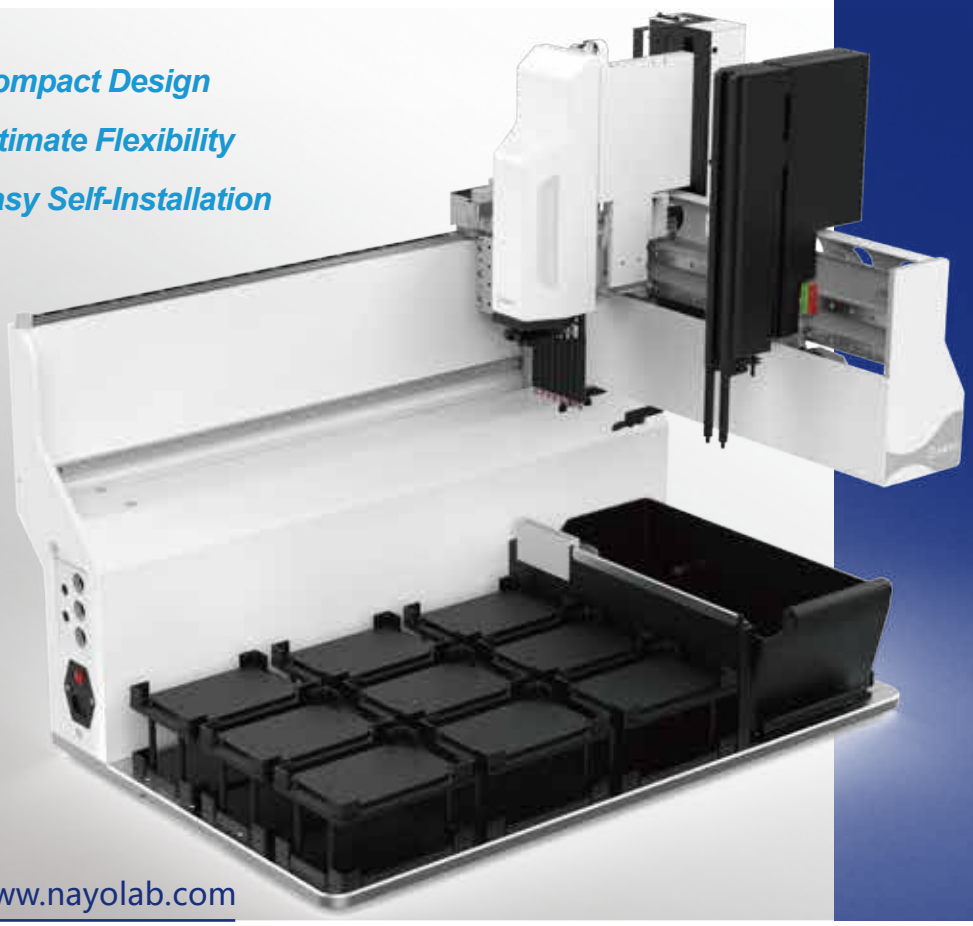
NAYO

By Precision, For Simplicity

A8 mini

Benchtop Automated Liquid Handling Workstation

- *Compact Design*
- *Ultimate Flexibility*
- *Easy Self-Installation*



- www.nayolab.com

A8 MINI

A8 mini
Standardize Your Short Workflows

Compact Design:

The A8 mini **(Length 665 mm x Width 525 mm x Height 610 mm)** fits easily inside a biological safety cabinet, freeing up bench space while providing dual protection for both the operator and samples.

Ultimate Flexibility:

Supports tool-free, quick-swap of various pipetting and on-deck modules, enabling rapid adaptation to diverse experimental workflows.

Easy Self-Installation:

Users can complete setup and basic calibration independently, significantly reducing the lead time from delivery to operation.

Product Overview

The A8 mini is a compact, benchtop liquid handling workstation designed for labs with limited bench space. Based on one single robotic arm, it offers over 10 configurations for unparalleled flexibility:

