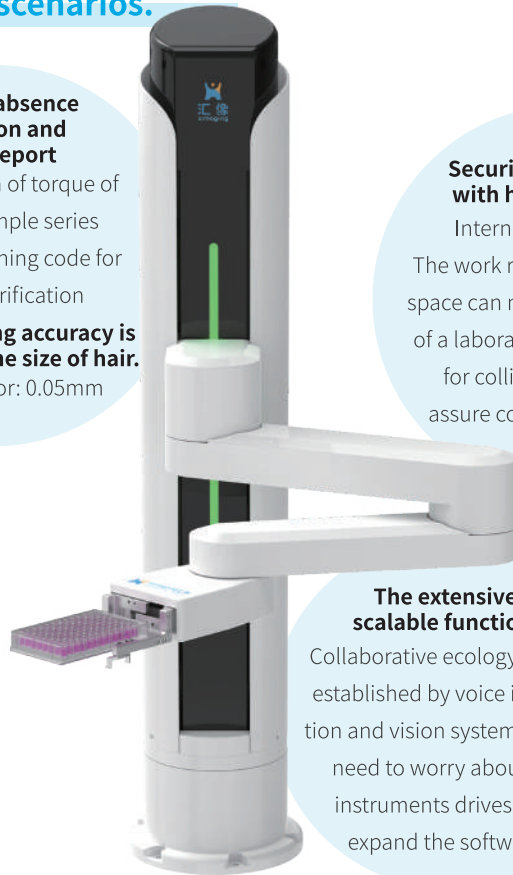
Internal rotation design  
The work range is extended. The space can meet the requirements of a laboratory. Sensitive modes for collision detection can assure collaborative security.

### High efficiency robot teaching system

It's suitable for all types of robots produced by XImaging. It can be used to view website and it supports multiple client platforms.  
Visualization position can help site application.

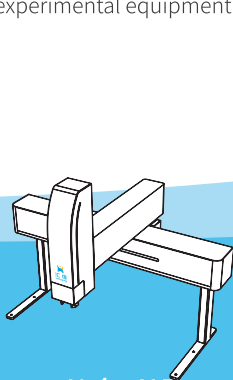
### The extensive scalable functions

Collaborative ecology can be established by voice interaction and vision system. It's no need to worry about the instruments drives after expand the software.

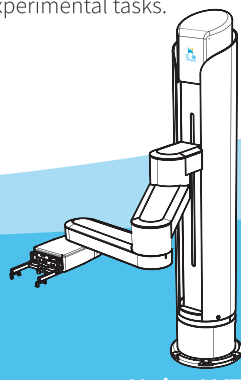


## About HelenX

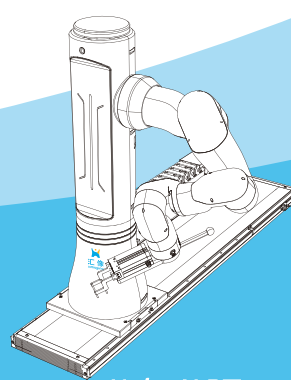
HelenX has two types of robot, fixed collaborative robot and mobile collaborative robot. Each robot has its own work range, load and application scenarios. All these robots are easy and reliable to use. It is the best choice for all kinds of experimental equipment and experimental tasks.



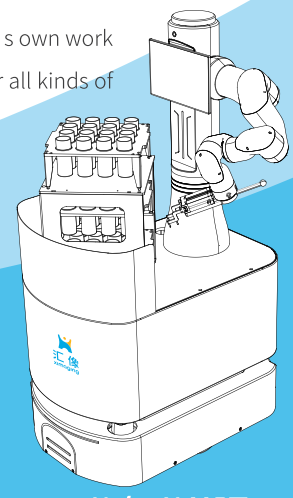
HelenX-3



HelenX-5



HelenX-R7



HelenX-MR7

fixed collaborative robot (HelenX)  
for high accuracy and light assembly applications

mobile collaborative robot (HelenX-R)  
for flexible deployment and high comprehensiveness applications



# Intelligent Automated Instruments

Let each scientist transform into experimental artist.



# HostaX Multiple Functional Fluid Workstation

## Let the complex experimental processes become simple.

HostaX multiple functional fluid workstation is an automated fluid process system according to the laboratory scenarios. It's fitted with multiple channels pipetting module which can independently adjust the parameters of pipetting distance, pipetting height, pipetting volume, pipetting speed etc. It can also accomplish many pipetting requirements of sample plate reproduction, pooling, unequally spaced picking. The system provides the possibility of one click operation for high throughput experiments by using scalable consumable stack which is fitted with fixed collaborative robot.

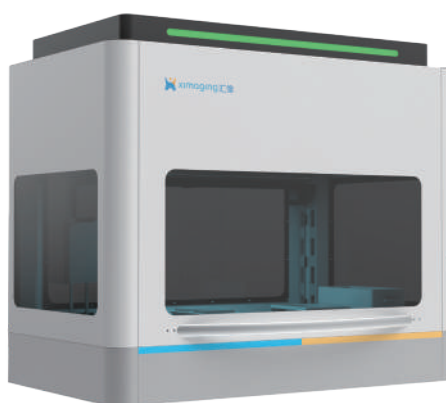
## Product Features▶▶▶

### Professional liquid handling

Multiple channels flexible pipetting technology, each channel can be independently controlled; Liquid level detection and full process monitoring of liquid transfer, the workstation can determine the occurrence of abnormal liquid transfer situations such as air suction and blockage, and sending alarm.

### Flexible plate transfer operation

360° rotating robot, capable of transferring the plate; The torque protection function of the robot can monitor the torque, stop running, and give an alarm when the robot collides.



### Multifunctional module combination

30 standard plate positions, capable of expanding 3D storage board positions; Modular design provides unlimited possibilities for application expansion.

### Full-Course Laboratory Monitoring

The entire experimental monitoring is equipped with a built-in camera, and the tabletop is set with automatic verification to avoid human operation errors.

### Visual software programming

Visual process editing, easy to operate; To support defined consumables and liquid parameters, providing possibilities for editing complex experimental processes.

## Parameters▶▶▶

Type	Hosta X5	Hosta X9
Pipetting channels	Flexible 4-channel (Minimum adjustable spacing 9mm, Maximum adjustable spacing $\geq$ 18mm)	Flexible 8-channel (Minimum adjustable spacing 9mm, Maximum adjustable spacing $\geq$ 18mm)
Pipetting principle	Air replacement	Air replacement
Pipetting accuracy	1-1000 $\mu$ l	1-1000 $\mu$ l
Pipetting range	1 $\mu$ l, accuracy $\pm$ 10%, CV $\leq$ 7%; 100 $\mu$ l, accuracy $\pm$ 2%, CV $\leq$ 1%; 1000 $\mu$ l, accuracy $\pm$ 1%, CV $\leq$ 0.75%	
Pipetting channels	Independent movement in the Z-axis direction	Independent movement in the Z-axis direction
Liquid surface detecting function	Support	Support
Robot	1	1
Plate quantity	30	30
LED	1	1
Internal camera	1	1
Emergency button	1	1
HEPA	optional	optional
UV module	optional	optional
Automation	Communication protocol open	Communication protocol open
Dimension	1290 $\times$ 820 $\times$ 1200mmWDH	1290 $\times$ 820 $\times$ 1200mmWDH
Weight	150kg	155kg

# Petunia Sequencing Library Preparation Workstation

**Let automated library preparation become more efficient, accurate, and convenient.**

“Petunia” Sequencing library preparation workstation is specially designed automated tool for unattended NGS library preparation. It has two types Petunia SeqX100 and Petunia SeqX800 for selection. The Petunia SeqX100 integrates a tabletop PCR instrument, a circular magnetic rack and a temperature control module. It is equipped with a turntable gripper and it is a true 24 sample flux full process hybrid capture automation machine. The Petunia SeqX800 has been upgraded to a flexible 8 pipetting channels based on the Petunia SeqX100 which is equipped with a new nucleic acid concentration measurement module. At the same time, the working platform has been expanded to 30 positions which can be compatible with various commercial library building kits and hybrid capture experimental processes. Petunia is making automated library preparation more efficient, accurate, and convenient!



## Product Features▶▶▶



### Automation

It is equipped with a detachable, tabletop PCR instrument, magnetic rack and temperature control module. The most complex library preparation workflow can be started with just one click.



### Intelligence

The built in camera can be used to check tabletop settings intelligently. The entire process can be remotely monitored in real-time. Petunia workstation can easily control the library preparation workflow to avoid any human operational errors.



### Openness

The software experimental program is open for editing and allows for flexible definition of experimental parameters. The API protocol is open and can be flexibly integrated into automation systems.



### Convenience

Petunia workstation supports the process of building the multiple samples library. The software can remind users of the storage location of different reagents to avoid experimental abnormalities caused by incorrect or insufficient placement of reagents according to the number of samples.



### Compatibility

Petunia workstation is fully designed by open experimental program. It is compatible with various sequencing library preparation kits, built-in multi brand universal library construction kit experimental programs and pooling, hybridization capture, product purification and other experimental programs. It supports flexible programming of personalized experimental programs.

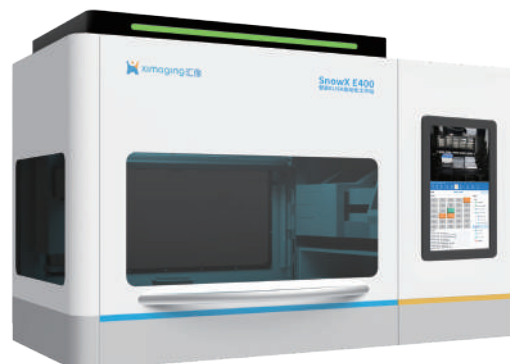
## Parameters▶▶▶

Type	Petunia SeqX100	Petunia SeqX800
Pipetting channels	Flexible 4 channels	Flexible 8 channels
Plate quantity	20	20
Plate gripper	1	1
PCR	1	1
Temperature control module	2	3
Temperature control oscillation module	1	1
Circular magnetic rack	1	1
Nucleic acid quantitative module	/	1
Camera	1	1
HEPA	optional	optional
Automation	Support	Support

# Snow Intelligent ELISA Testing Workstation

**It's simple and easy to use. Let ELISA experiments operate by one click.**

Snow Intelligent ELISA test workstation integrates with fluid workstation, plate washer, temperature control incubator and microplate reader. It can not only accomplish the test process automation and standardization operation of ELISA such as sample gradient dilution, fluid addition, incubation, plate washer etc, but also can fulfil the full process traceability of samples. The accuracy and reproducibility will be increased greatly. The labor cost will also be decreased. The experiments of ELISA become more efficient and convenient.

