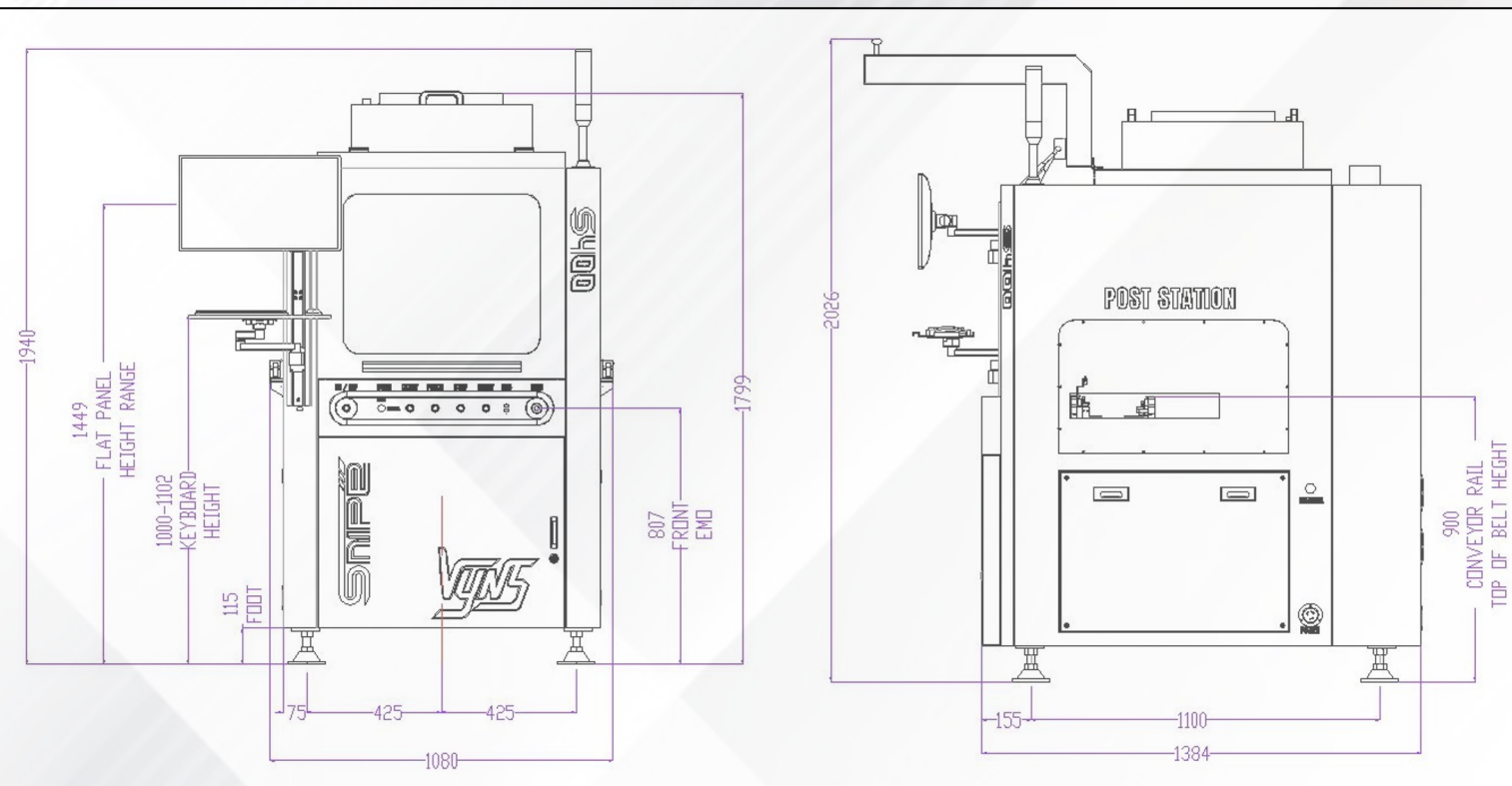


## FOOTPRINT



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### Authorized Distributor:

# SNIPER S4000 SERIES

## HIGH PRECISION AUTOMATED DISPENSING SYSTEM

The **SNIPER Series** is an advanced, fully automated dispensing system engineered for ultra-precise micro-dispensing in PCBA and semiconductor packaging applications.

Combining high-speed performance with micron-level accuracy, this system is ideal for demanding industries where precision, efficiency, and automation are critical.



FEATURES

- ✓ **Ultra-High Speed & Precision** – Capable of **micro-dot dispensing** at up to **1200Hz** frequency with **peak acceleration of 1.5G** for rapid, repeatable results.
- ✓ **Dual Dispensing Head Configuration** – Enables **multi-material dispensing** in a single cycle, boosting productivity.
- ✓ **Integrated Vision Mapping** – High-resolution **built-in vision camera** ensures **pinpoint accuracy** for complex patterns and fine geometries.
- ✓ **Auto-Calibration** – Automatic nozzle height and **XY positioning calibration** for consistent performance with minimal manual intervention.
- ✓ **Large Work Area & Flexible Conveyor Setup** – Supports **single or dual conveyor configurations** for seamless integration into production lines.
- ✓ **SJ100 Jet System Integration** – Delivers **high-precision, non-contact jet dispensing** for ultra-fine dots and lines.
- ✓ **User-Friendly Operation** – **Geometry Sketch™ software** provides an intuitive interface, reducing training time and enabling **easy recipe creation**—even for **non-experienced operators**.

