

Scientific 3 - Prtronic Micro-Electronic Printer

*From concept to creation, let our 3D printer
brings your idea to life..*

Creating impeccable electronic devices
has never been easier with our advanced
multi-mode printing technology



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High-Precision Micro-Electronic Printer

High Resolution Camera System Check printed film surface morphology in real time

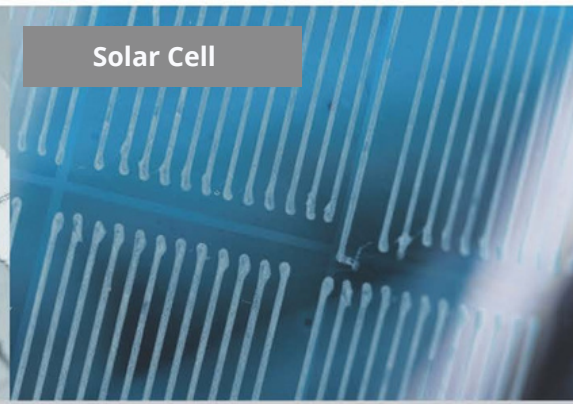
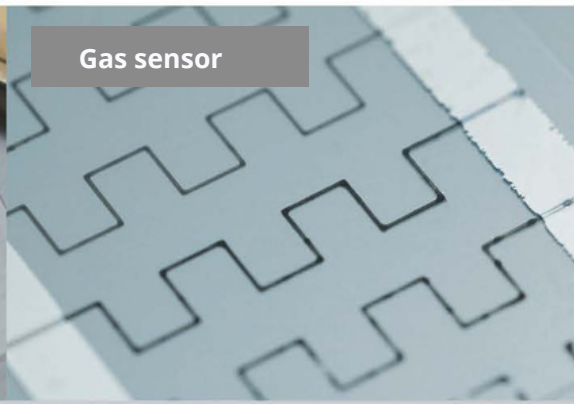
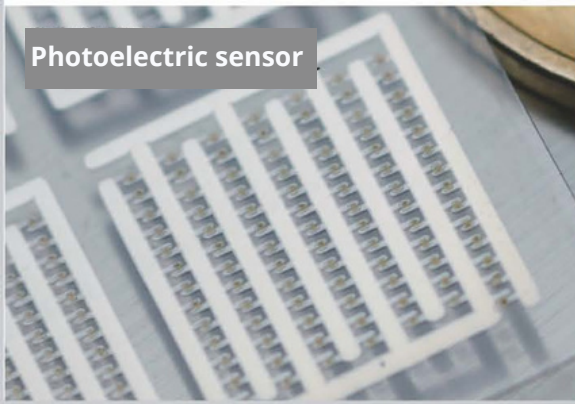
Heating and Vacuum Platen
Temperature adjustable: ambient to 110 C
Vacuum platen to assure the substrate's planeness
Printable area: AS (148*210 mm)

High Precision Mechanical System
Resolution: 1270 dpi Max
Maximum print speed: 300 mm/s

Printer Size:
555*555*485 mm

Cartridge System(Optional)

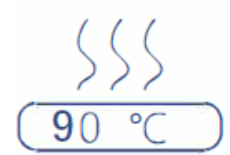
- The innovative ink cartridge system integrates multiple printing processes and is highly versatile, meeting your various R&D needs. It enables one machine to have multiple uses, greatly accelerating your research progress
- Adjustable cartridge angle from 0 to 90 degree automatically
- Ink cartridge library size: 435*555*485 mm



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Multi-Mode Printing Technology

- Inkjet printing, blade-coating and dispensing
- In-situ fabrication of electronic devices by **Scientific 3 -Prtronic**
- allows you to achieve a "what you see is what you get" result, freeing you from design limitations
- High-precision coating ensures the film is uniformly smooth
- Settable film thickness range from a few nanometers to micrometers, offers versatility for your unique printing needs