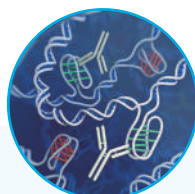


## Product Features >>>



### Easy to Operate

- Built in ELISA experimental program, input sample quantity, one click to operate the experiment



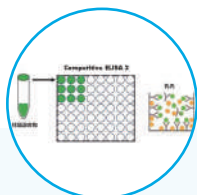
### Data Security

- Sample data tracking throughout the entire process
- User authority management to protect data security



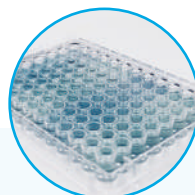
### High Efficient Operation

- To support multi-plate parallelism
- Independent control of each plate position in the temperature controlled incubator



### Reasonable Layout

- Integrated design, 3D layout, saving limited experimental space



### Accurate and Stable

- Liquid level detection, it enables accurate pipetting
- Precise temperature control
- Stable and reliable robot for accurate grasping
- High-precision microplate reader for accurate readings

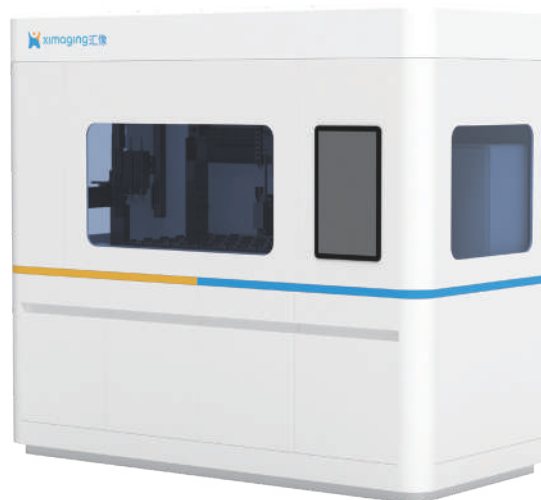
## Parameters >>>

Type	Snow E400	
Dimension	1790x820x1200mm	
weight	220kg	
Configuration	Equipment	Quantity
	Fluid workstation	1
	Microplate reader	1
	Plate washer	1
	Temperature control incubator	1

# Hosta Pre-B900 Biological Samples Preparation Workstation

**Let automated biological samples Preparation become more efficient, precise and convenient.**

Hosta Pre-B900 Biological sample Preparation workstation is an automated tool specially designed for unmanned biological sample pre-processing. This workstation cleverly integrates functional modules such as a tube centrifuge, scanning and opening of blood collection tubes, opening and closing of cryopreservation tubes, scanning of cryopreservation tubes, and recognition of biological sample composition images. It is also equipped with a flexible 8-channel pipetting module and a 360 ° rotating robot which makes it easy to handle the most complex biological sample pre-treatment process. Hosta Pre-B900 can enable automated biological sample preparation management more efficient, precise, and convenient!



## Product Features >>>



### Automation

It is integrated with multiple functions such as centrifugation, opening and closing of blood collection tubes, image recognition, opening and closing of cryopreservation tubes, and flexible pipetting. It has a high degree of automation and stable operation.



### Intelligence

The built-in camera can be set to intelligent verification of tabletop. It can remotely monitor in real-time throughout the entire process. The errors caused by human operation can be avoided. The biological sample pre-processing workflow will be easily operated.



### Openness

The experimental program design is fully opened. It is compatible with various biological sample pre-processing experimental processes. It supports flexible programming and personalized experimental programs.

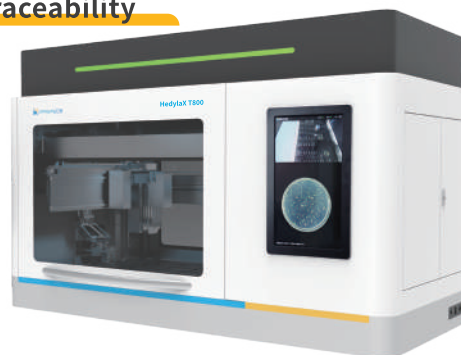
## Parameters >>>

Type	Hosta Pre-B900
Equipment	Quantity
instrument	1
Pipetting channel	8
Plate robot	1
Plate quantity	30
LED	1
Buil-in camera	1
Vascular centrifuges	1
Multi functional module for collecting blood vessels, scanning codes, and analyzing open cap images	1
Freezing tube opening module	1
Freezing tube scanning module	1
HEPA (optional)	1
UV lamp (optional)	1
Monitor, software system	1

# HedylaX Intelligent Microbial Colonies Picker Workstation

## High cost-effectiveness, saving human resources, process traceability

HedylaX Intelligent Microbial Colonies Picker Workstation has integrated XImaging visual identity, fluid treatment technology with automatic control technology. It can accomplish the colonies picking and inoculation automatic process through automatic imaging, intelligent identity and automatic control. There are different kinds of inoculation including agar to liquid inoculation, agar to agar inoculation, liquid to agar inoculation and liquid to liquid inoculation. The price performance ratio of the system is high and it is scalable for throughput. The aim is to solve the low efficiency of colonies picking by operators, unstable and no traceability etc.



## Product Features▶▶▶

### HD Image

25 million pixels HD image, identifying single colonies, resistant to background interference

### Full Functional Colony Picker

Surface colony picker and puncture colony picker, agar medium inoculation and fluid medium inoculation, including spreading/channel aspiration dispense/oscillation etc

### Laminar Flow Structure

Full air supply and ventilation to prevent cross contamination and residue of samples

### Disposable Sterile Picking Tip

To reduce contamination, good plating result, it can accomplish hollow square and Z shaped plating.

### Ultrasonic Detection

To detect the height of agar, precise colony picker and inoculation

### Different Kinds of Strains

Bacteria, actinomycetes, filamentous fungi, yeast etc.

### Different Kind of Picking

Selection and Puncture on the surface of the agar

### Information Traceability

Label Print, barcode scanning, dynamic monitoring camera

### Picking Accuracy

≥98% The diameter of colony is over 1mm.

### Different Kinds of Inoculation

Plating, oscillation, aspiration/dispensing

### Consumables

Disposable Petri dish, different SBS, picking tip cases, reagent tank

### High Throughput

Consumable stack can be connected directly. Maximum scalable SBS is 240

## Parameters▶▶▶

Type	Hedylax T200	Hedylax T800
Dimension	1210mm×750mm×1310mm	1890mm×995mm×1250mm
Weight	130kg	200kg
Power	1.5KW	3.5KW
Efficiency	200 clone/h	800 clone/h
Accuracy	≥98% (The diameter of colony is over 1mm.)	≥98% (The diameter of colony is over 1mm.)
Channel	Single channel	Separate 8 channels
Holders on tabletop	18	30
Height detection	Support	Support
Image system	White-light, 2500w HD camera	White-light, 2500w HD camera
Colonies identification	AI identification, according to status, colour, proximity etc.	AI identification, according to status, colour, proximity etc.
Manual colonies picking	Support	Support
Colony picking tools	Disposable sterile picking tip	Disposable sterile picking tip
Pipetting	Support	Support
Picking	Selection / Puncture	Selection / Puncture
Inoculation	Plating/aspiration, dispensing/oscillation	Plating/aspiration, dispensing/oscillation
Picking database	Support, searchable, exportable	Support, searchable, exportable
Petri dish automatic transferv	Support	Support
Consumable stack	Not support	Support to connect directly
Automatic integration	Support	Support

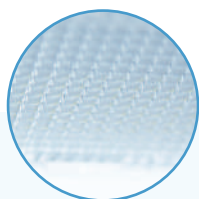
# Automated Nanoliter Pipetting Master

**Micro precision, small dead volume,  
flexible and efficient**

Automated nanoliter pipetting master is a pipetting equipment for small volume liquid separation of nanoliters. It takes the microfluidic chip technology, it works stably, accurately and efficiently to dispense various reagents such as buffers, culture media, compounds, as well as special substances such as enzymes, liquid microspheres, cells, and high viscosity liquid matrices etc. The technology of automatic reagent switching can be compatible with 8 kinds of reagents for non-contact dispensing at the same time. It can avoid the possibilities of cross contamination.

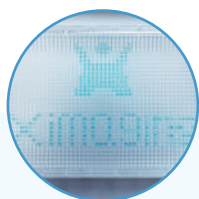


## Product Features >>>



### Micro Precision

Microfluidic chip technology for independent measurement and separation, with a minimum separation volume as low as 0.1  $\mu$ L, CV<3%



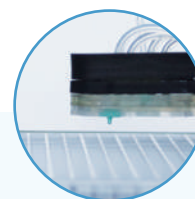
### Small Dead Volume

The pipette tip can be directly inserted into the chip as a liquid container, with a minimum dead volume as low as 6  $\mu$ L.



### Flexible and Efficient

Automated switching of 8 types of liquids, flexible definition of target holes and separation volume for consumables such as 96/384/1536-well plates.



### Non-contact

Non-contact flexible pipetting without tips.