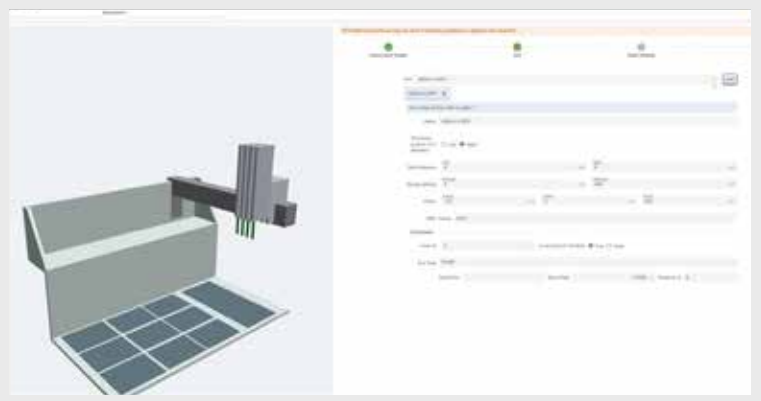
- **Pipetting Modules:** Single-channel, dual-channel, flexible 4-channel, and fixed 8-channel.
- **Mixed-Mode:** Support the combined use of a fixed 8-channel pipetting module with flexible-channel pipetting modules.
- **Extended Capability:** Configurable with adaptive force gripper module.

The workstation features 12 standard SBS-compatible deck slots and can integrate up to three functional modules simultaneously—such as temperature control modules **(TCM)**, automated shaking modules **(ASM)**, fluorescence readers, or other third-party devices. All multi-function arms and on-deck modules support tool-free quick swapping capability within 3 minutes.

Beyond high-precision pipetting, the A8 mini streamlines complex workflows including concentration normalization, clone picking, sample pooling, and various purification assays. Its modularity enables multi-application utility in one single workstation, making it an ideal choice for short workflows automation that demands flexibility, efficiency and a high return on investment.

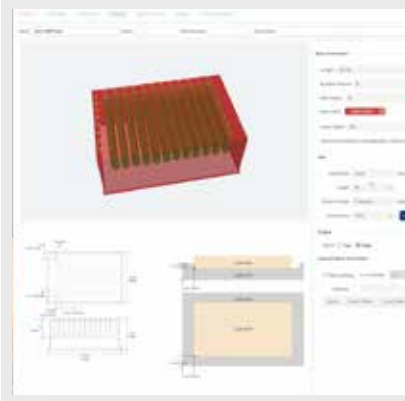
Intuitive Software

Low-Barrier Interface with No Special Training Needed



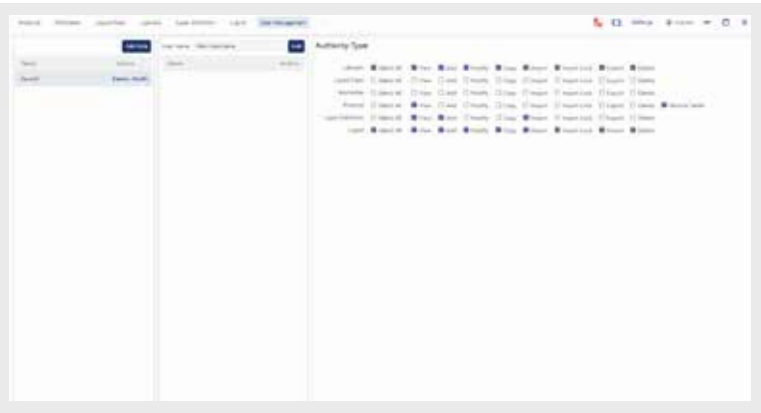
1.Drag-to-Build Experiment & Smart Logical Commands
Users with no programming background can quickly build complex protocols through an intuitive graphical interface by dragging and dropping pre-configured command blocks (e.g., aspirate, dispense, mix, incubate).

Smart logic commands support performing advanced tasks (e.g., parameterized variables), allowing a single protocol template to adapt to daily fluctuations in experimental scale, greatly improving efficiency.



2.Open 3D Labware Library
True-to-Scale Visualization: Include accu
labware, supporting 360° rotation and zoom
protocols.

Parametric Customization: Users can qu
by entering key dimensions (e.g., well heig
non-standard or novel consumables.

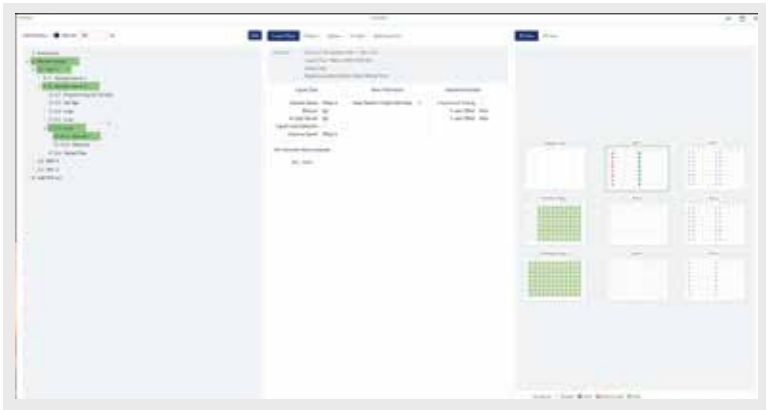


4.Flexible User Rights Management
With user management, you can set up different privileges to accounts and roles to meet all role-based requirements.

