

Molecular biology meets  
industrial automation

# AUTOMATED PRECISION DISPENSING

with sciFLEXARRAYERs

**SCIENION**   
A BICO COMPANY

[www.scienion.com](http://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.

# sciDROPPICO and sciDROPNANO Technology



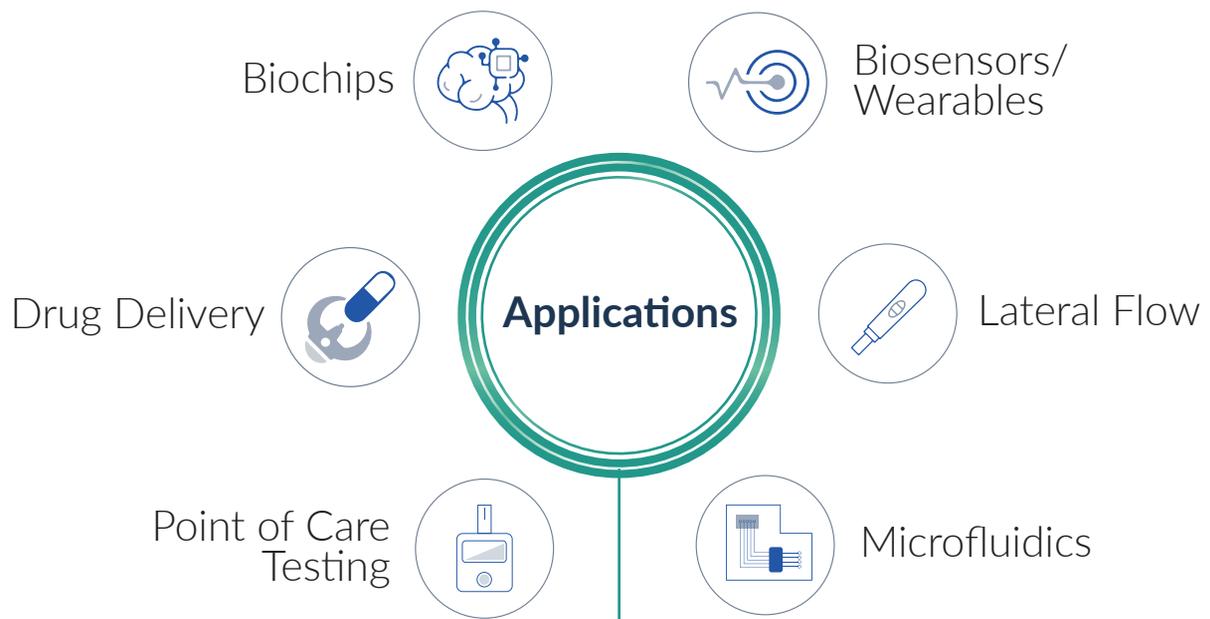
Equipped with SCIENION's patented sciDROPPICO and sciDROPNANO technologies, drop-on-demand dispensing of 10 pL to 100 µL can be covered by a single sciFLEXARRAYER instrument.