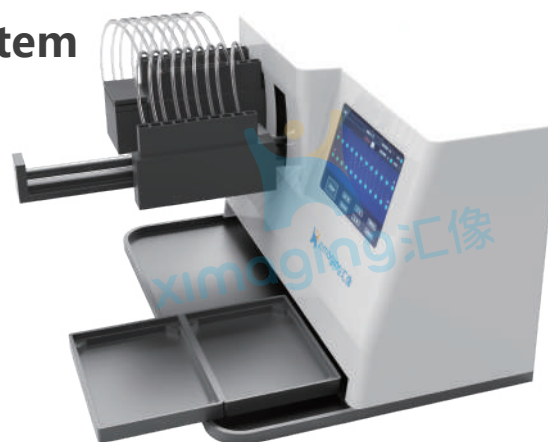
## Technical Parameters >>>

Type	SwiftDrop S1
Pipetting range	0.1- $\infty$ $\mu$ L
Accuracy	0.1 $\mu$ L: CV $\leq$ 3%
Reagents type	8
Fluid switch	It supports 8 kinds fluid to switch.
Pipetting speed	1.well plate: 0.1 $\mu$ L/hole, 25s; 384-well plate: 1 $\mu$ L/hole, 120s
Dead volume	Min 6 $\mu$ L
Plate type	SBS standard size 1-1536-well plate and deep well plate with a height not exceeding 60mm
Pipetting type	Any flexible defined volume
Technical principle	Microfluidic chip
Fallback function	It supports to return unused reagents back to original bottles.
Automation	API protocol, supporting automated integration
Dimension	400 $\times$ 320 $\times$ 240mm WDH

# High Speed Reagent Subpackage System

## Different type of products can meet various experimental needs.

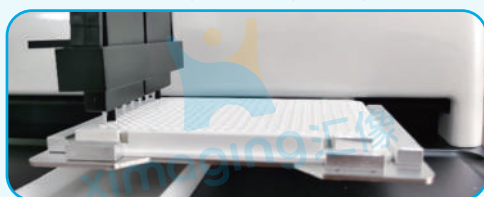
The system can automatically subpackage various types of reagents with high throughput. It greatly improves work efficiency. The system can be used for all kind of complex applications such as cells, culture media, high-precision subpackage of various IVD reagents, preparation of nucleic acid extraction reagent pre assembly plate, PCR system construction, quality control solution subpackage, glass bottle subpackage, preservation solution subpackage and ELISA experiments etc.



## Product Features >>>

### High Speed MicroDispenser

<20s/384 well plate (XDispenser/plus,20ul)  
 ≤6 seconds / 384 plate (XDispenser pro,10ul)



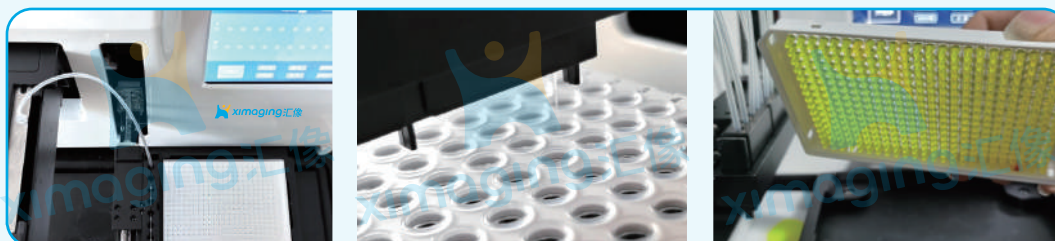
### Anti-collision Design

The anti-collision protection plate has been installed to prevent damage to the instrument in collision.



### Innovative Double Plate Position Design

New single channel/double channels liquid dispenser function, saving reagents, can perform complex work such as fast PCR liquid dispensing



## Technical Parameters >>>

Type	XDispenser	XDispenser plus	XDispenser pro
Type of subpackage	Micro volume high-precision rapid subpackage		To subpackage trace volume reagents rapidly by new peristaltic pump technology
Subpackage speed	96-well plate: 10μl/well, 5 seconds; 100μl/well, 10 seconds 384-well plate: 1μl/well, 6 seconds; 20μl/well, 21seconds 1536-well plate: 1μl/well, 15seconds; 5μl/well, 28seconds		96-well plate: 100μl/well, 8 seconds; 384-well plate: 20μl/well, 18 seconds; 1536-well plate: 5μl/well, 25 seconds;
Non-contact subpackage	8 channels	8 channels+1 channel 96 well subpackage	
Consumable type	PCR plate, deep well plate, 8-tube, dosing tube, glass bottle, centrifuge tube, etc.		
Subpackage volume range	1-999uL (small volume tube kit)		0.5-999uL (small volume tube kit)
	5-50000uL (large volume tube kit)		
Subpackage accuracy	Thin tube subpackage box: 0.5-50ul, 2 μ L: CV ≤ 5%; 10 μ L: CV ≤ 3%, standard tube subpackage box: 5ul-2.5ml, 20 μ L: CV ≤ 1.5%; 100 μ L: CV ≤ 1%		
Subpackage accuracy	slim tube dispenser box: 0.5-50ul, 2μL: ±10%; 10μL: ±5% standard tube dispenser box: 5ul-2.5ml, 20μL: ±2%; 100μL: ±1%		
Height of subpackage	Height of liquid subpackage : 5-60mm, continuously adjustable		
Automation	The system can be integrated with sealing machines, microplate reader, robot etc. into an integration equipment		

# 96-Channel Automated Pipetting System

## Efficient, Precise and High Cost-effective

This equipment is an efficient, precise, and cost-effective 96-channel fully automatic pipetting system, which can achieve fast and accurate pipetting operations such as reagent subpackage, sample transfer and reagent addition. Humanized design and user-friendly operation interface simplify the tedious and repetitive microplate dosing operation to the greatest extent, reduce errors, and make the experimental process safer and data results more reliable.



### Air displacement

Air displacement technology pipetting, no need for syringe pumps and syringes, simple system maintenance

### 96 samples

96 samples can be operated at the same time, and the transfer of 96 samples can be completed within 30 seconds

### N<sup>+</sup> pipetting modes

Supports multiple pipetting modes, including single-row sample pipetting, whole-plate sample pipetting, one-pipette-one-dispense, one-pipette-multiple-dispense, and pre-pipetting mixing, etc.

### High adaptability

Small size, the whole machine can be placed in a clean bench/biosafety cabinet, suitable for high-throughput screening experimental processes

## Technical Parameters >>>

Type	XHandler H4	XHandler H8
Plate quantity	4 holders	8 holders
dimension	695×330×610mm WDH	695×420×610mm WDH
New weight	30KG	35KG
Power	Voltage	200-240 V AC
	Frequency	50/60 Hz
	Power rating	150W
Environment	Temperature	5-40°C
	Humidity	≤80%
Product features	High precision pipetting platform, compact size, comprehensive functionality, and high cost-effectiveness	
Application	Laboratory sample processing, gradient dilution, sample transfer, reagent preparation, etc	
Guarantee	12 months	



# Automated Consumables Stack

## Fully Automatic, High Capacity, Easy to Integrate

The XHarbor series of automated consumables stacks are tailored for intelligent storage and retrieval devices of automated laboratory integration. It's automatic storage, retrieval and transportation functions can meet the high-throughput needs of laboratories in the fields of medical care, food safety, biopharmaceuticals etc.



### Diversified Storage

It can store SBS standard well plates and it is compatible with various specifications of pipette tip boxes.



### Maintainability and Cleanability

Corrosion-resistant stainless steel material, modular design, easy to clean and maintain.



### Quick Plate Retrieval

Average plate retrieval time is 10s.



### Easy Operation

Touch screen interface is user-friendly and interactive.



### Automatic Code Scanning Function

Real-time operation recording and traceability of information.



### Easy Scalability

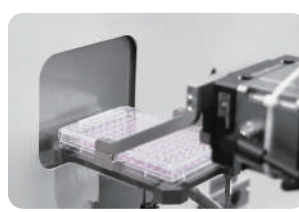
Rich laboratory automation equipment integration.



Rack Sstack



Rack Stack



Lower Board Position



Upper Board Position (optional)

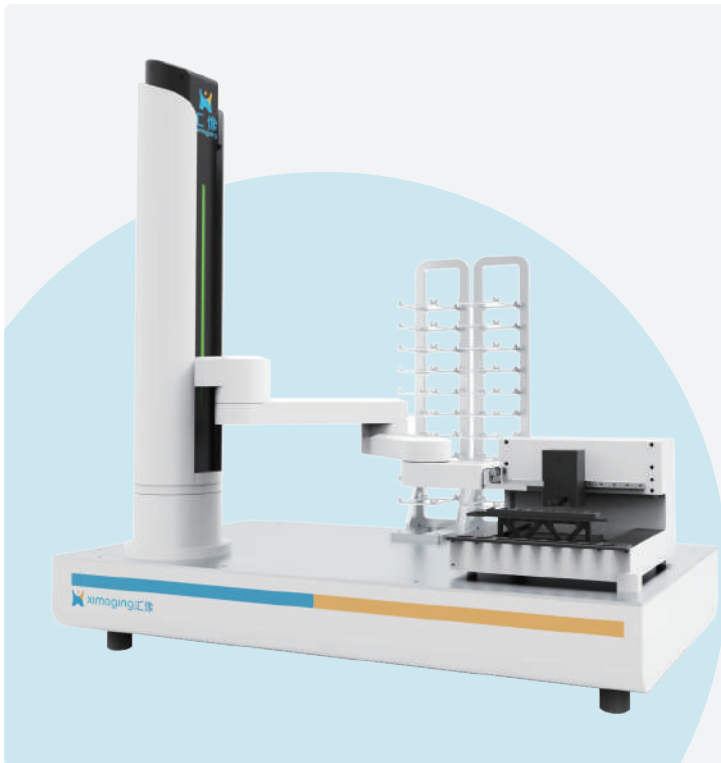
Product type	Plate height	Plate rack height	Number of layers	Capacity
XHarbor12	<15mm	25mm	24	288
	<20mm	30mm	20	240
	<30mm	40mm	15	180
	<50mm	60mm	10	120
	<60mm	75mm	8	96
	<125mm	150mm	4	48
XHarbor7	<15mm	25mm	24	168
	<20mm	30mm	20	140
	<30mm	40mm	15	105
	<50mm	60mm	10	70
	<60mm	75mm	8	56
	<125mm	150mm	4	28



# Robotic Automated Sampling System

Unlock instruments' potential, increase experiment throughput

# High Throughput Nanoliter Pipetting Master



The core of nanoliter pipetting master is HelenX robot and iMagicOS Lite and it is equipped with one SwiftDrop S1 nanoliter pipetting master and a consumable stack with 20 holders. With the help of the stack temporary storage function and the robot automatic plate transfer function, it can automatically switch various reagents and dispense the liquid into 20 pieces of SBS standard 1-1536 well plates by one click.