ADVANCED FEATURES

- ★ **Smart Thermal Conveyor System**
  - ✓ Maintains optimal temperature for sensitive materials with optional pre/post-process modules with heating elements (30-150°C ±5°C)
- ★ **Cross-Platform Recipe Compatibility**
  - ✓ Reduces process validation time by 70% with seamless recipe transfer between S300BT (benchtop) and S400 systems
- ★ **Closed-Loop Flow Control**
  - ✓ Utilizes high-precision scale (0.001g) and adaptive FRC (Flow Rate Compensation) algorithm to maintain consistent fluid flow rates during operation

APPLICATIONS

- ❑ **Semiconductor Packaging** (die attach, underfill, encapsulation)
- ❑ **PCB Assembly** (SMT adhesive, solder paste, underfill, conformal coating)
- ❑ **Advanced Electronics** (micro-LED, sensors, MEMS devices)
- ❑ **Medical & Automotive Micro-Dispensing** (precision bonding, sealing, encapsulation)

Why Choose the SNIPE Series?

- ✓ **Industry-Leading Speed & Accuracy** – Optimized for **high-throughput** production without sacrificing precision.
- ✓ **Smart Automation** – **Vision-guided dispensing** minimizes errors and maximizes yield.
- ✓ **Scalable & Adaptable** – Flexible configurations suit both **prototyping and mass production**.
- ✓ **Minimal Downtime** – Robust design ensures reliability for **24/7 operation**.

SPECIFICATIONS

Motion	
X-Y Axis Acceleration	1.5 g peak
X-Y Axis Velocity	1.5 m/s
Z-Axis Height Minimum Dispense Gap	30 μm
X, Y, Z Repeatability	± 5um, Cp 1.67
X, Y, Z Placement	± 25um, Cp 1.33
X,Y Wet Dispense Repeatability	± 25um, Cp 1.67 @ 3σ
X,Y Wet Dispense Placement Accuracy	± 35um, Cp 1.33 @ 3σ

Dispense	
Dispense Area	X-Y Dual Valve Max Dispense Area 400 x 400 mm
Dispensing Head	Support Independent Dual Head
Dispensing System Config	Support Dual Piston Valve Config
	Support Dual Jet Valve Config
	Support Dual Spray Valve Config
	Support Dual Valve (One Piston + One Jet) Config

Sensor	
High Precision Laser Displacement Sensor	Repeatability = 2um
High Accuracy Touch Sensor	Repeatability =10um

Weighing Scale	
High Precision Scale	Accuracy:±0.2mg Resolution:0.1mg

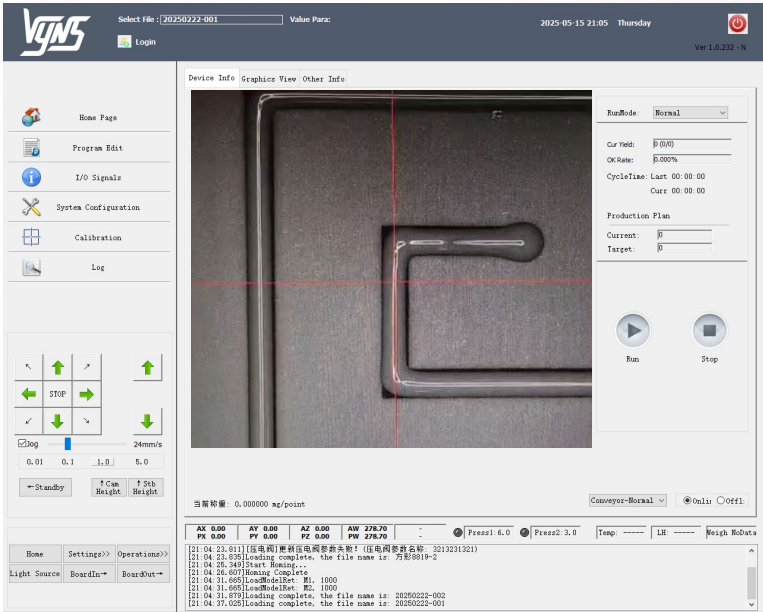
Standard	
Cleanliness	Class 1000
Safety	CE, SEMI-2, SEMI-8
Certification	CE Ready

Conveyor	
Conveyor Transport Height	Minimum Adjustable from 900-970mm
Conveyor Flow Direction	Left-to-right (Standard) Right-to-left (Upon request)
Conveyor Operation Modes	Automatic (SMEMA), Manual and Pass Through
Conveyor Type	3-mm O-ring; Support 1 kg
	6-mm Flat Belt; Support 2 kg
	4-mm Flat Belt; Support 1kg
Conveyor Motorized Width Adjustment	Adjustable Width 40~400mm

Vision	
Top Camera	Camera : 1.3MP ~ 3MP
	Lighting : White LED Ring Light
	Option: Red or RGB Ring Light
	Support Image Mapping
	Support Pattern Recognition Function
Bottom Camera	Support Fly Capture Function
	Support Barcode Read
	Camera : 1.3MP
	Lighting : White LED Ring Light
Support Needle XY Positioning Calibration	

Options	
Impingement Heater Block (Small Size)	L300mm x D50mm x H50mm
Impingement Heater Block (Medium Size)	L300mm x D200mm x H50mm

Software Support	
CPK	
MTBA / MTBF	
SMEMA	
SECS / GEM (Roadmap)	



Geometry Sketch™ Software

