

Molecular biology meets
industrial automation

AUTOMATED PRECISION DISPENSING

with sciFLEXARRAYERs

SCIENION 
A BICO COMPANY

www.scienion.com



SCIENION's sciFLEXARRAYERs are fully automated non-contact dispensing platforms tailored to the demands of any research or manufacturing environment.

Together with SCIENION's coating technology, a wide range of biomolecules, organic solvents, and viscous liquids are homogeneously dispensed onto various targets such as MTPs, biosensors, and glass slides.

sciDROP PICO and sciDROP NANO Technology

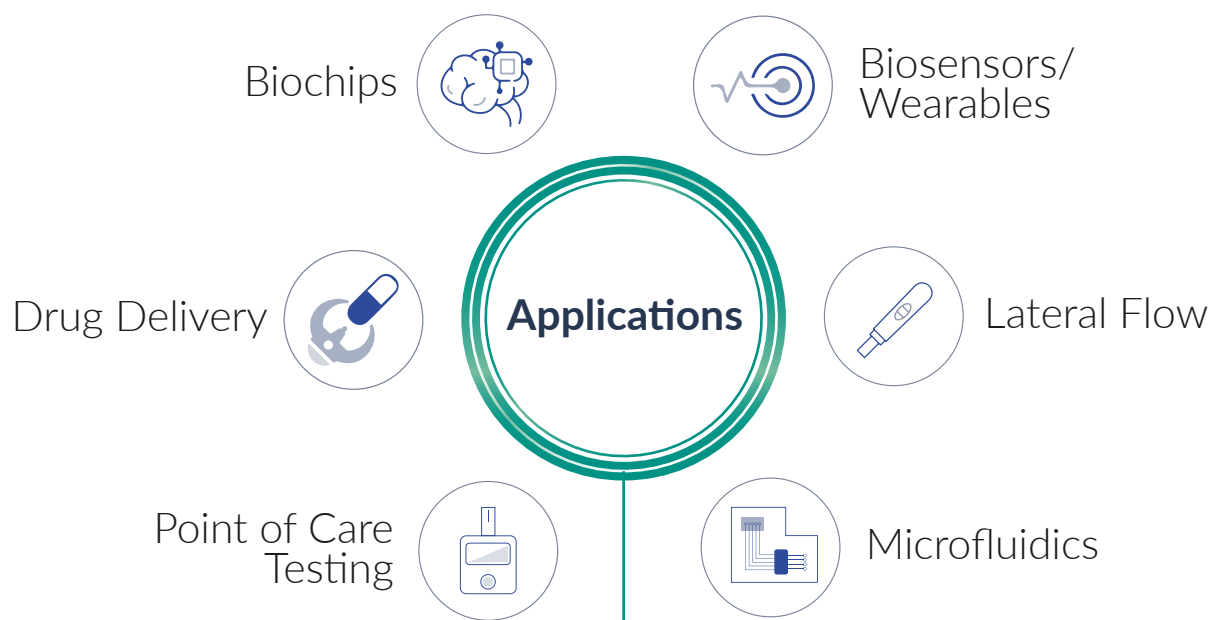
Equipped with SCIENION's patented sciDROP PICO and sciDROP NANO technologies, drop-on-demand dispensing of 10 pL to 100 µL can be covered by a single sciFLEXARRAYER instrument.

sciDROP PICO is an acoustic non-contact dispensing technology based on piezo driven pulses on inert glass capillaries called Piezo Dispense Capillaries (PDCs). This enables accurate and precise droplet deposition of up to 500 drops per second.

sciDROP NANO is the perfect choice for printing larger spots, lines and coatings. At the heart of the technology is an electromagnetic micro valve with an extremely fast response time, creating a jet of controlled dispensed volume and accurate positioning.

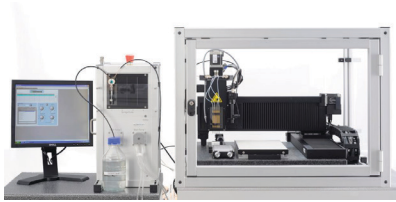
Based on our core technologies and decades of experience, our team provides comprehensive services including:

- material selection
- assay development
- supply chain logistics
- quality management
- process development
- scale-up towards commercialization



These are just a few of the application formats we currently work with, but enabled by our in-house R&D team we are capable of much more.

Commercial solutions from R&D to certified manufacturing:



● R&D Entry Level



● Medium Scale Batch



● High Scale Batch



● In-Line High-Throughput

Hardware Options

- 3D drop, live stream and head cameras
- sciPULSE shaper for dispensing of volumes under 50 pL & high viscosities
- Temperature, humidity and dew point control
- Custom holders for non-standard targets
- Cooling/heating unit for source plate and/or slide holder
- Anti-static bar

Software Options

- Spot-on-the-Fly mode to speed up array printing
- Full online QC
- Fiducial recognition & target alignment

We can also develop custom hardware and software to meet your application needs.



Technical Specifications

				
Use	S3	S12	SX	S100
	R&D Entry Level	Medium Scale Batch	High Scale Batch	In-Line High-Throughput
Dispensing Technology and Volume	sciDROP PICO : 10 pL* - 800 pL / single drop sciDROP NANO: 25 nL – 1 uL / single jet			
# Channels	Up to 8			Up to 12 per portal
Dispense Control	Integrated CCD camera			
Spottable Area (X x Y)	227 x 276 mm	380 x 370 mm	803 x 370 mm	Custom
Capacity	Up to 4 MTPs or 36 standard glass slides	Up to 12 MTPs or 70 standard glass slides	Up to 27 MTPs or 140 standard glass slides	Custom
Axis System	X-Y-Z spindle drive	X-Y magnetic linear drives, Z spindle		X-Y magnetic linear drives, Z spindle, conveyor belt
Precision	< 5 µm	< 3 µm		
Dimensions with Enclosure (L x W x H)	760 x 850 x 650 mm	1300 x 800 x 1200 mm	1670 x 850 x 1760 mm	1300 x 800 x 1200 mm
Weight	130 kg	420 kg	450 kg	420kg per portal

* results obtained with optimized samples and configuration



Commercial solutions from R&D to certified manufacturing:

Go from proof-of-concept to high-throughput production of commercial tests and devices with a single partner. SCIENION's experienced team of biological, engineering, quality assurance and product experts will translate research-scale innovations into certified manufacturing systems.

Discover our capabilities



High accuracy and precision dispensing of a wide range of liquids: Non-contact precision dispensing of liquid in the pico- to nanoliterrange.



Dispense any molecule onto any substrate at any scale: Benefit from our expertise in manifold application formats such as Biosensors, Lateral Flow or Microfluidics.



Capture more value from every drop: Leverage our precision dispensing solutions to miniaturize and multiplex your assays.



Consistent: Guaranteed batch-to-batch reproducibility.



Speed: Up to 1 array per second with unlimited batch sizes.



Complete solutions for your workflow: We provide complete product, process and services solutions globally, ranging from assay development, supply chain logistics, quality management, process development and scale-up towards commercialization.



Complete solutions for your workflows



Contract manufacturing



Assay development



Regulatory compliance



In-line manufacturing systems



Quantitative readers



Consulting services



Consumables



Global service & support



Batch R&D systems through pilot production

Global Service and Support

- Demo printing and application support
- Training on operation and maintenance
- Production process optimization
- Hotline and online support
- Preventive maintenance inspection and service contract





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