## SwiftDrop S1 Nanoliter Pipetting Master

It takes the microfluidic chip technology, it works stably, accurately and efficiently to dispense various reagents. The technology of automatic reagent switching can be compatible with 8 kinds of reagents for non-contact dispensing at the same time.

## Features

### • High Throughput / Unattended

The robot can replace the sample plate automatically, and it has capable of dispensing up to 20×1536-well plate. The plate is compatible with SBS standard 1-1536 well plate and deep well plate.

### • Non-contact Flexible Pipetting

The dispensing droplets will be distributed into the target plate wells by spraying. It eliminates the possibility of cross contamination and any volume of reagent can be allocated to any hole into the target plate.

### • High Efficiency / Small Dead Volume

It only needs 25 seconds to dispense 0.1μl into each well of a 96-well plate. The pipetting tip can be used as source container of reagent and the dead volume is below 6μL.

### • Simple Operation

The setup interface of experiment is intuitive and it is easy to operate. It supports to import CSV files to create complex pipetting pattern for a relaxed tour of high-throughput experiment.

### • Flexible and Extensible

It can be flexibly integrated with the automation system and seamlessly interconnect with most automatic workstations appear on the market. It can easily expand the automation of the entire experimental process.

## Applications

### • Distribution of Drugs

It is designed according to the initial concentration of drugs and it automatically calculates the volume of the drug and dispenses liquid to reduce the allocation error during the sample dispensing process.

### • Analyzing Experiment Develop

The analyzing experiment can be miniaturized into 1536-well plate. Each hole can be allocated with different volume of 8 reagents.

### • Reaction System Construction

The ingredients, which transcriptional response is needed such as RNA transcriptase, NTP, buffer, RNase inhibitor, can be pre-packed into 96/384/1536-well plates to construct transcription reaction system.

### • Synthesis Biology

It can be used to rapidly allocate 0.1μL of reagents such as primers, enzymes and reaction buffers into 96/384/1536-well plates.

### • Cell Biology

The medium can be dispensed into 96/384/1536-well plates, and organoid or 3d microspheres of Matrigel suspension can also be dispensed.

# LabMasterX MC-2000 Intelligent Microbial Colony Analysis Master



The core of colony analyzer is HelenX robot and iMagicOS Lite and it is equipped with a colony counter, a code scanning module which can automatically analyze the colonies in various types of agar medium, including pouring method, spread method, membrane filtration method, cross plate method, etc., to accomplish the characteristics analysis and counting of target colonies, and conduct preliminary screening and classification of plates according to the set rules.

Finally, the results can be analyzed, counted, reviewed, reported, saved and uploaded to the LIMS system according to the requirements.

## Colony Counter

The colonies in the plate can be counted and identified according to the methods.

## Features

- The accuracy of colony counter will be improved by using expert recognition mechanism.
- It takes automated result analysis to avoid manual deviation.
- It has electronic original records to improve the traceability of records.
- The plate preliminary screening minimizes workload of inspectors.
- The analyzer supports secondary identification and manual review of results.
- It supports unattended automation for twenty-four hours a day.
- It supports automated integration.

## Applications

The bacteria cultured by the following four methods can be used for intelligent identification and counting analysis of bacterial colonies in Petri dish.

Pouring Plate Method

Spreading Plate Method

Membrane Filtration Method

Cross Plate Method

# LabMasterX EAT-2000 High Throughput Enzyme Activity Assay



The core of enzyme activity assay is HelenX robot and iMagicOS Lite, it is equipped with 1 enzyme label detector and 20 slots of consumable stack, which can be applied to the scene of high-throughput enzyme labeled instrument. With the help of the stack temporary storage function and the robot automatic plate transfer function, it can meet the high-throughput enzyme activity assay testing work.

## Enzyme Labeled Instrument

It supports various brands of microplate reader on the market, including but not limited to Ximaging, Biotek, Thermo Fisher Scientific, MD etc., and it can also be customized to the existing microplate reader in the laboratory.

## Features

### • Automatic Detection

The robot will be cooperated with the Enzyme Labeled Instrument to complete the transfer of the plate and accomplish the automation of the detection process.

### • Easy Operation

It has a clear experiment setting interface and simple operation. It is easy to embark on the high-throughput enzyme activity experiment.

### • High Compatibility

It supports various brands of Enzyme Labeled Instrument on the market, including but not limited to Ximaging, Biotek, Thermo Fisher Scientific, MD etc., and it can also be customized to the existing Enzyme Labeled Instrument in the laboratory.

### • Unattended Laboratory

When the laboratory is equipped with the consumable stack, it can achieve ten minutes to over ten hours of unattended after manual dosing.

### • Flexible and Extensible

It can be flexibly integrated into the automatic system and seamlessly interconnect with most automatic workstations on the market. It is easily expanding the automation of the entire experimental process.

## Applications

ELISA

Quantitative Detection of Protein and Nucleic acids

Cell Viability Detection

Cell Signaling Assay

Metabolite Analyzing and Detection

# LabMasterX CM-2000 High Throughput Cell Imaging Master



The core of Cell Imaging Master is HelenX robot and iMagicOS Lite, it is equipped with one cell imaging, code scanning module and automated cell incubator (optional). It is compatible with 6-384-well plate which can be set multiple time points to imagine and record cells for several days or even several weeks. Making real-time imaging of high-throughput living cells is a simple matter.

## Cell Imaging System

The imaging time can be set according to the experimental requirements and the plate imaging can be automatically completed. The cell growth status in the cell incubation plate can be monitored in real-time.

## Scanning Code Module

It can accomplish to scan the QR code of the cell incubation plate and track the whole information.

## Automatic Cell Incubator

Optional Equipment:

It can provide cell incubation environment, support multiple brands of automatic cell incubators on the market, including but not limited to Cytomat, Liconic, Nexcell, etc.

## Features

### • Automatic High-throughput Operation

It is unattended and the robot can replace the plate automatically. It is compatible with various brands of cell plates. The operators can set up and run their own experiments independently.

### • Intelligent data analyzing for accurate and reliable results

High-performance GPU-driven intelligent learning algorithm, no need to set complex parameters. The reproducible image analyzing and visual data presentation will bring you more intuitive and accurate data results.

### • It has an intuitive experiment setup interface.

It's easy to operate and start. The Guided User Interface makes it simple to start your high-throughput experiment journey.

### • Flexible and Extensible

It can be flexibly integrated into the automation system and seamlessly interconnect with most automation workstations on the market. It is easily expanding the automation of the entire experimental process.

## Applications

Tumorsphere

Colony Formation

Immuno-oncology

Cell Transfection

Cell Proliferation

Cytotoxic

Wound-healing Assay

Cell Migration

# LabMasterX WS-2000



The core of Microplate Washer is HelenX robot and iMagi-cOS Lite, it is equipped with a high-speed liquid pipetting system, automatic reagent switching module, and 20 holders of consumable stack, which can meet the high throughput liquid pipetting operation with the help of the stack temporary storage function and the robot automatic plate transferring function.

## Plate Washing Apparatus

It supports various brands of Microplate Washer on the market, including but not limited to XImaging, Biotek, Thermo Fisher Scientific, MD, etc., and can also be customized to the existing Microplate Washer in the laboratory.

## Features

### • High Throughput / Unattended

The robot can automatically transfer the sample plate, which can accomplish the automatic washing plate up to 20.

### • High Compatibility

It supports various brands of microplate washer on the market, including but not limited to XImaging, Biotek, Thermo Fisher Scientific, MD, etc., and can also be customized to the existing microplate washer in the laboratory.

### • Easy Operation

The operator only need to place the sample plate on the consumable plate rack and start with one button to easily start the high-throughput washing experiment.

### • Flexible and Extensible

It can be flexibly integrated into the automatic system and seamlessly interconnect with most automatic workstations on the market. It is easily expanding the automation of the entire experimental process.

## Applications

ELISA Test

Live Cell Imaging

Cytotoxicity Test

Agglutination Test

# LabMasterX DIS-2000 High Throughput Liquid Pipetting Master



The core of Liquid Pipetting Master is HelenX robot and iMagicOS Lite, it is equipped with a high-speed liquid pipetting system, automatic reagent switching module, and 20 positions of consumable stack, which can meet the high throughput liquid dispensing operation with the help of the stack temporary storage function and the robot automatic plate transferring function.

## High Speed Dispenser

High Throughput Liquid Pipetting Master supports a wide range of pipetting from multiple brands on the market, including but not limited to Vision, Biotek, Thermo Fisher, etc.

## Features

### • High Throughput / Unattended

The robot can automatically replace the consumable plate, and it is capable of pipetting up to 20 plates. The plate is compatible with SBS standard 96 and 384-well plates.

### • Simple Operation

It is an intuitive experiment setup interface and easy to operate. It's simple to start a high-throughput liquid pipetting experiment.

### • Non-contact High Speed Liquid Pipetting

The liquid will be dispensed into the target plate by the peristaltic pump. It cost only 10 seconds to dispense 25 $\mu$ l on a 96-well plate. It takes only 20 seconds to distribute 20 $\mu$ l on a 384-well plate.

### • Flexible and Extensible

It can be flexibly integrated into the automatic system and seamlessly interconnect with most automation workstations on the market. It's simple expanding the automation of the entire experimental process.

## Applications

High-speed  
Subpackage of Cells  
and Medium

High-Speed  
IVD Reagents  
Dispensing

Nuclear Acid  
Extraction Reagent  
Preloaded  
Plate Prepare

PCR System  
Construction

ELISA





# Automated Integration Platform for Experiments

Expansible platform for full workflow automation

HolonLabX interconnecting instruments.  
Experiment quality and efficiency improved.

