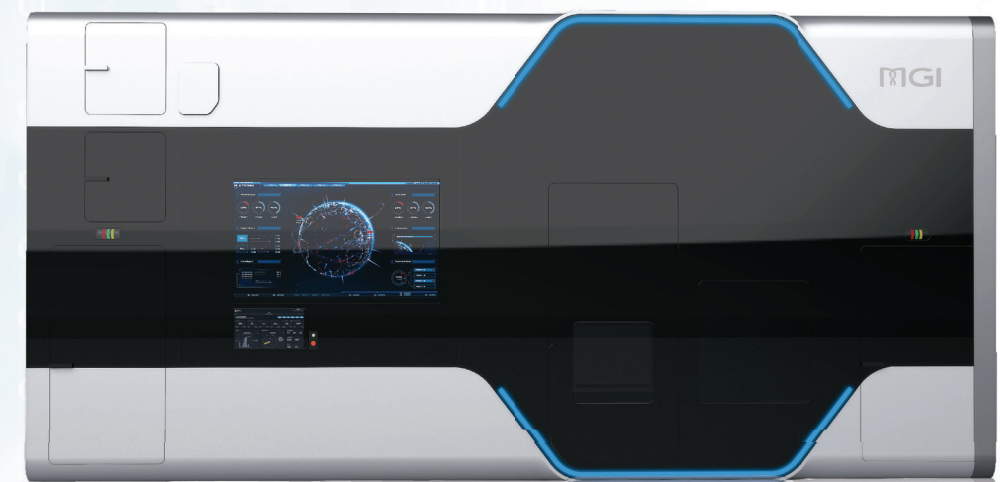


Leading Life Science Innovation
To Develop and Promote Advanced
Life Science Tools for Future Healthcare
Focus on Life Science and Bio-technology Fields



Storage for Intelligent Application

MGICLab-LT Series Ultra-low Temperature Automation Biobanking System



Based on the design concept of intelligence and automation, MGI has customized a stable, safe, intelligent, and efficient brand-new biorepository MGICLab-LT series for users. As a highly Customized -80C lift-up automatic sample storage device, MGICLab-LT can accommodate 500,000 to 3 million samples and automatically completes the entire process of access and intelligent management, to ensure safe storage of samples and controllable quality. The end-to-end life-cycle of sample information can be traced.


MGI Tech Co., Ltd.