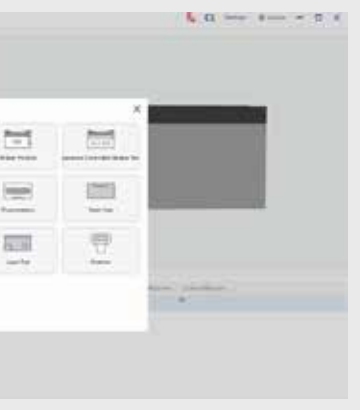
5.Powerful Third-Party Device I
Open communication interfaces e
with third-party device including m
thermal cyclers, creating end-to-e
workflows.

rate 3D models of a wide range of
n, to achieve precise virtual layout of

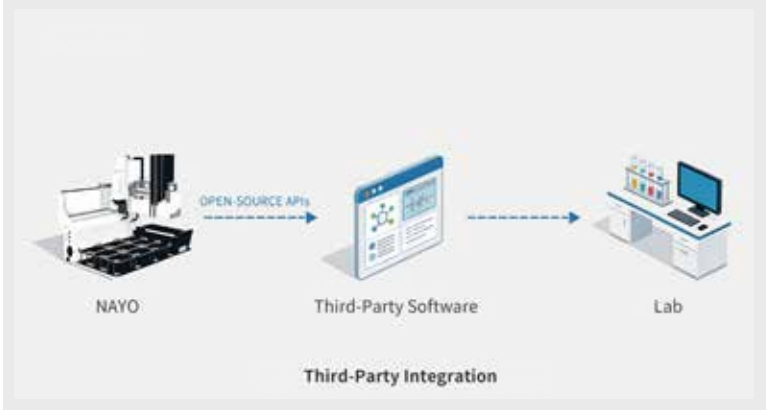
ickly create custom labware models
ht, diameter), easily adapting to



3.Run Simulation & Visualization
Clear 2D and 3D run visualization (with adjustable speed) reduces setup time by allowing you to optimize assays from your desktop computer before they occupy the real instrument. This saves you tips, labware, and expensive reagents, and of course, precious instrument time.



ntegration Capabilities
enable seamless integration
nicroplate readers and
nd unified automated



6.Remote Control & Open-Source APIs
Supports remote monitoring and control via network API, and can be easily integrated with laboratory information management systems, laying the groundwork for a smart, unattended modern laboratory.

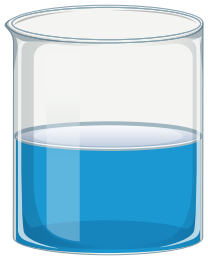
Core Technology

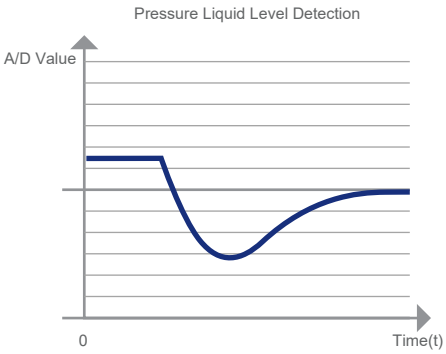
A8 mini integrates multiple core technologies to ensure accurate, reliable and safe pipetting operations.

1.High-Precision Pipetting & Liquid Level Detection

• Precision Pipetting Ensures Reliable Results:
Utilizes high-precision servo motors and air displacement technology, with a pipetting range of 1–1000 µL.

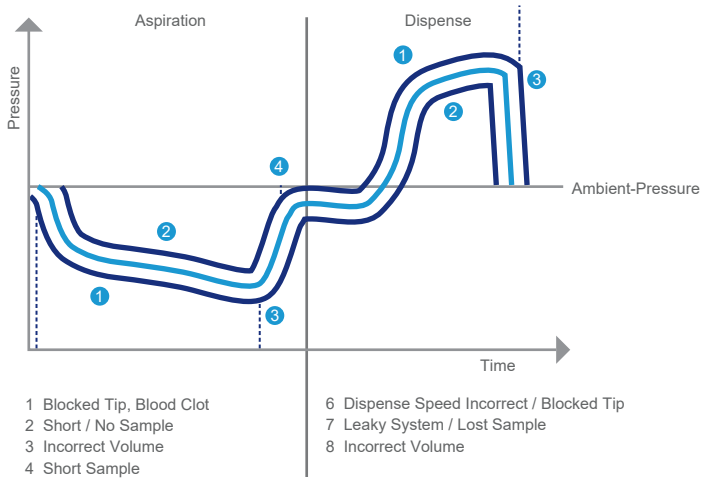
• Pressure Liquid Level Detection **(pLLD)** Prevents Dry-Aspiration:
Flexible pipettes use internal pressure sensors to detect liquid in labware. Sensors in the pipettes detect pressure changes relative to ambient pressure. This method is suitable for both polar and non-polar (organic) liquids, effectively preventing dry-aspiration or over-insertion of the tip.