# Biopharmaceutical HolonLabX

## High-Throughput Microbial Culture

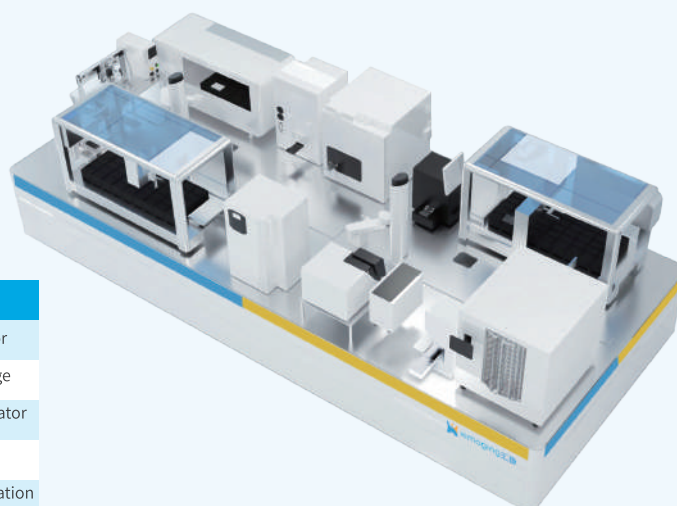
The core of intelligent operating system is XImaging iMagicOS. It integrates advanced automation technology and microbial culture equipment to achieve high-throughput automated culture of microorganisms. The system can process thousands of microbial samples at the same time, and through automated operation procedures, it can accomplish unattended operation of the entire process from sample inoculation, culture condition control to data collection and analysis.



Main equipment
Oscillating incubator
Static incubator
Microbial inoculation workstation
Mobile robot

## High-Throughput Microbial Transformation

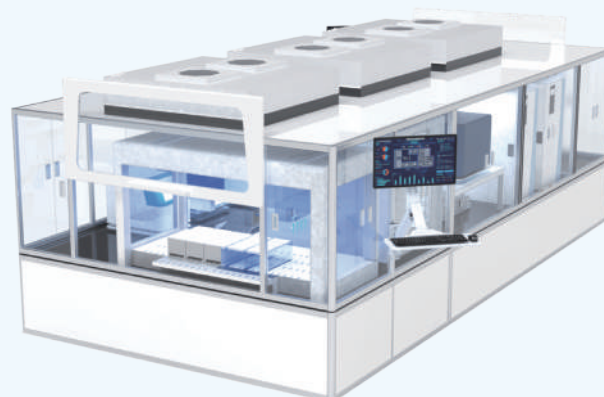
The microbial genome can be transformed and screened by highly integrated and intelligent system dynamically dispatches automated equipment under XImaging iMagicOS intelligent system. Therefore, the expression of genes can be precisely regulated and it achieves regulation of their metabolic pathways, growth characteristics, product synthesis and other functions.



	Main equipment	
Vector construction workstation	Automated monoclonal selection workstation	Oscillating incubator
High-efficiency solid phase extraction instrument	Automated microplate reader	Automated centrifuge
Automatic film tearing machine	Static incubator	Automated electroporator
High-throughput nucleic acid extraction instrument	Automated PCR instrument	Orbital robot
Automated consumables stack	Fully automatic nucleic acid electrophoresis instrument	Cloning and transformation workstation

## Intelligent Enzyme Library Screening

It can accomplish the induced expression, concentration homogenization and enzyme activity determination of recombinant bacteria such as mutant strains and gene-edited strains. It needs a lot of time and repeated trials or errors when screen mutant enzymes with specific functions or special activities. While the automated enzyme library screening system greatly improves the efficiency of mass screening of engineering bacteria and accelerates the pace of enzyme transformation.

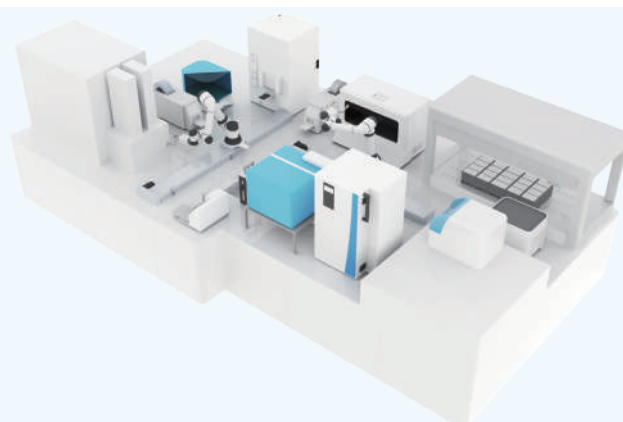


### Main equipment

Liquid workstation	Automated film tearing machine
Automated shaking incubator	Automated PCR instrument
Multi-function microplate reader	Automated centrifuge
Automated consumables stack	Orbital robot

## Intelligent Single Clone Rapid Identification

It can realize rapid identification of positive clones and strain preservation, covering functions such as bacteria picking, colony PCR, product analysis, colony picking, shaking culture, and strain preservation etc. It can fulfil the plate input and strain output. It can widely used to the large number clone identification which match gene cloning, gene mutation, and gene editing applications. And it can screen the available positive clones through automated rapid identification.

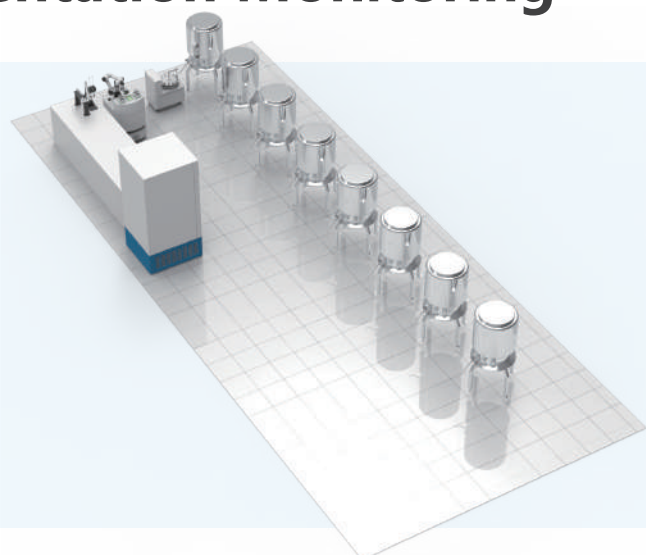


### Main equipment

Liquid workstation	Fragment analyzer
Automated monoclonal selection workstation	Automatic film tearing /sealing machine
Automated shaking incubator	Low-temperature storage refrigerator
Automated PCR instrument	Track robot

## High-Throughput Fermentation Monitoring

XImaging Technology has developed an innovative intelligent automation solution which can automatically complete sample collection and storage, and realize unattended operation at night according to the demand for precise control of fermentation parameters during the fermentation process. At the same time, it supports real-time online data collection and manual input of offline data, and it can conduct systematic and comprehensive analysis of a large amount of process data. It can help fermentation technicians quickly, efficiently accomplish high quality complete tedious tasks such as information collection, data analysis, knowledge management and experimental reports.



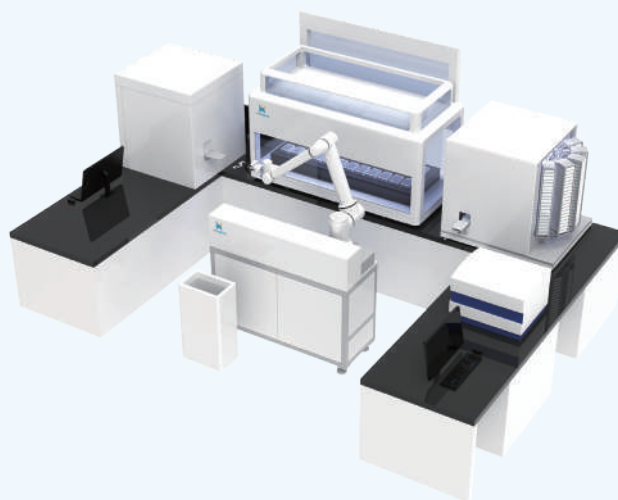
### Main equipment

Fermentation tank	Test tube cover opening and closing machine
Mobile dosing robot	4°C refrigerator
Mobile robot	

# Synthetic Biology HolonLabX

## High-Throughput Cell Line Screening

Cell line development is an indispensable key experimental technology in the process development of biopharmaceuticals. This platform provides an automated solution for high-throughput screening of cell lines, including cell plating of 96-well plate, culture and replacement of culture medium. It supports the picking and expansion of positive wells. The information is tracked throughout the process, and database retrieval of historical information is supported, which solves the problems of manual repetitive labor, confusion and contamination, and accelerates the process of new drug research and development.

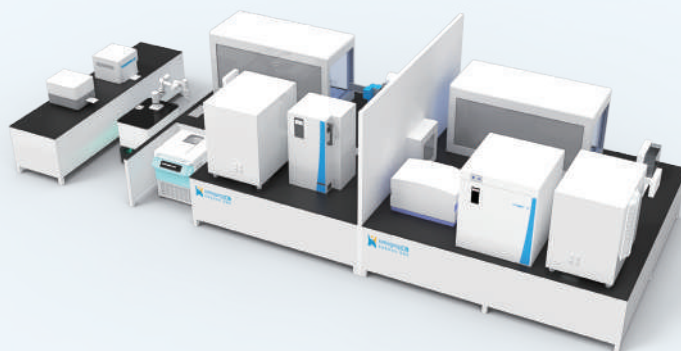


### Main equipment

Liquid workstation	Monoclonal cell tracking imager
Cell culture incubator	Robot
Molecular interaction instrument	Consumables stack

## High-Throughput Hybridoma Screening Assay

Hybridoma technology is one of the important technologies for developing monoclonal antibodies so far. Because of its high specificity, it is widely used in biology, pharmacy, medicine and other fields. Cell screening is a key step in hybridoma technology, which is to screen out target cells that can produce high-yield specific antibodies from a large number of cells. The manual screening method is inefficient, has a low screening throughput, and it is difficult to record the operation process and previous data, resulting in the loss of precious data. This system can greatly reduce the manual workload in the hybridoma cell screening process, and can accurately record each operation step. It greatly improves the screening throughput, and accelerates the drug development process.