Building 11, Beishan Industrial Zone,
Yantian District, Shenzhen. CHINA 518083

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 en.mgi-tech.com

 MGI-service@mgi-tech.com



Telephone

+86 4000-688-114

Website

www.mgi-tech.com

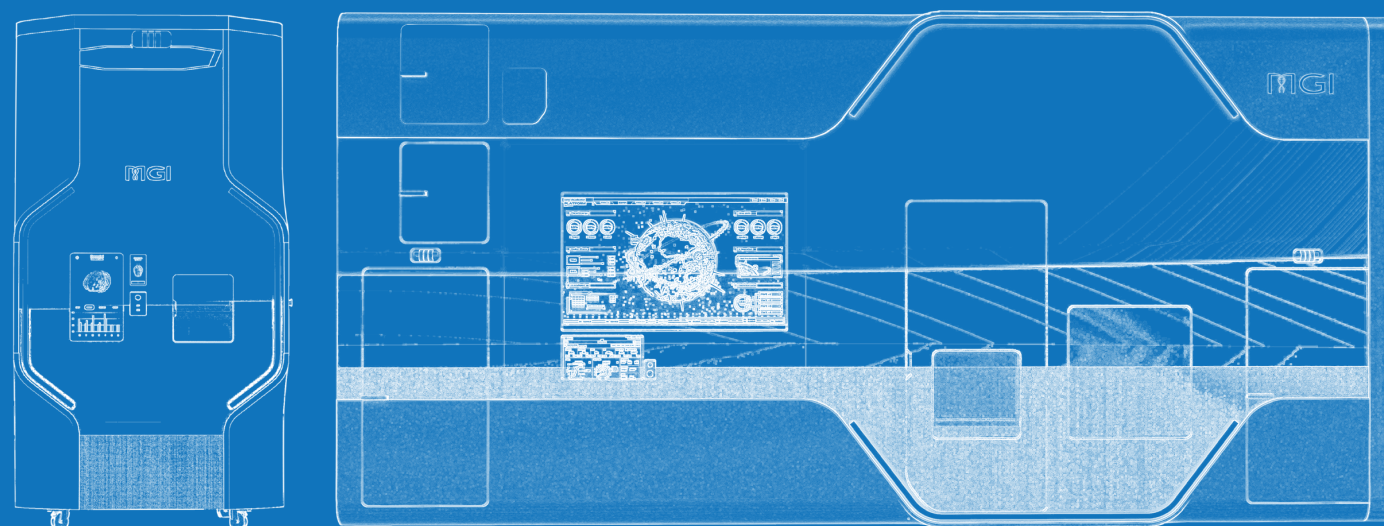
Mail

MGI-service@mgi-tech.com



MGICLab-LT Series Ultra-low Temperature Automated Biorepository

Safe, Stable, Intelligent and Efficient Biorepository



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Globalization Strategy

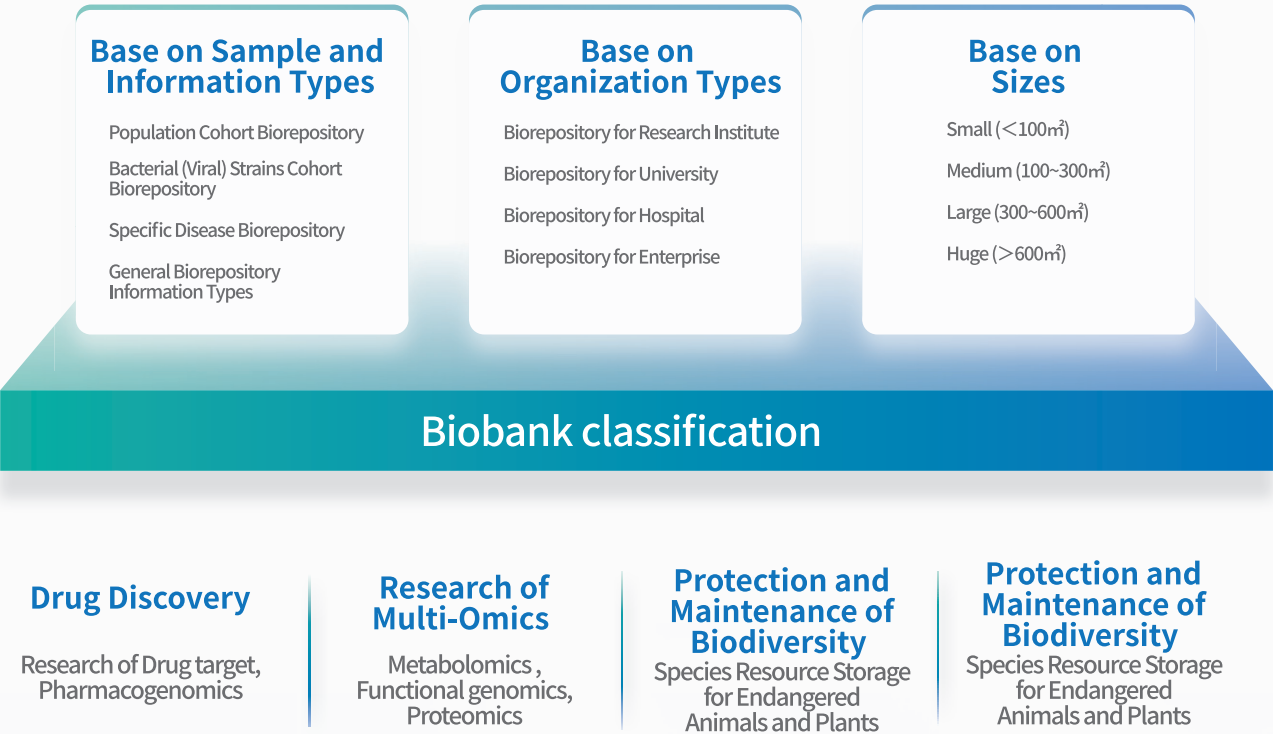


Global Network to Fully Empower Users

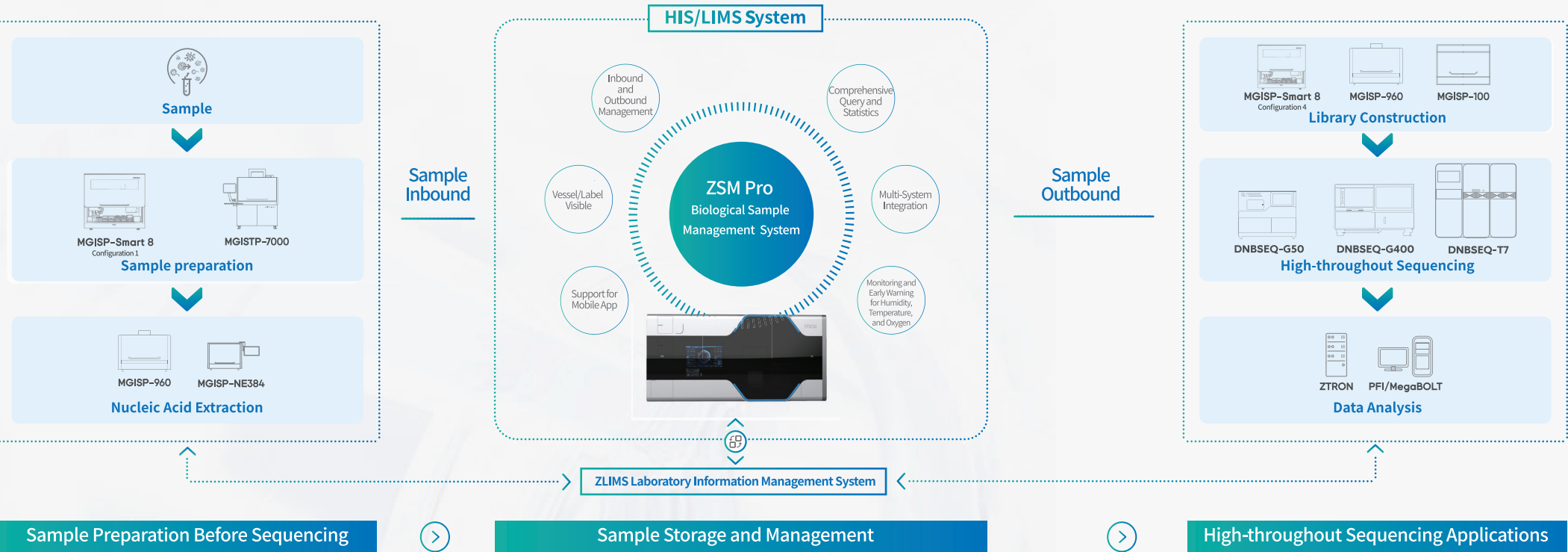
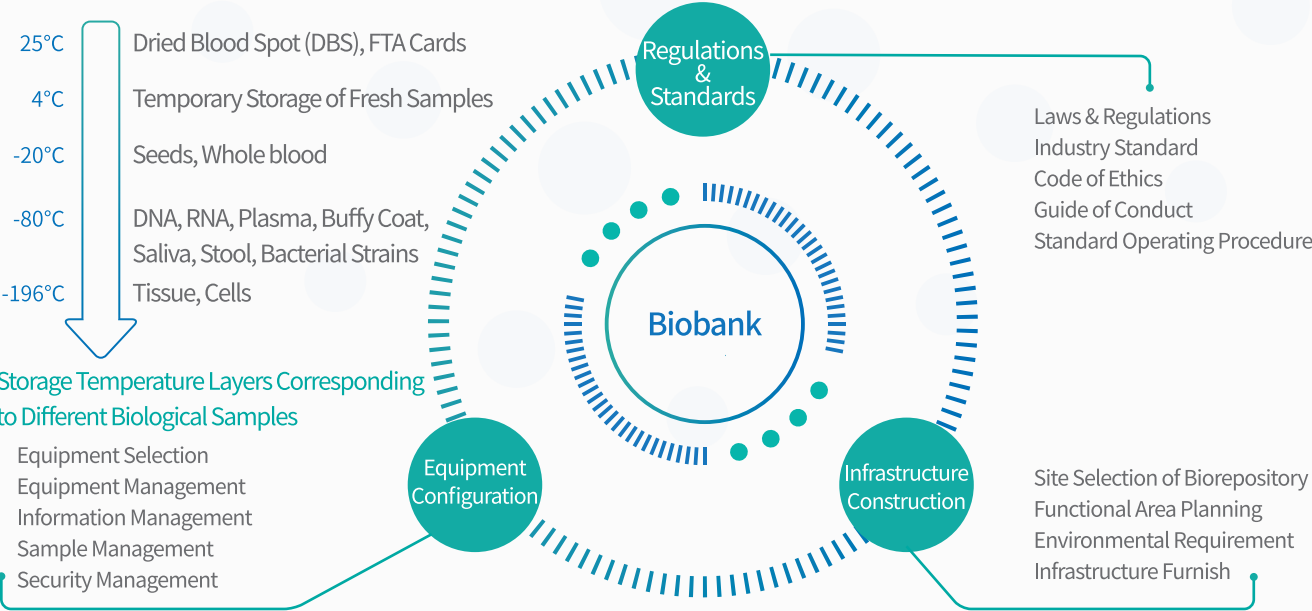
Based on R&D and production bases around the world, MGI continues to adjust and optimize product structure, promote product upgrading, and invest in new products and new technologies to promote the development and industrialization of new products.

GLOBAL NETWORK

Classification and Value of Biorepository



Biorepository System Engineering



Integration of Storage and Reading

Relying on the supporting strength of MGI in the core tools of life science and technology, it can provide integrated storage and reading platform tools from sample preparation, nucleic acid extraction, sample preservation and storage, library preparation, gene sequencing, bioinformatics analysis, etc. Covering the entire process of sample information and laboratory information end-to-end life-cycle data management capabilities, maximizing the value of samples, and promoting the development of industry-university research linkage.

Ultra-low Temperature Automated Biorepository



MGICLab-LT Series

Centralized Preservation / Intelligent Control / Safe&Stable

MGICLab-LT series Ultra-low temperature automated Biobanking System, as a highly customized -80°C lift-up automatic sample storage equipment, can realize large-scale, safe, and stable preservation of blood, tissue, nucleic acid, protein, microorganism, and other sample resources.

MGICLab-LT series equips with MGI's biological sample management system ZSM Pro, which can realize automatic access and intelligent management of samples, ensure sample safety, quality control, and information traceability, and support end-to-end life-cycle management of samples.