3.Flexible Pipetting Capabilities

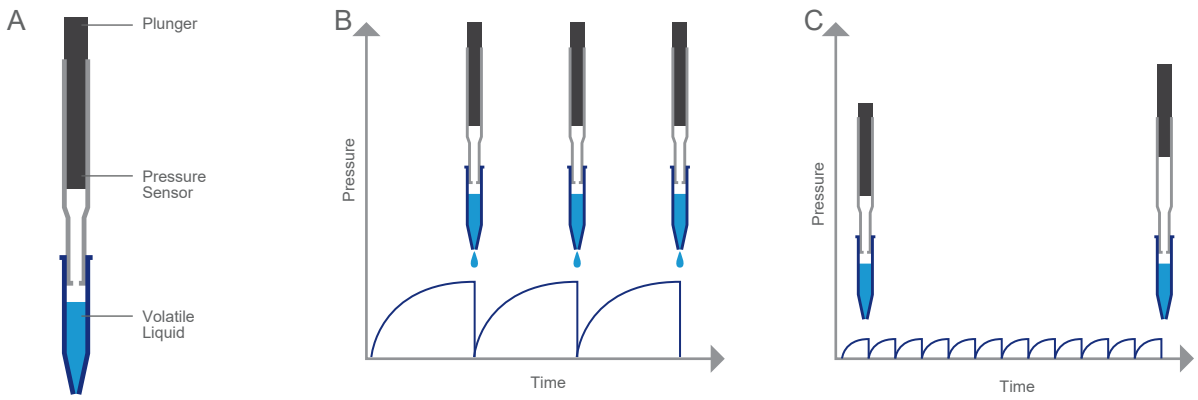
• Asymmetric, Variable Span Aspiration Technology:
During sample transfers, parameters may be set up for real-time monitoring of each independent pipetting channel during the aspiration and dispensing steps.



2.Active Safety Controls

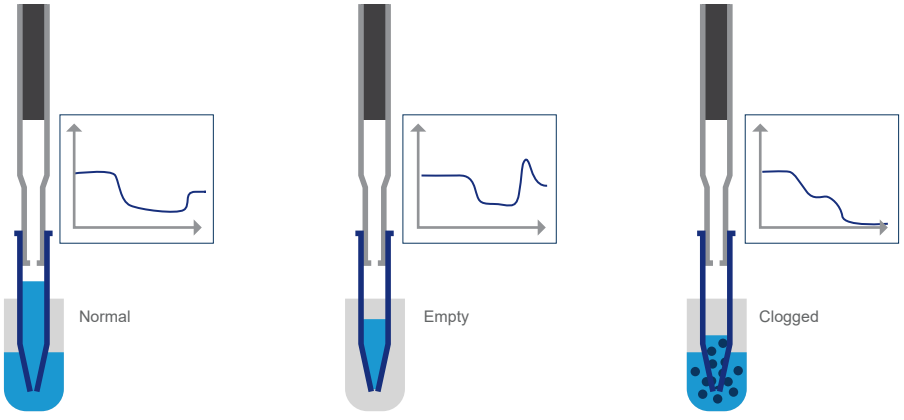
- **Droplet Prevention Control (DPC) Reduce Cross-Risk:**

DPC detects and compensates for pressure changes in real time for each pipetting channel that are caused by the high vapor pressure of volatile organics.
DPC compensates for pressure changes to ensure that volatile liquids do not produce dripping.