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Diversity and Versatility

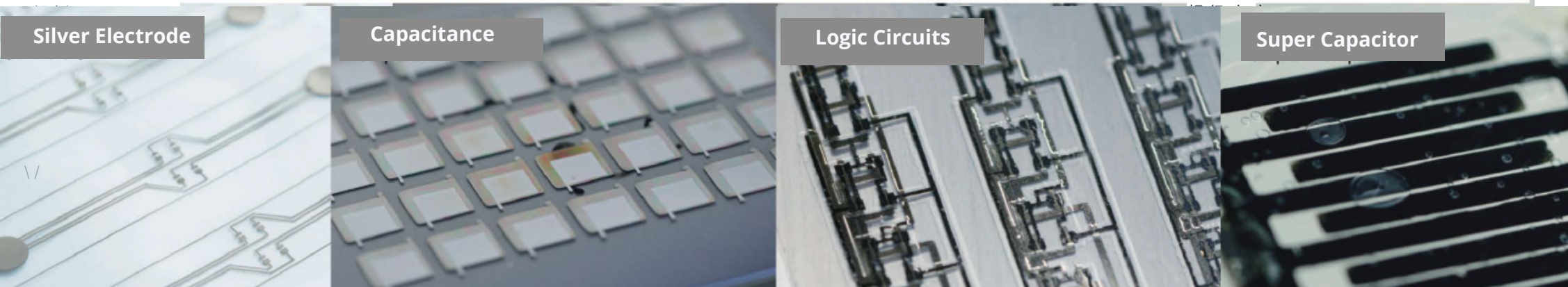
- Wide research areas including energy, logic, display and sensors
- Diverse micro-electronic devices: organic/perovskite solar cells, super capacitor, resistor
- capacitor, p/n transistor, memristor, RFID, OLEO, electroluminescence, photoelectric sensor,
- temperature sensor, pressure sensor, and so on.

Silver Electrode

Capacitance

Logic Circuits

Super Capacitor



Product Features / Specifications

Basic Configuration Printer Host

Components	Three-Axis Platform	Ink-drops Observation System	Grating Feedback	Heating & Vacuum Platen	Accessories
Description	<ul style="list-style-type: none"> • Repeatability $\pm 20 \mu\text{m}$ 	Observing the Inkjet status in Real-time, allowing timely setting of the printing parameters such as driving voltage, waveform and Ignition frequency of the ink, hence providing a high print resolution	<ul style="list-style-type: none"> • 5 micron high precision grating feedback 	Heating and Vacuum Platen <ul style="list-style-type: none"> • Temperature adjustable from ambient to 110 C • Vacuum platen can ensure the flatness of the film during printing 	Blade-Coating System <ul style="list-style-type: none"> • Replaceable blade • Customized blade with ink supply system • Ensure thin film uniformity • Settable film thickness
	Inkjet Rotation Setting <ul style="list-style-type: none"> • Cartridge angle: 0-90 • Repeatability $\pm 20 \mu\text{m}$ • Drop spacing: 5 μm 	Design Software <ul style="list-style-type: none"> • Software for device and circuit design • Print electronic components and system directly 	High-resolution Camera <ul style="list-style-type: none"> • Multi-layer alignment printing • Monitor nozzles and inkjet status 	Pressure Pump <ul style="list-style-type: none"> • Stable pressure control for substrate and cartridge 	Dispensing System <ul style="list-style-type: none"> • Convenient installation or dismantling • Suitable for high viscosity ink

Advanced Configuration

Advanced Module

Components	Automatic Cartridge Replacement System	Cartridge Replacement System	Other accessory
Description	<ul style="list-style-type: none"> • Storage Tank with 16 cartridges space (for fully automatic version only) • Controlled environment for stable cartridge storage, minimize ink evaporation and nozzle clogging 	<ul style="list-style-type: none"> • Mechanical arms for cartridges replacement between cartridge pedestal and storage tank (fully automatic version only) • Automatic replace cartridge to realize ink switch 	High precision ink-jet printing head with 12 nozzles



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