Ultra-low Temperature Storage for Large-scale

-80°C environment, storage capacity option for half-million to millions.



Fully Automatic and Efficient Access

Quick positioning, precise sorting, one-key access



Intelligent, Stable and Safe

Intelligent identification of sample information, fast and efficient defragment

The MGICLab-LT series customizes a stable, safe, intelligent and efficient new biobank based on the design concept of standardization, intelligence and automation.

MGICLab-LT Series · Product Features



● Cascade Refrigeration System

There are two refrigeration systems at -80°C and -20°C/-40°C respectively, one for standby and one for use, and the rotation is switched; the backup liquid nitrogen refrigeration system provides comprehensive refrigeration guarantee.

● Double Temperature Zone Design

There are no electrical components in the -80°C storage area, which minimizes the risk of failure; The -20°C/-40°C buffer zone provides a stable operating environment for the automated mechanical Systems and is easy to maintain; monitors temperature and humidity in real-time, provides remote monitoring and alarm functions, and has built-in multi-dimensional monitoring to ensure sample safety.

● Cascade Refrigeration System

Data storage security: Localize storage of sample information data, classify user access permissions, and ensure data security. There are no electrical components in the -80°C storage area, which minimizes the risk of failure; The -20°C/-40°C buffer zone provides a stable operating environment for the automated mechanical system and is easy to maintain; monitors temperature and humidity in real-time, provides remote monitoring and alarm functions and has built-in multi-dimensional monitoring to ensure sample safety.



● Automatic Tube-pick System

The entire process of sample entry and exit identification, sorting, transfer, and temporary storage is automated.

● Intelligent Control System

Greatly improve the access efficiency; Fragmented sample sorting, timing trigger, improve effective utilization rate; Support space management by sample type and customer type, intelligent and convenient inventory management.



● High Density Matrix Storage Rack

Utilizing the cold sink principle, the space utilization rate is greatly improved, and the overall energy consumption and storage cost are reduced.

● One-piece fully-enclosed Heat-insulated Shell

Multi-stage buffer design, combined with micro-positive pressure to isolate external moisture from entering the storage body, reduce frosting rate and ensure overall temperature stability.



● Intelligent IoT

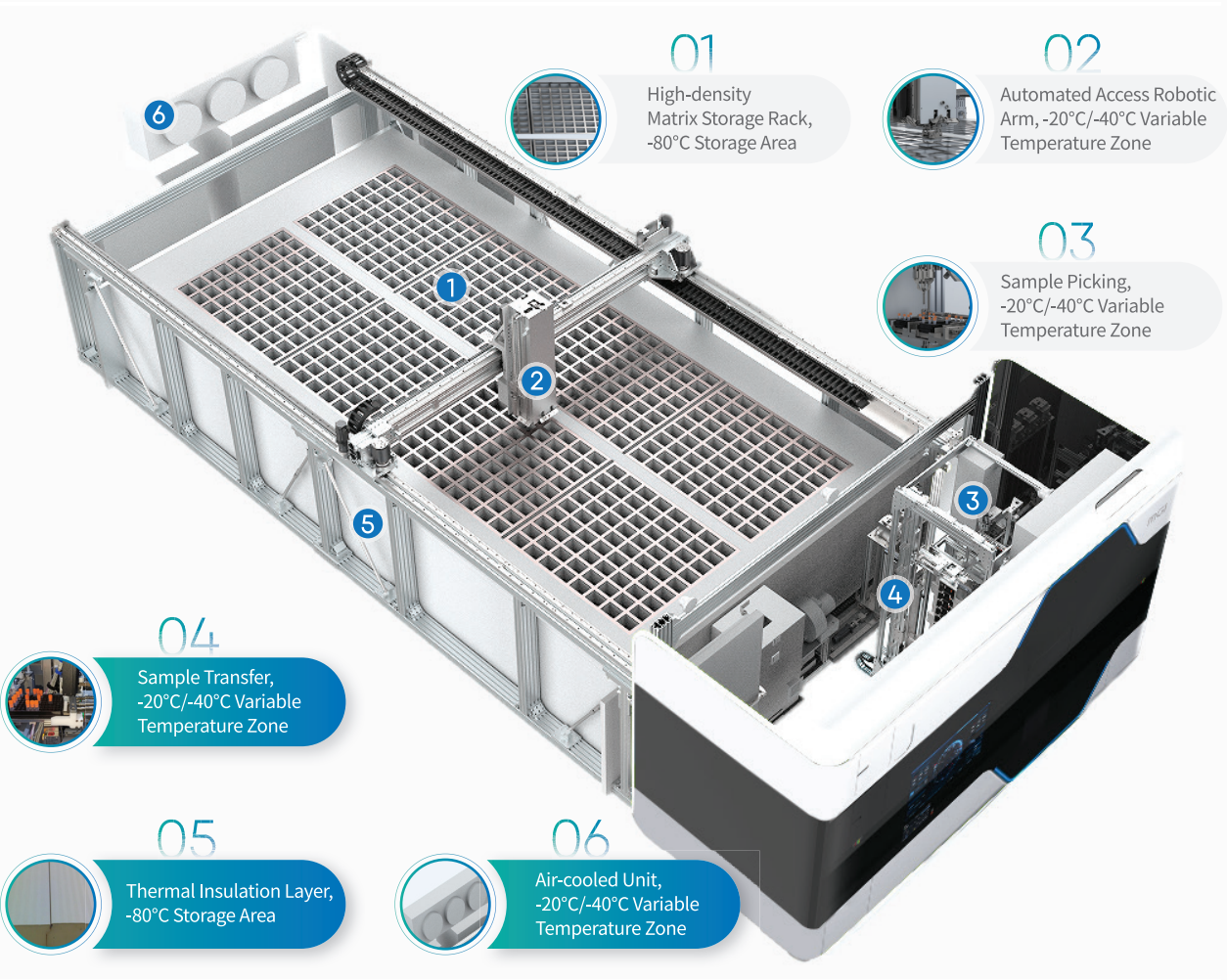
It supports data docking with third-party LIMS/HIS systems and cooperates with MGI ZSM Pro biological sample management system to link cold chain equipment to achieve data sharing.