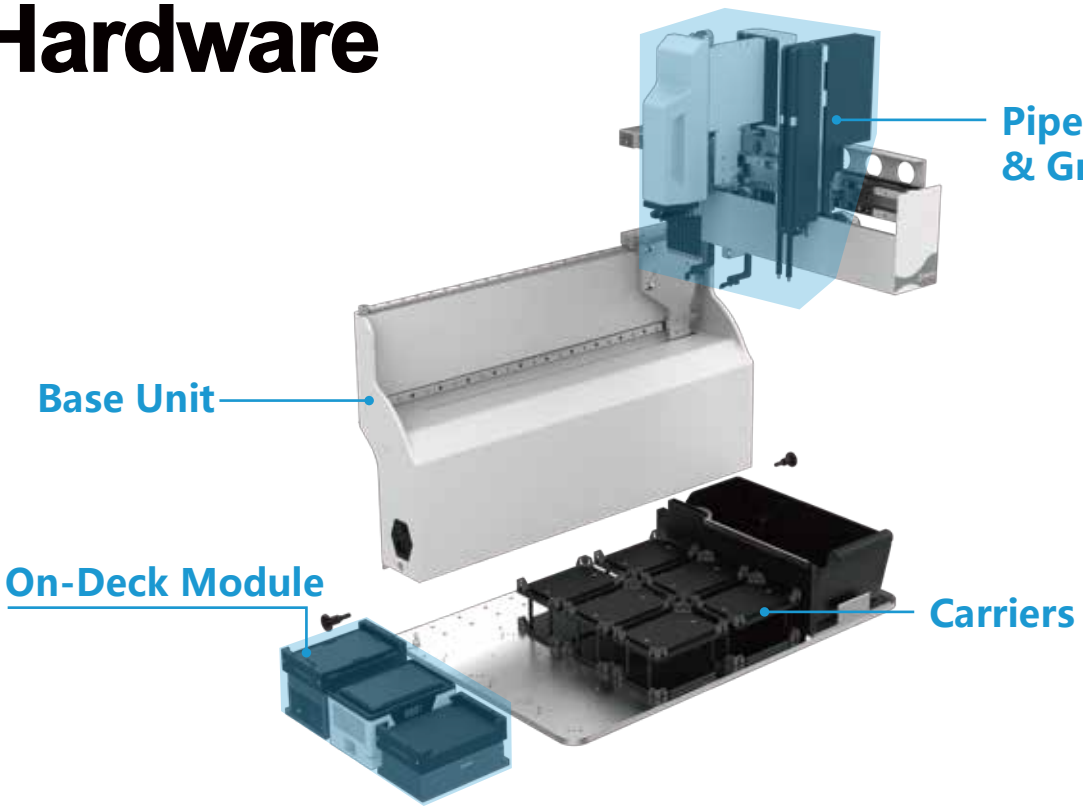


- **Force Feedback Technology Provides Real-Time Alerts:**

Smart obstacle detection during liquid handling triggers real-time alerts, ensuring seamless experimental workflows with enhanced reliability.



Hardware



1.Biosecurity Compatibility

The compact design allows operation inside biosafety cabinets, providing ultimate protection for sterile procedures and pathogenic sample processing.

2. Pipetting Modules

Fixed-Channel & Flexible-Channel Pipetting Heads

- Pipetting range:1-1000 μL
- Innovative improvements in the sealing design giving the cartridge head all for over 300,000 uses before needing replacement.

Single-channel

Fixed 8-channel

Adaptive Force Gripper

Gripper Module

Accurate force-controlled gripper

Gripper force ranging from 1 to 16N supports the transfer of various consumables.

Configurable finger directions

Capable of accessing peripheral devices to enable a huge array of process automation possibilities.

3. On-Deck Modules

TCM

Temperature Control Module (TCM)

Temperature Control Module **(TCM)** incorporates advanced heating and cooling technology to deliver a wide working range from 0°C to 120°C, ensuring precise and controllable temperatures for your experimental processes. It supports SBS-size microplates (1–384 wells), 1.5/2 mL centrifuge tubes, reservoir plates, and other common consumables. With a small footprint optimized for high-density deck layouts, the module maximizes workspace efficiency without compromising performance. The compact design features internal **PCBA** integration, eliminating the need for additional control units, and ensures stable operation.

ASM

HSM

TCS

Shaker Module Series

The series includes three specialized modules:
Automated Shaker Module **(ASM),**
Heater Shaker Module**(HSM),**
Temperature-controlled Shaker Module **(TCS)**

All modules support SBS-size microplates (1–384 wells), 1.5/2 mL centrifuge tubes, reservoir plates, and other common consumables.

The compact design features internal **PCBA** integration, eliminating the need for additional control units. Precise automatic in-situ positioning (± 0.1 mm) and clamping ensure stable, reproducible results.

Designed for Seamless Integration, Ease of Use and High Precision.