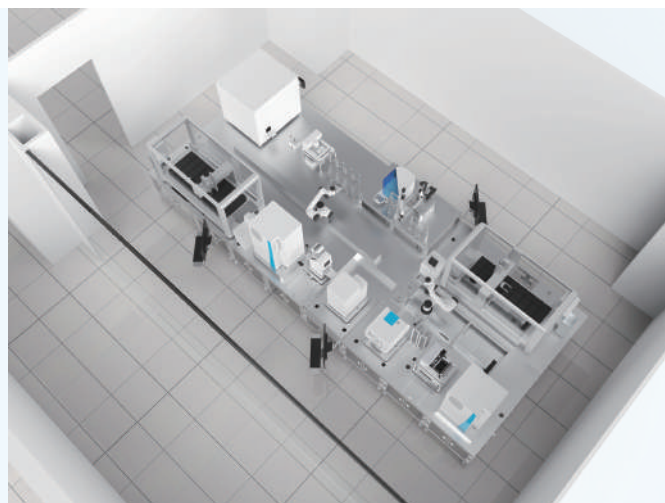


### Main equipment

Liquid workstation	ELISA reader	Flow cytometer
Cell culture incubator	Temperature-controlled incubator	Consumables stack
Microplate washer	Centrifuge	Robot

# mRNA Vaccine Development

In vitro synthesis and screening of mRNA is an important part of the mRNA vaccine development process. Manual in vitro synthesis and screening of mRNA often requires a lot of labor, repetitive work and complex micro-pipetting. This system can achieve in vitro synthesis and screening of 384 samples/batches. It supports multi-task parallelization of molecular and cell areas, and obtain screening data of hundreds of samples as fast as 1.5 days.



### Main equipment

Liquid workstation	Centrifuge
Fragment analyzer	Film sealing and tearing machine
PCR instrument	Cell culture incubator
Nanoliter dispenser	Cell imaging instrument

# High-Throughput Compound Screening

High-throughput compound screening has the advantages such as trace, rapid, sensitive and accurate etc. It is an effective method for discovering active compounds. Manual screening is labor-intensive and error-prone. The platform integrates robotic automation technology with liquid handling technology to support the verification of high-throughput screening models at the cellular or biochemical levels, the verification of high-throughput screening models based on targeting or phenotypes, compound screening based on high-throughput screening models, and the verification of "Hit compounds" obtained by high-throughput screening.



### Main equipment

Liquid workstation	High-content cell imager
Cell culture incubator	Pipetting system
Multi-function microplate reader	

# High-Throughput ELISA Detection

The high-throughput ELISA automated function island includes liquid workstations, automatic dispensers, plate washers, temperature-controlled incubators, microplate readers, robots and other equipment. The functional island can accomplish automatic and standardized processes such as sample gradient dilution, oscillation incubation, fully automatic plate washing, and microplate detection, which will improve the accuracy and repeatability of test results and reduce labor costs.



### Main equipment

Liquid workstation	Incubator
Microplate washer	Consumables stack
ELISA reader	Robot
Dispenser	

# Biological Agriculture HolonLabX

## High-Throughput Seed Sample Pretreatment

This platform can be widely applied to the pretreatment of seed samples in the field of molecular breeding according to robotics and liquid handling technology. It can automate the experimental steps of seed sample packaging, grinding ball subpackage, sample grinding and crushing, metal bath dissolution of nucleic acids, centrifugation and supernatant collection etc. The high-throughput seed samples can be processed with one click, reducing labor costs while improving the accuracy and consistency of sample processing.

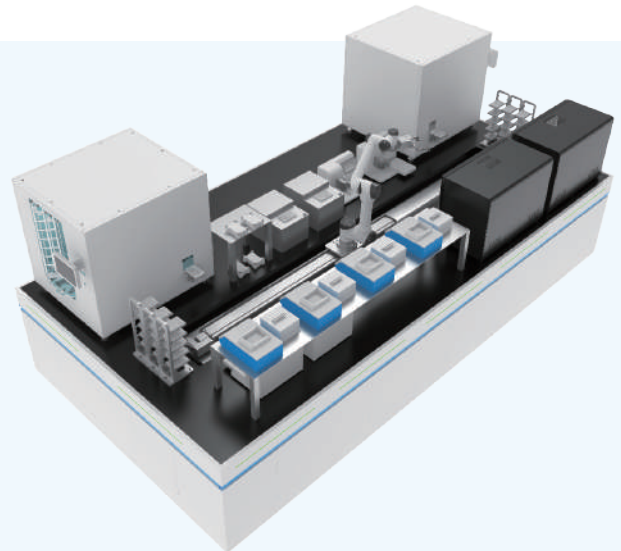


### Main equipment

Liquid workstation	Automated centrifuge
Automated grinder	Reagent dispenser
Automated sample dispenser	Automated metal bath

## High-Throughput Nucleic Acid Extraction

Fully automated nucleic acid extraction, with sample input and nucleic acid output, which can be applied in the field of molecular breeding. High-throughput and high-quality nucleic acid extraction can be achieved in a short time. It is compatible with alkaline boiling method and magnetic bead method. The nucleic acid extraction will be accomplished efficiently. 2300 samples of magnetic bead method nucleic acid extraction (2300 samples) can be completed in 5 hours. 2300 samples of alkaline boiling method nucleic acid extraction can be completed in 3 hours. It can be used for SNP detection, NGS library construction and other experiments with high requirements for nucleic acid quality.

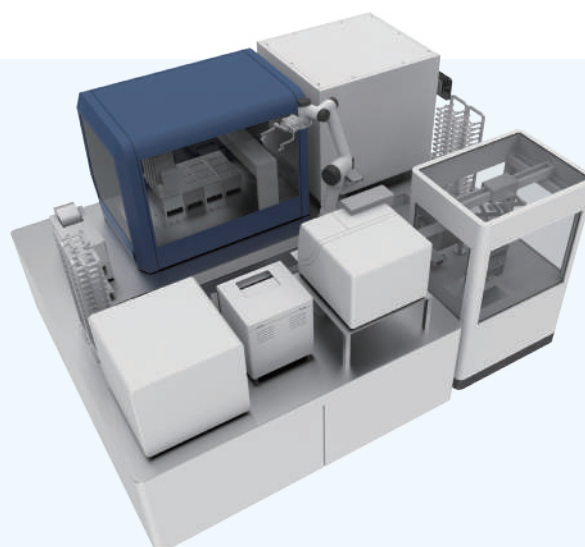


### Main equipment

Liquid workstation	Centrifuge
Dispenser Incubator	Nucleic acid extractor
Oscillator Centrifuge	Consumables stack
Nucleic acid extractor	Robot

## SNP Genotyping Detection

The unattended SNP genotyping detection platform has the advantages of high throughput and low cost. It can quickly detect SNPs through the KASP method. The multi-sample single SNP and single-sample multi-SNP detection will be supported by the platform. It can complete up to 122,880 data point detections within one day. It also has the functions of automated gene detection and gene expression detection, which is convenient and flexible. It can be widely used in molecular marker-assisted breeding.

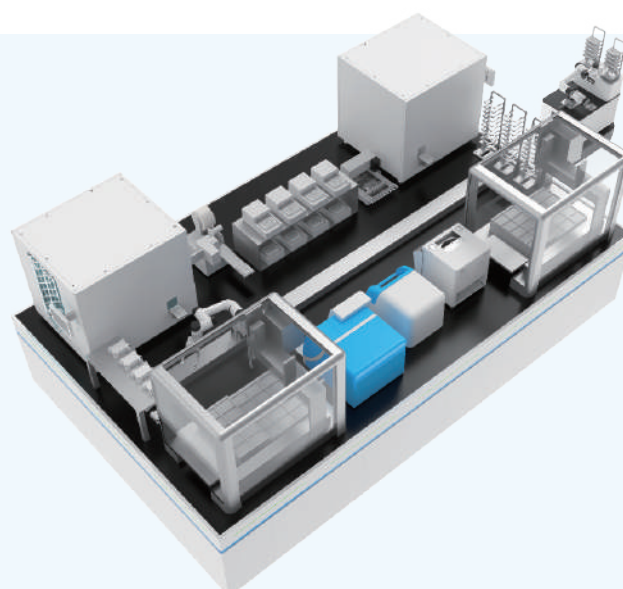


### Main equipment

Liquid workstation	Nanoliter dispenser
Film sealing machine	Centrifuge
Water bath PCR instrument	Genotyping detector

## NGS Second-Generation Sequencing

This platform can accomplish the automation and standardization of nucleic acid sample preparation, library construction and library quality control, and automatic data analysis, without manual intervention in the middle. The single sample loading volume is over 96. It is compatible with the mainstream kit processes in the market. The reagents are open and it can complete the whole genome sequencing, exon sequencing, methylation sequencing, RNA-seq and other library preparation work.



### Main equipment

Liquid workstation	Nanoliter dispenser	4°C automatic refrigerator
PCR instrument	Centrifuge	Consumables stack
ELISA instrument	Temperature-controlled incubator	Robot
Fragment analyzer	Film sealing and tearing machine	

# Bioomics HolonLabX

## Omics Sample Preparation

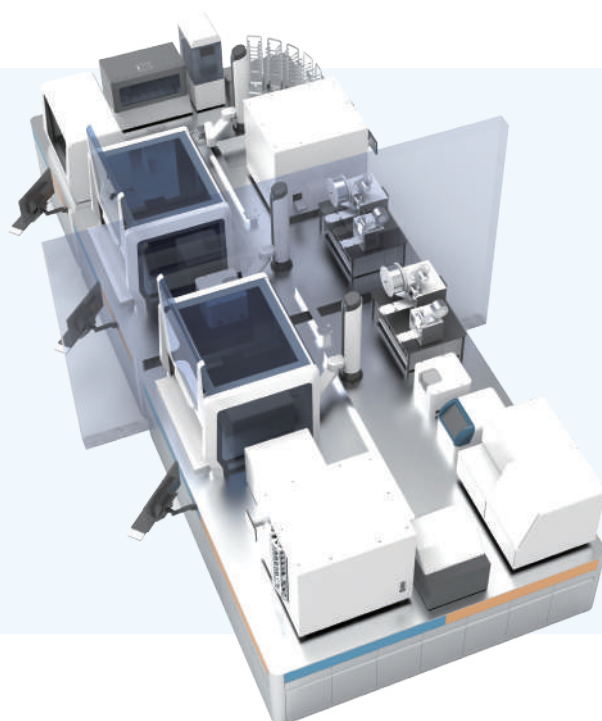
This system can automatically accomplish multi-omics monitoring of various liquid samples such as serum plasma, cerebrospinal fluid, urine, etc. It mainly includes the whole process of proteomics sample pretreatment from protein extraction, quantification, enzymatic hydrolysis, peptide desalting, and freeze-drying, as well as the metabolomics/clinical mass spectrometry sample pretreatment process of extracting small molecule metabolites through magnetic bead method, protein precipitation, liquid-liquid extraction, solid phase extraction, etc., and then concentrating and freeze-drying.