● Software System, Flexible Expansion

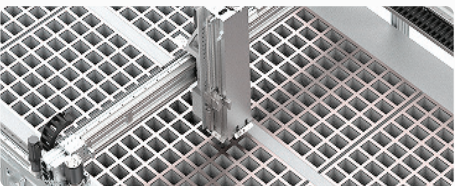
According to different business needs, it supports the expansion of system functions, including project establishment, project review, sample inbound and outbound tracking, material information, etc.

Product Structure

MGICLab-LT series automated access system is fully located in the -20/-40 variable temperature zone, enabling precise operation of motors, sensors, mechanical transmission structures, and more. The system has an exceptionally low failure rate, ensuring a smooth sample access process and demonstrating efficient and reliable access capabilities.



● MGI Partition Lifting Up Sample Storage Technology



Sample preservation area at -80°C, with multi-level large space buffer to prevent frosting in the preservation area. The automation access system works in a highly reliable environment of -20°C/-40°C, where maintenance personnel can enter for maintenance without affecting sample storage. The maintenance space is large and does not interfere with biorepository preservation. Providing a good user experience.

High Storage Capacity & High Degree of Customization

From the beginning of its development, the MGICLab-LT series has taken into account different scenarios and opened up customized services, giving it a strong ability to adapt to different environments. Its flexibility to customize sample capacity according to the user's on-site conditions enables users to have personalized options and more practical functions, perfectly solving the problem of space restrictions,

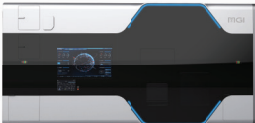
MGICLab-LT50



Sample Capacity:
below 500,000



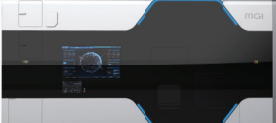
MGICLab-LT100



Sample Capacity:
1 million



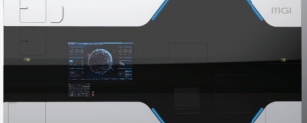
MGICLab-LT200



Sample Capacity:
2 millions



MGICLab-LT300



Sample Capacity:
3 millions



Stock Quantity of Consumables of Different Specifications/tubes							
Product Model	Cabinet Area (L×D×H)	Site Area (m ²)	0.5 mL SBS (96-well plates)	0.75 mL SBS (96-well plates)	1 mL SBS (96-well plates)	2 mL SBS (48-well plates)	5 mL SBS (24-well plates)
MGICLab-LT 50	6688×4000×2900	52.34	500,000	500,000	360,000	180,000	90,000
MGICLab-LT 100a	10262×4000×2900	72.45	1,000,000	1,000,000	720,000	360,000	180,000
MGICLab-LT 100b	8843×4000×3520	67.00	1,000,000	1,000,000	760,000	380,000	190,000
MGICLab-LT 200	13377×4000×3520	97.26	2,000,000	2,000,000	1,520,000	760,000	380,000
MGICLab-LT 300	10000×5500×5020	87.77	3,010,000	3,010,000	2,260,000	1,130,000	560,000

* The size of the cabinet and corresponding storage capacity may vary, depending on the actual site conditions.

Biological Sample Management System ZSM Pro

- Supports data integration with third-party LIMS/HIS systems, and links to cold chain equipment through the MGI ZSM Pro Biological Sample Management System to achieve data sharing.
- Supports system function expansion for different business needs, including project initiation, project review, sample tracking, and material information.
- Provides comprehensive operation logs and multi-dimensional sample statistical queries to ensure traceability of sample data.
- Provides sample in/out audit management process, customizes user permissions, and ensures data access security.

Make sample management safer, more convenient, and more intelligent, and achieve information-based management for end-to-end life-cycle of samples.