- **Stable and Wide Speed Range:** Covering from 0 to 5000 rpm, it effortlessly handles diverse workflows, from gentle homogenization to vigorous shaking, suitable for a wide variety of liquids.

- **Accurate Temperature Control:** The innovative temperature control system enables precise heating and cooling, which is crucial for temperature-sensitive experimental steps.

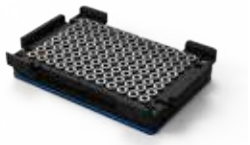
- **Low-Profile Modular Design:** It features a small footprint and a compact form factor, effectively saving valuable laboratory bench space.

- **Easy to Use and Install:** With quick plug-and-play operation, it offers the flexibility to switch rapidly between different workflows, significantly improving experimental efficiency and reliability.

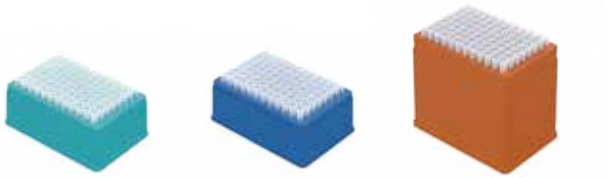
4. Accessories and Consumables

A8 mini Offers standardized carriers and adapters for microplates, deep-well plates, PCR plates, and tubes of various sizes, with compatibility for special application accessories such as magnetic stands.

Temperature Control Adapter: For different kinds of plates.



Magnetic Rack: Used for nucleic acid separation and purification by magnetic bead method, and experimental processes such as nucleic acid sample separation and purification, fragment sorting, etc. during library construction.



Disposable Tips: 50 μL, 250 μL, 1000 μL; available sterilized/non-sterilized, with/without filters.

Application Scenario

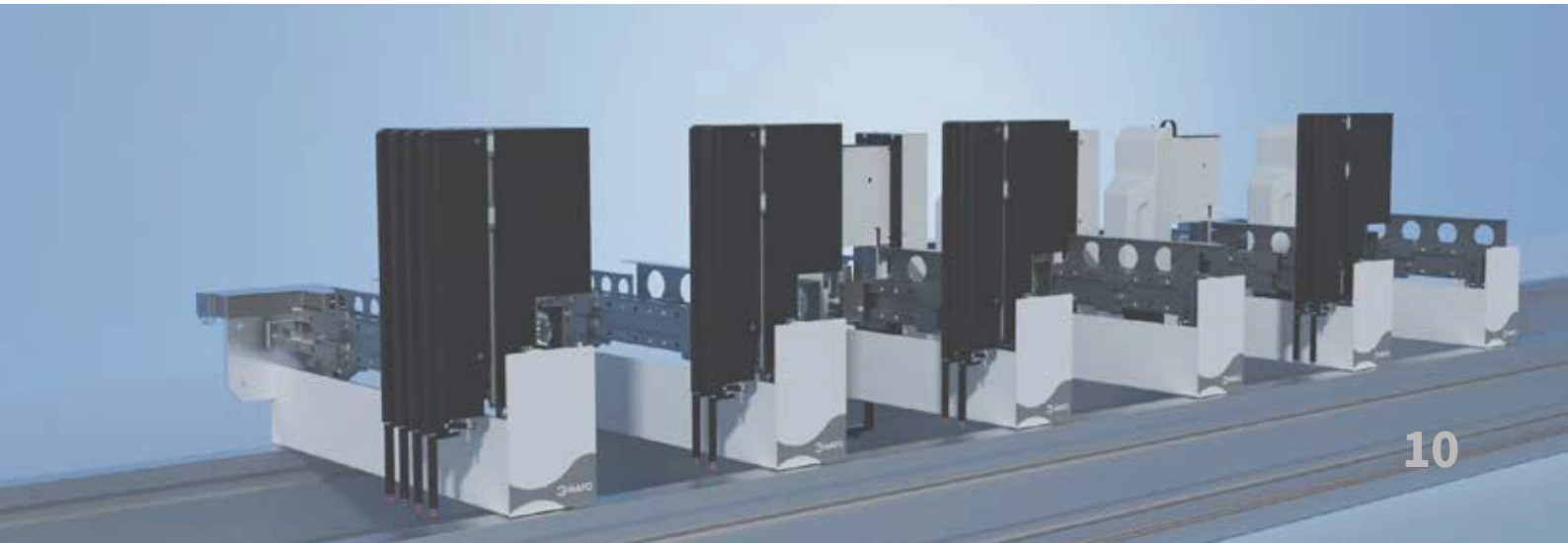
The A8mini flexibly adapts to a wide range of life science research and industrial applications, including but not limited to:

Genomics: NGS library prep, PCR/qPCR setup
Cell Biology: Flow cytometry sample prep, cell culture, stimulus addition
Diagnostics: ELISA/chemiluminescence assays, sample preprocessing
Proteomics: Sample digestion, peptide purification
Drug Discovery: High-throughput compound screening, dose-response curve testing, ADME toxicity studies
Industrial Biotechnology: Microbial strain screening, bio-based chemical synthesis, biofuel and biomaterial production
Forensics: DNA profiling, toxicology analysis, trace evidence processing
Biobanking: Sample aliquoting and storage, sample management standardization
Toxicology: Genotoxicity testing, cytotoxicity assays, dose-response studies

Multi-Function Arm Configuration

The A8 mini meets personalized needs through various combinations of arm configurations.

Order No.	Description
A8 mini - 80N	Fixed 8-channel pipetting module
A8 mini - 81N	Fixed 8-channel & Single-channel pipetting module
A8 mini - 82N	Fixed 8-channel & Dual-channel pipetting module
A8 mini - 80G	Fixed 8-channel pipetting module & Gripper
A8 mini - 81G	Fixed 8-channel & Single-channel pipetting module & Gripper
A8 mini - 82G	Fixed 8-channel & Dual-channel pipetting module & Gripper
A8 mini - 01N	Single-channel pipetting module
A8 mini - 02N	Dual-channel pipetting module
A8 mini - 04N	Flexible 4-channel pipetting module



Service Commitment

Rapid Response Within 24 Hours

NAYO established a global network of professional services dedicated to providing you with high-quality, standardized technical support and customer service. Our field service engineers are trained by either NAYO service headquarters or by one of our distribution partners.

1) High-Quality Customer Service and Quality Assurance

- **Comprehensive Quality Control:** Through in-house R&D and production, advanced quality control systems, and final factory inspection, we ensure every product meets the highest standards of quality, reliability, and precision.

- **Standardized Installation and Documentation:** All NAYO instruments are installed and validated according to strict operating procedures and **ISO 9001** standards, accompanied by detailed operational documentation to ensure normative deployment and full traceability.

- **Flexible Service Contracts:** We offer tiered service and support contract options, including regular system inspections and preventive maintenance, designed to ensure the long-term stable operation and optimal performance of your automated system.

2) Efficient Technical Support and Training System

We are committed to minimizing system downtime through rapid response and professional guidance, ensuring your productivity.

- **Rapid-Response Network:** Leveraging a global field service and remote support system—including technical support hotlines, remote guidance, and on-site local engineers—we guarantee a swift response to your service requests.

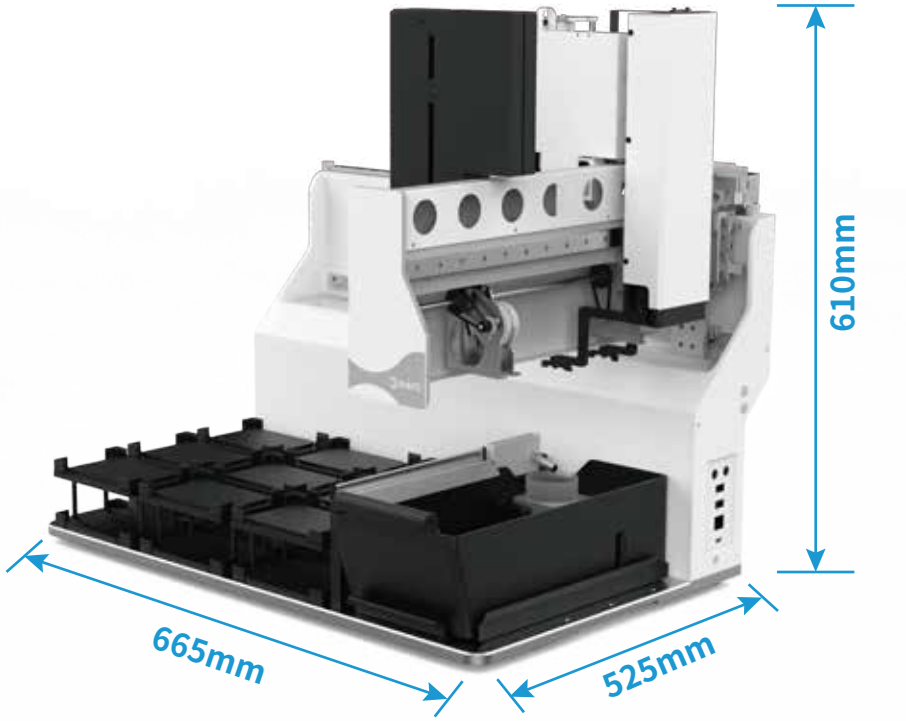
- **Customized Training Programs:** We provide standard training courses and can also customize content based on your specific application needs, available at NAYO training centers or your laboratory premises.