**sciDROPPICO** 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.

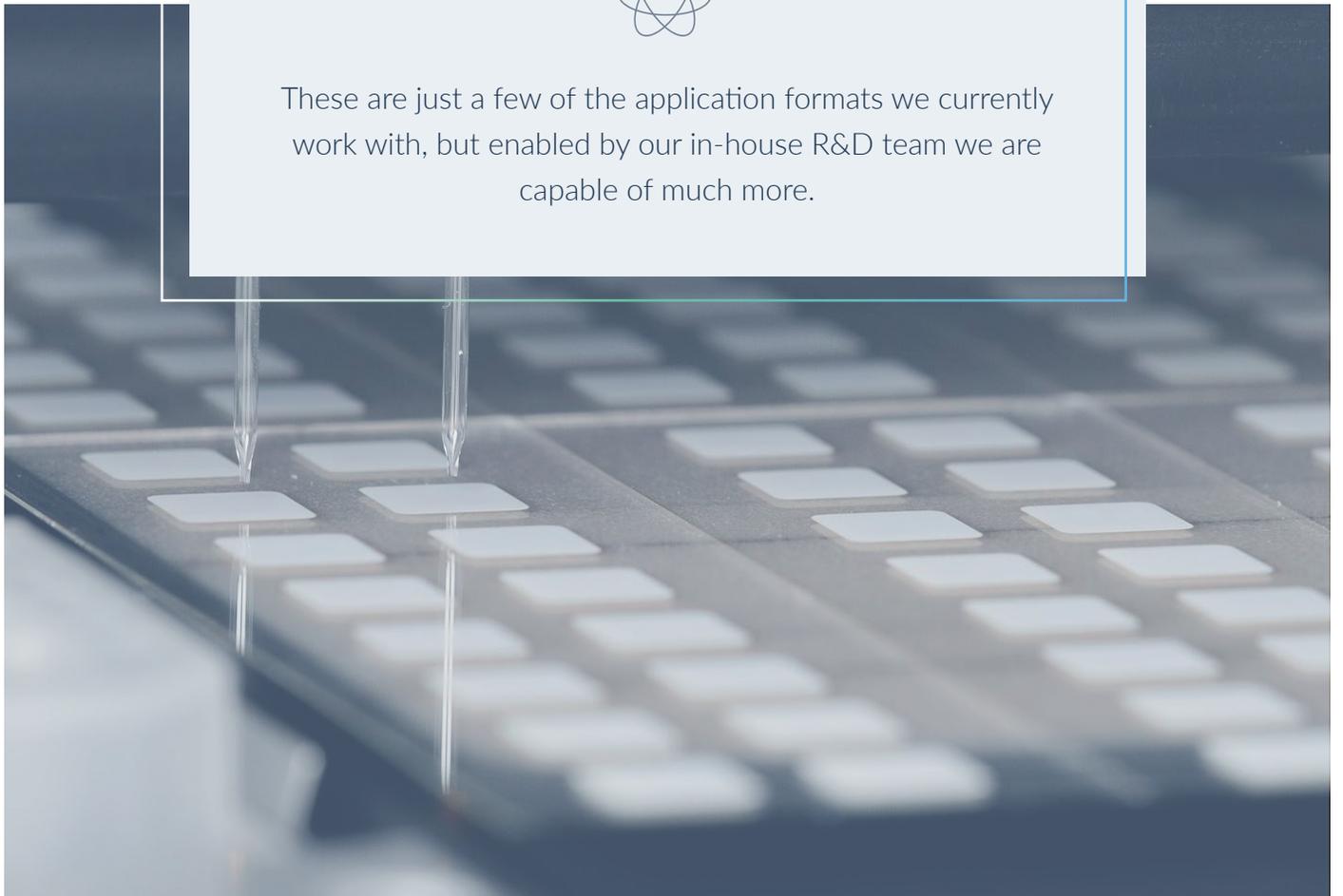
**sciDROPNANO** is the perfect choice for printing larger spots, lines and coatings. At the heart of the technology is an electromagnetic micro valve with an extremely fast response time, creating a jet of controlled dispensed volume and accurate positioning.

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

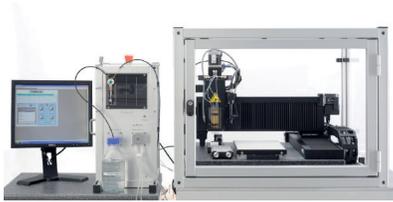
- material selection
  - assay development
  - supply chain logistics
  - quality management
  - process development
  - scale-up towards commercialization
- 



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

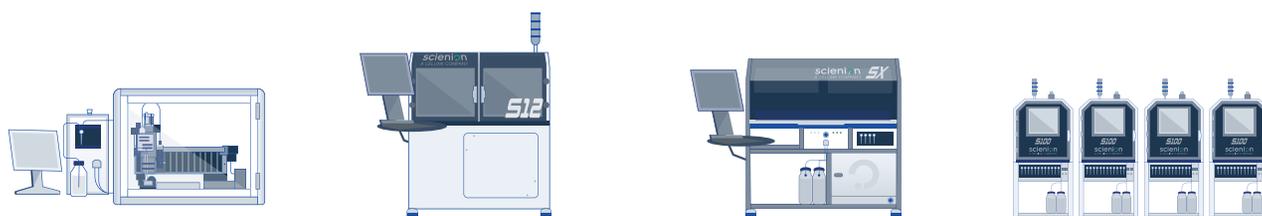
## Software Options

- 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



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



# SCIENION

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