Main equipment	
Liquid workstation	Centrifugal concentrator/nitrogen blower
Heating oscillator	Film sealing and tearing machine
Consumables stack	Freezing tube cover opener (optional)
Centrifuge	Bottom QR code scanner (optional)
ELISA reader	Robot
-20°C refrigerator	

## Genomic Sample Preparation

The system can accomplish automation and standardization of nucleic acid sample preparation, library construction and quality control through strict zoning design. The sample processing area performs automated pre-processing of tissue samples. The front area of library construction performs nucleic acid extraction, construction of enzyme reaction systems such as linker addition, fragment screening and purification. The back area performs PCR system construction, PCR amplification and purification, qPCR system construction and quantification and other quality controls. The whole process is automated and strictly zoned to avoid sample contamination.



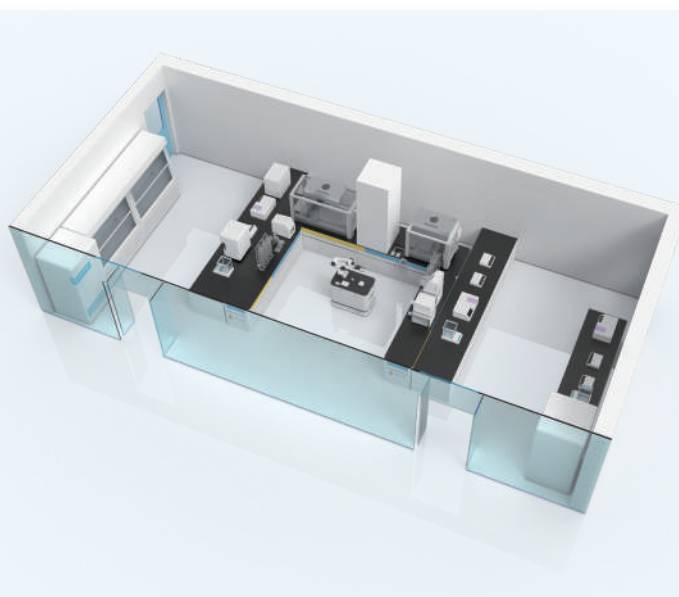
Main equipment		
Liquid workstation	Automated 4°C refrigerator	Fragment analyzer
Automated tissue grinder	Automated centrifuge	Automated qPCR instrument
Nucleic acid extractor	PCR instrument	Consumables stack
Film sealing and tearing machine	ELISA instrument	Robot



# Biomedical HolonLabX

## Biological Sample Preparation

This platform combines automation technology and image recognition technology. It integrates blood separation workstation, nucleic acid extractor, centrifuge, cryotube cover, barcode scanner, low-temperature refrigerator and other equipment, which can realize the automation of experimental processes such as centrifugation of biological samples, automatic identification and positioning of buffy coat cells, sample subpackage and storage, and nucleic acid extraction. The manual preparation area and the automated experimental area are designed to coexist. The manual and robot operations are coordinated to improve the utilization rate of equipment and the efficiency of sample processing.



Main equipment		
Blood separation workstation	Cryotube barcode scanner	Low-temperature refrigerator
Centrifuge	Nucleic acid extractor	Consumables stack
Cryotube decapping machine	Dispenser	Robot

## Nucleic Acid Extraction and Detection

The platform integrates sample pre-treatment workstation, nucleic acid extractor, qPCR system construction workstation, film sealing machine, centrifuge, qPCR instrument and other equipment, which can fulfil automatic subpackage of samples and reagents, sample pre-treatment, fully automatic nucleic acid extraction, qPCR detection and automatic uploading of test reports. The whole process information is recorded and can be directly connected to LIMS to reduce the workload and pressure of testing staff.

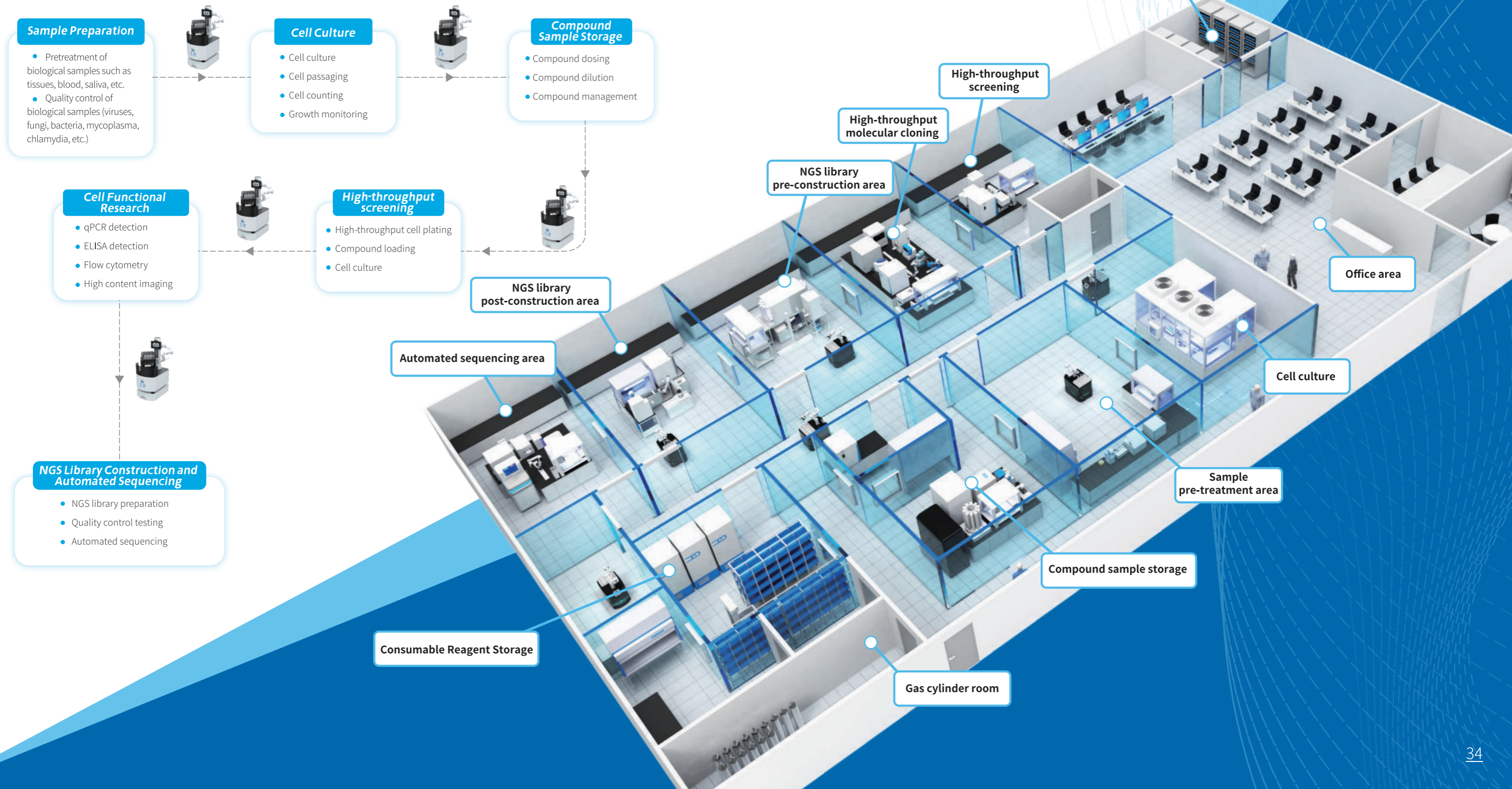


Main equipment	
Sample pre-treatment workstation	Centrifuge
Nucleic acid extractor	qPCR instrument
qPCR system construction workstation	Robot
Automatic film sealing machine	