3) In-House Production and Quality Control System

NAYO have a transparent end to end digitalized and traceable process that begins with raw materials, in-process testing, and final product inspections. Core components are manufactured in our own factories, undergoing high-standard parts testing and finished product validation processes.

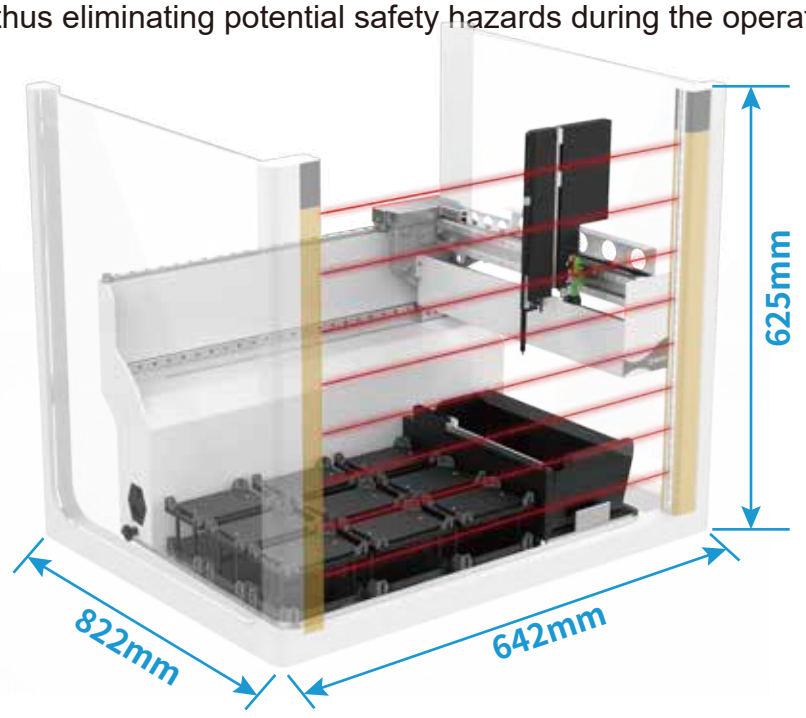
This vertically integrated model not only guarantees high-quality product delivery but also enables us to respond quickly to market changes and continuously improve quality and reliability through ongoing product iteration.

Specifications



Safety Choice: Light Curtain

An intelligent protection device that uses photoelectric sensors to detect light. It can automatically detect the surrounding environment and prompt the operating status of the device. When a person or object approaches the device, the light curtain can detect it in time and issue an alarm, thus eliminating potential safety hazards during the operation of the device in time.



General Specifications

Dimension (L x W x H)	665 mm × 525 mm × 610 mm
Weight	47 kg
Deck Capacity	12 SBS/SLAS-compatible slots
Network Conditions	C/S, not less than 10 Mbit/s

Environmental Conditions

Working Temperature	19℃ - 25 ℃
Relative Humidity	20% - 80%, without condensation
Atmospheric Pressure	80 kPa – 106 kPa

Storage

Storage Temperature	-20℃ - 50℃
Storage Humidity	20% - 80%, without condensation

Power

Voltage	~100-240 VAC
Frequency	50/60Hz

Pipette Specifications

Range 1~1000μL

Tip Capacity	Tested Volume	Accuracy %D	Precision %CV
50 μL	1 μL	10	8
50 μL	2 μL	8	4
50 μL	5 μL	4	4
50 μL	50 μL	1	1
250 μL	50 μL	1	1
250 μL	250 μL	1	1
1000 μL	100 μL	1	1
1000 μL	500 μL	0.5	0.5
1000 μL	1000 μL	0.5	0.5

Range 0.7~300μL

Tip Capacity	Tested Volume	Accuracy %D	Precision %CV
50 μL	0.7 μL	12	10
50 μL	1 μL	8	8
50 μL	10 μL	3	3
50 μL	50 μL	1	1
250 μL	50 μL	1	1
250 μL	100 μL	0.5	0.5
250 μL	250 μL	0.5	0.5
1000 μL	100 μL	1	1
1000 μL	300 μL	1	1

YouTube

Linkedin

Website

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