Standardization

Standardize and regulate the end-to-end life-cycle management process of the repository with SOPs.

Intelligence

Intelligent error prevention during operation, real-time abnormality warning, and temperature control module monitoring.

Visualization

A visually-rich and diverse interface to create a sample management platform that is easy-to-use and accessible.

Automation

Automated in/out of liquid nitrogen tanks and cold storage systems through system integration; efficient whole-plate in/out through integration with plate scanners.

Modularization

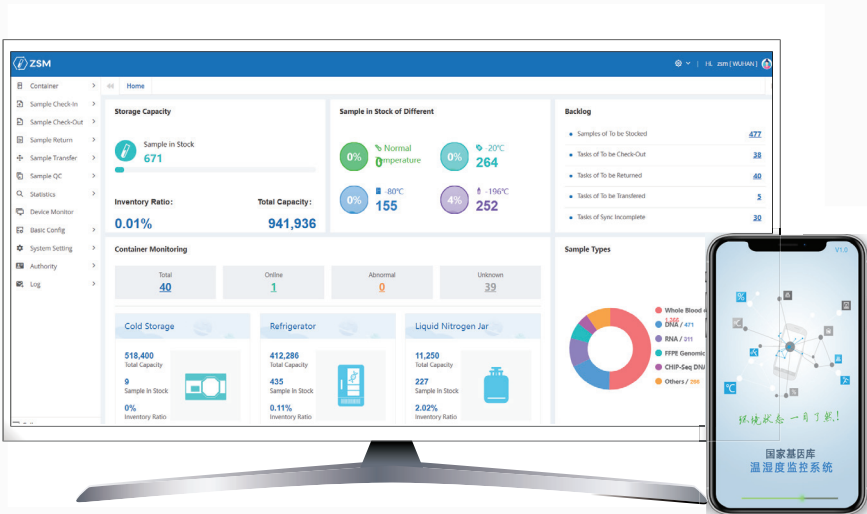
Hardware integration capabilities include barcode printers, full-plate scanners, storage containers, etc., with support for third-party system API integrations such as HIS.

Security

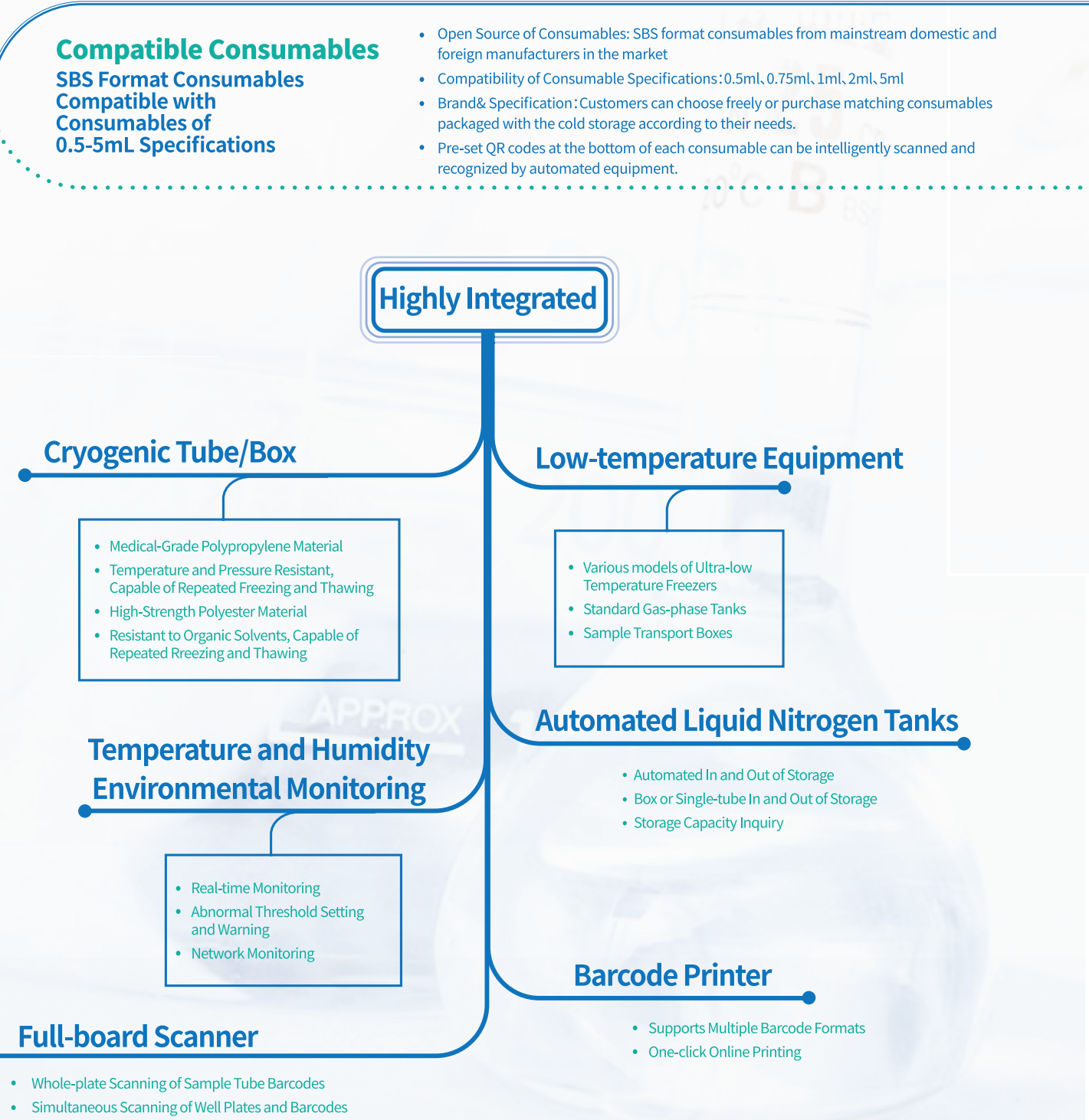
Strict access control management, comprehensive operation log auditing, and quality control processes ensure the integrity of sample storage.