# Ximaging Drug Development Full-process Automation Solution

High throughput, high efficiency, flexible expansion

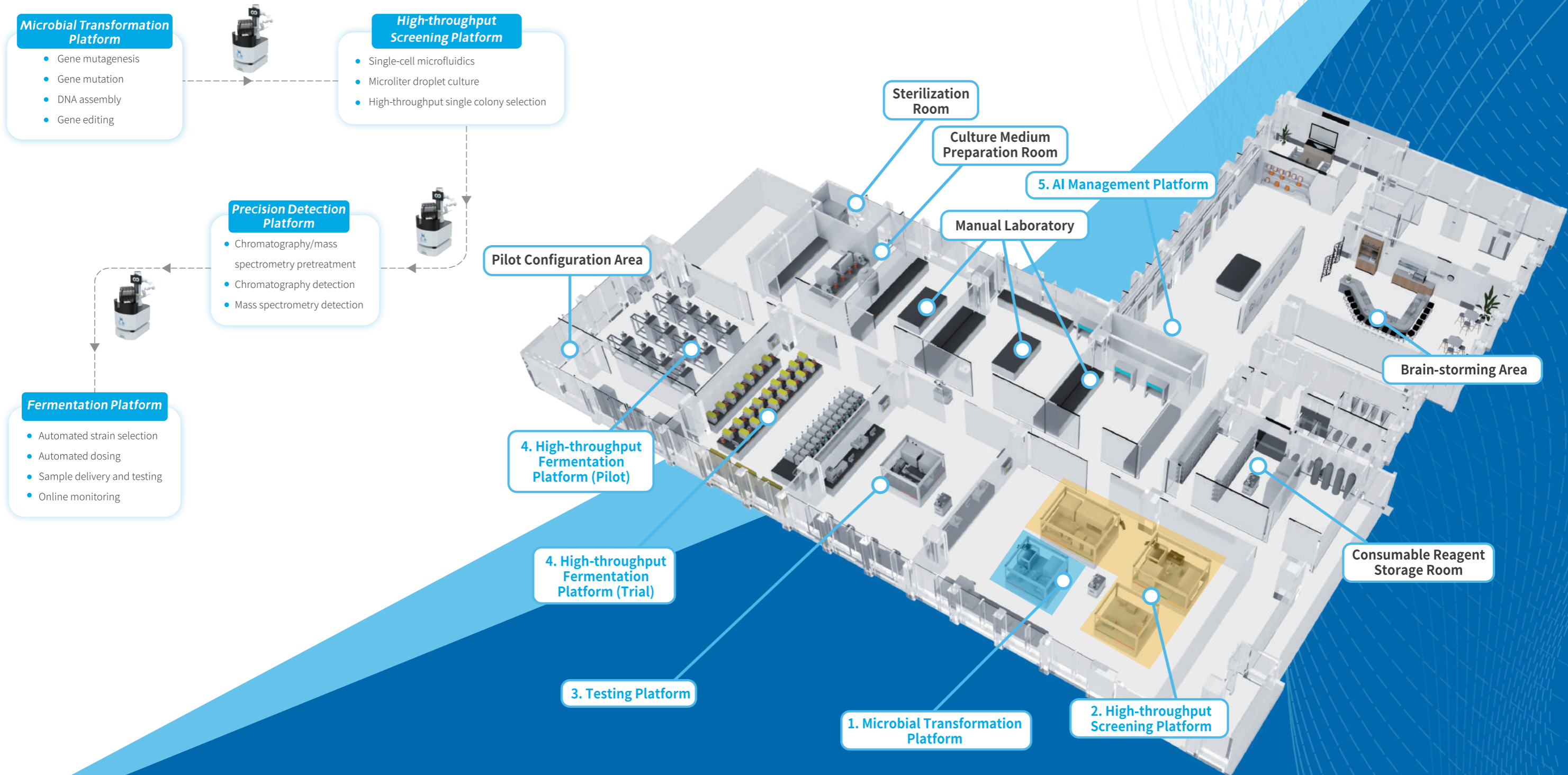
The solution can achieve functions such as automated sample pretreatment and quality control, compound management, cell-based and biochemical high-throughput drug screening, automated cell culture, high-content screening, NGS library construction and sequencing automation. It can accomplish a closed loop of dry-wet experiments in the drug development process, and assist the artificial intelligence system.



# XImaging Synthetic Biology

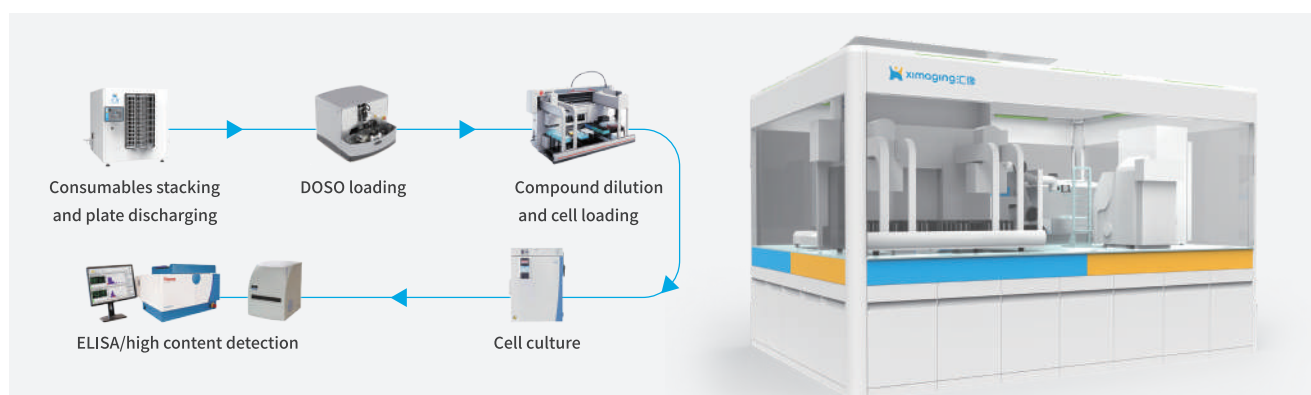
## Full-process Automation Solution

High throughput, high efficiency, flexible expansion



## Intelligent High-Throughput Drug Screening Platform

- The core of the platform is built with the XImaging RoboSciX-10 HelenX AI robot scientist system. The platform is equipped with a 7-axis sliding table robot, Huawei's Ascend series dedicated intelligent computing platform, Huawei distributed data management system and XImaging iMageOS cloud smart operating system. The platform is also connected and controlled nearly 10 sets of equipment including liquid workstations, consumable plate stations, microplate readers, high-content drug screening systems, automated cell culture incubators, and micro-liquid dispensers etc
- The system integrates an automated consumables stack to store pipetting tips, compound well plates and cell culture plates. The liquid workstation PinTool tool can achieve low-cost, high-throughput, automated compound dilution and sample dosing. The automated incubator can accomplish cell culture and regular observation of cell status. The micro-liquid dispenser or liquid workstation achieves automated Assay system construction and automated immunostaining. Finally it performs high-throughput enzyme-labeled detection and high-content drug screening. The entire experiment is automated by the RoboSciX-10 "HelenX" AI robot scientist system and it is achieving 24-hour fully automated unmanned drug screening.



### Platform applications:

- Validation of high-throughput screening models at the cell-based assay or biochemical assay level;
- Validation of high-throughput screening models based on targeting or phenotype;
- Compound screening based on high-throughput screening models;
- Validation of "hits" obtained through high-throughput screening (Hits validation).

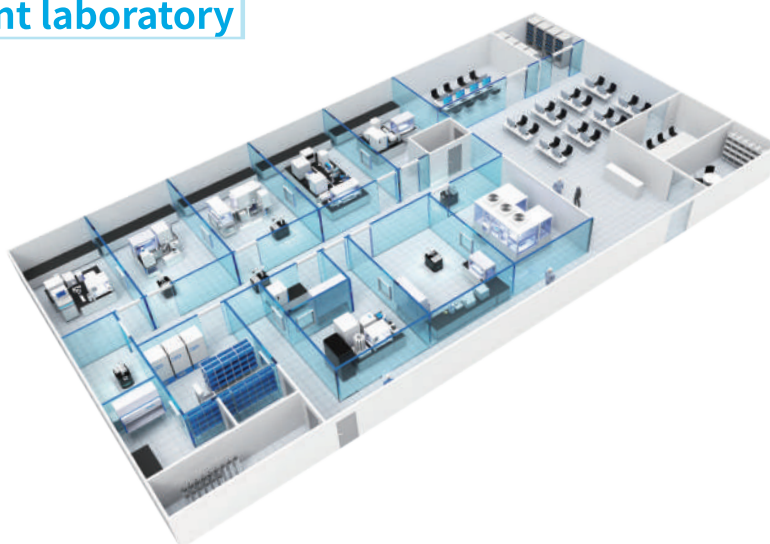
### Solution features:

- "HelenX AI Robot Scientist" connects and automatically operates nearly 10 devices including pipetting workstations, microplate readers and cell culture incubators etc.
- The screening workflow is standardized, the experimental data is reliable, and human errors can be reduced;
- The screening platform can work 24 hours a day with high throughput;
- Existing equipment can be reused and given new power;
- The consistent experimental data of "samples input, results output" is highly traceable.



## AI Drug development intelligent laboratory

This automated laboratory covers over 1,000 m<sup>2</sup> with the iMagicOS system as the core. It has realized 8 automated function islands and laboratory automation of more than 100 instruments and equipment. It can accomplish experimental processes such as pre-treatment of blood, tissue, saliva and other samples, cell subculture, high-throughput screening of compounds, cell staining imaging, NGS library construction and sequencing. It will minimize the manual steps required to complete the experiments and it will reduce the risk of sample processing errors. At the same time, it can improve the consistency and reliability of the experiment, thereby achieving a more efficient R&D process.



**↓ 80%**  
less manpower

**↓ 50%**  
less samples and reagents

**↑ 3times**  
higher capacity

**↑ 4times**  
higher throughput

It forges a global leading benchmark for intelligent laboratories throughout the entire drug development process.

Sample intake	Compound management	High throughput screening	Cell culture	High content imaging	NGS
<ul style="list-style-type: none"> <li>• Sample pretreatment (Tissue, blood, plasma)</li> <li>• Sample QC (mycoplasma, bacteria and fungi)</li> <li>• PE Envision plate reading</li> </ul>	<ul style="list-style-type: none"> <li>• Compound dissolve</li> <li>• Compound reformat</li> <li>• Cherry-pick</li> <li>• Serial dilution</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Cell-based HTS</b> <ul style="list-style-type: none"> <li>• Cell-panel sensitivity</li> <li>• Combination screening</li> </ul> </li> <li>• <b>Biochemical-based HTS</b> <ul style="list-style-type: none"> <li>• ADP-Glo</li> <li>• HTRF</li> <li>• TR-FRET, et al</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Automated cell culture</li> <li>• CRISPR screening</li> </ul>	<ul style="list-style-type: none"> <li>• Cell painting assay</li> <li>• Immunofluorescence</li> <li>• ELISA</li> </ul>	<ul style="list-style-type: none"> <li>• WES</li> <li>• Standard mRNAseq</li> <li>• HTS-mRNAseq</li> <li>• Methylation seq (RRBS)</li> </ul>

# *Intelligent Science, Selecting XImaging*

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