The scalable Spectrum II series is ideal for high-volume production of advanced dispensing processes, including underfill, cavity fill, die attach, and encapsulation.

Scalability. With its flexible, scalable configuration, the Spectrum II can be configured with single or dual lanes, and up to six heat stations with the dual-lane configuration. The platform is easily upgraded in the field when process needs change.

At only 600mm wide without optional pre- and post-heating stations, the Spectrum II maximizes use of precious production floor space.

Advanced Process Control. The Spectrum II reduces process variation, increases yield, and reduces cost. Software-managed temperature, fluid and air pressure provide closed-loop control that eliminates the need for operator adjustment. Calibrated Process Jetting (CPJ) automatically maintains volumetric repeatability during long production runs. Controlled Process Heat (CpH™) adds recipe-controlled heat management for improved thermal efficiency.

The Spectrum II’s standard digital vision system’s high-brightness LEDs with RGB three-color control provides good image contrast and detection capabilities for more accurate and consistent pattern recognition. For the most challenging vision applications, the Monocle™ Vision Package (MVP) enhances contrast and field of view size and resolution even further.

Jet Technology. Patented non-contact jetting offers many advantages over traditional needle dispensing. The NexJet® 8 system shoots “on the fly” using a patented high-speed actuator, jetting precise volumes of fluid in dots, lines and patterns with flow rates up to 500 mg/second and 300 dots/second.

Expert Value and Support. With over 30 years of precision fluid dispensing experience and a reputation for the best closed-loop process controls, Nordson provides customers a reliable partner for fluid dispensing development and production. From initial process development through full-scale production, you are supported by our experienced worldwide engineering, applications development and technical service network.
**Features and Configurations**

**Additional Optional Features and Configurations**

CpH™ - Controlled Process Substrate Heat

Dual-action dispensing (two applicators operate independently)

Exterior bulk fluid reservoir: 600 cc (20 oz), includes remote feed and fluid level sensor

Hot plate, process development (batch processing)

Low fluid sensor, magnetic or capacitive

Cleanroom compatibility

**Key System Specifications**

**Motion System**

- Z repeatability (1): ±15 µm (0.0006 in.), 3 sigma
- X-Y repeatability (1): ±15 µm (0.0006 in.), 3 sigma
- X-Y acceleration: 1 g peak
- X-Y velocity: 1 m/s peak (40 in./s)
- X-Y-Z encoder resolution: 1 µm

**Wet Dispensing Accuracy & Repeatability**

**Single Applicator:**

Cp ≥ 1.0:

\[ C_{p} \geq 1.0; \quad \pm 35 \mu m (0.0016 in.) \]

Cpk ≥ 1.0:

\[ C_{pk} \geq 1.0; \quad \pm 40 \mu m (0.0016 in.) \]

**Z-Gap Performance**

Z-Gap Repeatability (2):

\[ \pm 15 \mu m (0.0006 in.), 3 \text{ sigma} \]

Minimum Z-Gap Capability: 50 µm (0.002 in.)

**Dispense Area (X-Y)**

339 x 410 mm (13.3 x 16.1 in.)

**Conveyor**

Min. board/carrier width (3): 34 mm (1.3 in.)

Max. board/carrier thickness: 12 mm (0.5 in.)

Max. board/carrier length:

- One station: 340 mm (13.4 in.)
- Three stations: 320 mm (12.6 in.)

Min. board/carrier length: 25 mm (1.0 in.)

Max. board/carrier width:

- Single lane: 535 mm (21.1 in.)
- Dual lane: up to 228 mm (9.0 in.)

(3) Contact factory regarding smaller boards/carriers

(4) System weight varies depending on configuration

**Facilities Requirements**

**System footprint:**

- Single heat station: 600 mm wide x 1321 mm deep (23.6 x 52.0 in.)
- Two heat stations: 850 x 1321 mm (33.5 x 52.0 in.)
- Three heat stations: 1100 x 1321 mm (43.3 x 52.0 in.)

**Air supply:**

Two air supplies: one with 3 CFM @ 100 psi for contact tooling, a second one with 1 CFM @ 100 psi for the rest of the system (100 psi = 689 kPa, 6.8 atm)

**Power (mains):**

Power supply accommodates 200-240 VAC, 47-63 Hz single phase, 30 A

**Ventilation:**

Downdraft or updraft

**System weight:**

377-422 kg (830-930 lbs.)

(1) Wet dispense Cpk is tested against Nordson ASYMTEK standard sealant line path accuracy test method

(2) Z-gap repeatability is tested with Nordson ASYMTEK standard white ceramic, performance with other substrates may vary

(3) Contact factory regarding smaller boards/carriers

(4) System weight varies depending on configuration

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**Manual or Programmable fluid and valve pressures**

Optional Fids-on-the-Fly™ software for high-speed fiducial capture

Single- or dual-lane configuration

Optional pre- and post-dispense heat stations

Non-contact laser or tactile height sensor choices

Optional Tilt Jetting or Automatic Dual Simultaneous (ADS) dispensing options

Patented Calibrated Process Jetting (CPJ) and Mass Flow Calibration (MFC) weight scale option

Digital vision system with high-brightness RGB lighting

Monocle™ Vision Package (MVP) for increased contrast, field of view, and vision resolution

SECS/GEM interface

Ventilation Interlocking for Volatile Organic Compound dispensing (e.g. flux or primer)

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Nordson ELECTRONICS SOLUTIONS
Spectrum II S2-900 Series System Dimensions

Dimensions are in millimeters

For more information, visit our website to find your local regional office or representative.

We have several global locations to serve you.

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Asia Pacific
EMEA

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