Intelligent Information Management

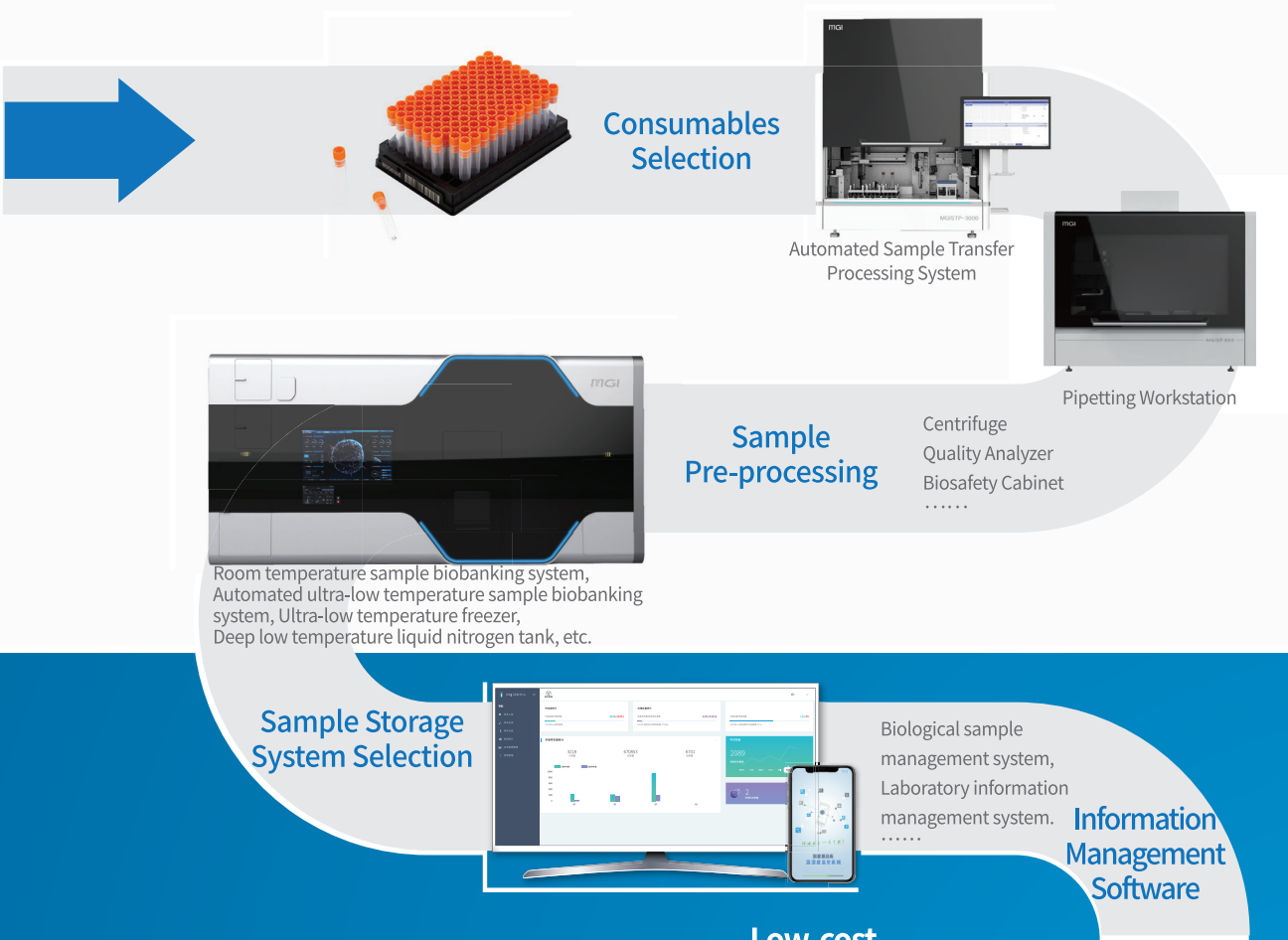
- Intelligent IoT
- Flexible Expansion of Software System
- Data Security Management



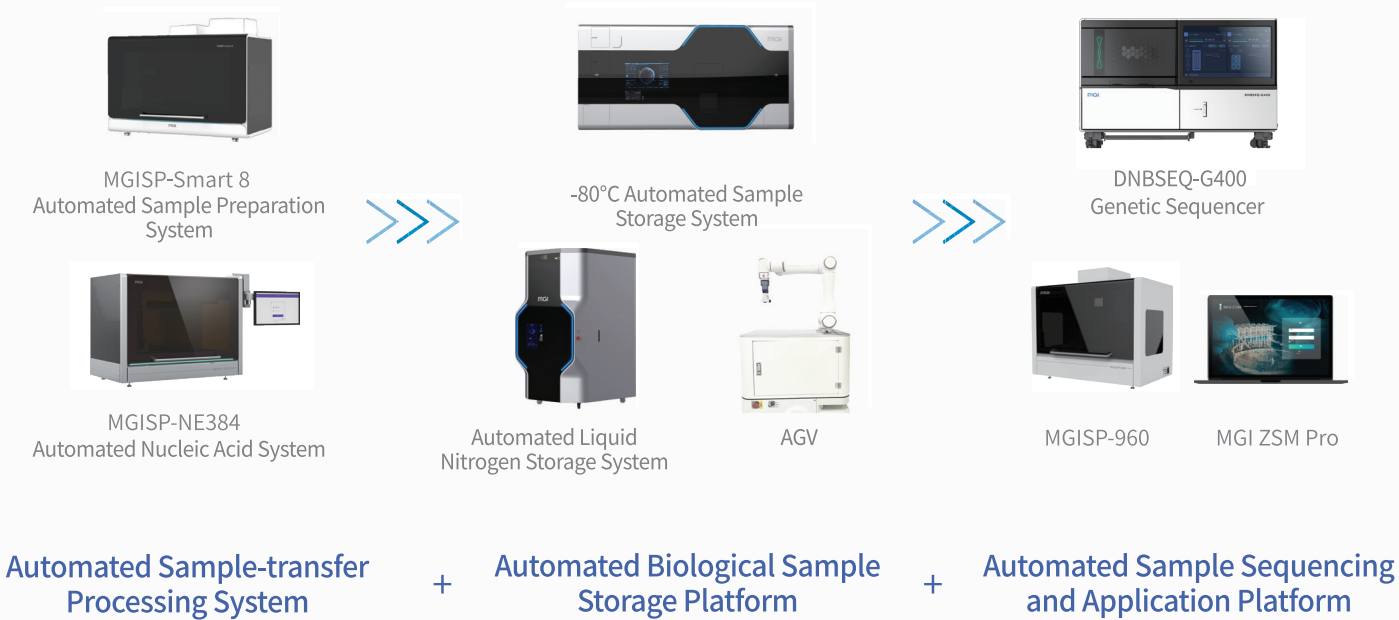
ZSM Pro Highly-integrated



Equipment Selection and Configuration



Fully Automated Sample Handling and Control



End-to-end Life-cycle Informationization

Supports multi-life center management mode
Data desensitization and permission separation
Process quality control and intelligent error prevention
Sample traceability and behavior recording
Integration with HIS, LIS, and other clinical systems, supports other personalized customization
Compliant with ISO 9001, third-level security requirements

Safe Operation, Energy Saving, and Quality Assurance

Automated blood distribution
Automatic tube transfer and distribution for white film layers, plasma, red blood cells, throat swabs, urine, and other samples

Low-cost, High-throughput Sample Extraction Process

Continuously optimizing and iterating experimental methods to improve productivity, quality, and reduce costs
Blood, human/animal tissues, feces, saliva, genital samples, FFPE, soil microorganisms, bacteria, fungi, etc.

Automated Cryogenic Storage

Automated storage, multiple real-time monitoring, remote alarms, and safe stability

MGI Biorepository Construction Product Solution

Full coverage of design, operation and management of biological sample library.

1 Demand Analysis

Combining online and offline research to accurately understand the requirements of the sample library, and customizing output technical documents according to the process.

Top-level Design

Mastery of industry research and analysis reports, overall planning for sustainable development, investment return analysis, and scientific research applications.

3 Site Slanning

Functional zoning, comprehensive consideration of business and building requirements, testing, and acceptance.

End-to-end life-cycle management of biological sample resource storage and reading

Sample resource collection and storage
|
Digitization of sample resources
|
Data preservation, analysis, and presentation

Standardized Operation and Management

Operation and management training, ISO 20387 accredited consulting services.

5 Technical Methods

End-to-end life-cycle cycle solution; Automation of technical processes; Continuous optimization and iteration of experimental methods; Data management; Quality control standards.

Equipment, Consumables and Software

Sample storage and processing equipment; Adaptation of consumables list; Automation solution; Information management software.