

# Axiom™ X-1010 SMT Dispenser

## Features and Benefits

- **High-speed SMA non-contact jetting for non-contact, highly repeatable dot diameters as small as 0.33 mm and shot volumes as small as 1.0 nanoliter**
- **Enhanced pattern recognition system with robust blue-red on-axis lighting for a larger range of vision capability**
- **Linear-encoded X-Y drive system for  $\pm 0.076$  mm placement accuracy for high-speed applications and  $\pm 0.050$  mm for high precision applications with lower component-per-hour requirements**
- **Fast, accurate dispensing of a wide variety of fluids with quick tool-free material changeover for ultimate process flexibility**

The Axiom™ X-1010 dispensing system meets mid-range throughput requirements for inline, high-volume, high-accuracy SMT application of surface mount adhesive (SMA), solder paste and other materials such as electrically conductive adhesives. The system keeps pace with placement equipment in the 30,000 to 40,000 dots-per-hour production range. It can be configured with Nordson ASYMTEK's DispenseJet® DJ-9000 valve for jetting precise dot volumes without the need for mechanical needle standoffs or underboard support.

When dispensing high-viscosity fluids like thermal grease, lid seal and dam materials as well as silver epoxy, Nordson ASYMTEK's Heli-flow® DV-8000 servo-controlled auger pump, is the ideal choice. The DV-7000 model – with its floating-head design – is well suited for footed needle applications, like dots of solder and silver paste. The X-1010 system supports Nordson ASYMTEK's other valve technologies depending on application requirements, including positive displacement, spool, and time/pressure valves.



The standard Axiom system is configured with Nordson ASYMTEK's Fluidmove® for Windows XP (FmXP) software which allows an operator to accomplish basic production tasks while providing engineers a user-friendly interface to develop programs for a wide variety of applications. With the CAD import software utility, FmXP programs can be quickly and efficiently developed offline using existing CAD-generated data, or a file from a component placement machine.

Configurable for single- or dual-pump dispensing to accommodate a wide variety of fluids, processes and applications, the X-1010 system flexibly fits a variety of product line configurations. Dual-lane configuration is also available for high-volume production. Integrated with Nordson ASYMTEK's loaders/unloaders, wafer film-frame or bare wafer handling equipment, the Axiom system interfaces with other equipment upstream and downstream from the dispensing operation with SMEMA-standard hardware and software protocols.

# Specifications: Axiom X-1010 SMT Dispenser

## Motion System

X-Y Placement Accuracy:  
± 0.076 mm (0.003 in.), 3 Sigma (fast mode)  
± 0.050 mm (0.002 in.), 3 Sigma (high precision)  
Z Accuracy: ± 0.025 mm (0.001 in.), 3 Sigma  
High Precision Z Accuracy:  
± 0.012 mm (0.0005 in.), 3 Sigma  
X-Y Repeatability: ± 0.025 mm (0.001 in.)  
Encoder Resolution: 5 micrometer  
X-Y Acceleration:  
1.0 g peak with S-curve jerk control  
X-Y Velocity: 1 m/s (40 in/s) peak  
X-Y Travel: 501.4 x 541.5 mm (19.7 x 21.3 in.)  
Z Travel: 89.0 mm (3.5 in.)  
X-Y Type: Brushless DC servomotor driven, low-inertia, closed-loop, high-resolution cable drive with linear-encoder feedback  
Z Type: Brushless DC servomotor, rack and pinion Z-drive with precision encoder feedback

## Dispense Area (X-Y)

DJ-9000, DV-8K, DV-7K:  
458.2 x 459.0 mm (18.0 x 18.1 in.)  
DP Pump: 442.2 x 418.6 mm (17.4 x 16.5 in.)

## Dual Action (Valve 1/Valve 2)

DV or DJ/DV or DJ:  
356.9 x 432.5 mm (14.1 x 17.0 in.)  
DV or DJ/DP:  
353.0 x 394.2 mm (13.9 x 15.5 in.)  
DP/DP:  
309.0 x 394.2 mm (12.2 x 15.5 in.)

## Vision and Lighting

Vision: Automatic pattern recognition system allows for optical registration of the work piece to reliably locate dispensing sites (can compensate for up to ±7° rotational part misalignment)  
Lighting: On-axis red/blue LED with 255 independent light levels for each color  
Field of View: 7.0 x 5.0 mm (0.28 x 0.20 in.)

## Conveyor

Two-station (prequeue, dispense) O-Ring (Flat Belt optional)  
SMEMA-compatible: Height adjustable between 891.0 to 965.0 mm (35.1 to 38.0 in.)  
Width-Adjustment: Motorized, variable 19.0 to 459.7 mm (0.75 to 18.1 in.)

## Computer

Computer: Windows XP PC  
User Interface: LCD flat-panel display; ASCII keyboard/mouse; 10-100 MBS Ethernet port; DVD ± RW; USB port

## Software

User Software: Fluidmove® for Windows XP;  
CAD Import (3-user license)  
Operating System: Windows XP

## Fluid Delivery Method

Supports all Nordson ASYMTEK jets, encoded auger pumps, positive displacement, spool and pressure/time valves

## Facilities Requirements

System Footprint: See illustration  
Air Supply: 621 kPa (6.2 Bar, 90 psi)  
Power (Mains): Adaptive power supply that accommodates supply voltages between 200-240 VAC, single phase, 30A, 50/60 Hz  
System Weight: 435.0 to 490.0 kg (960.0 to 1080 lbs.) depending on configuration  
Crate Dimensions: 1930.0 x 1321.0 x 1981.0 mm (76.0 x 52.0 x 78.0 in.)  
Crated Weight: 680 kg (1500 lbs.)

## Standards Compliance

SEMI-S2; SEMI-S8; SMEMA; CE

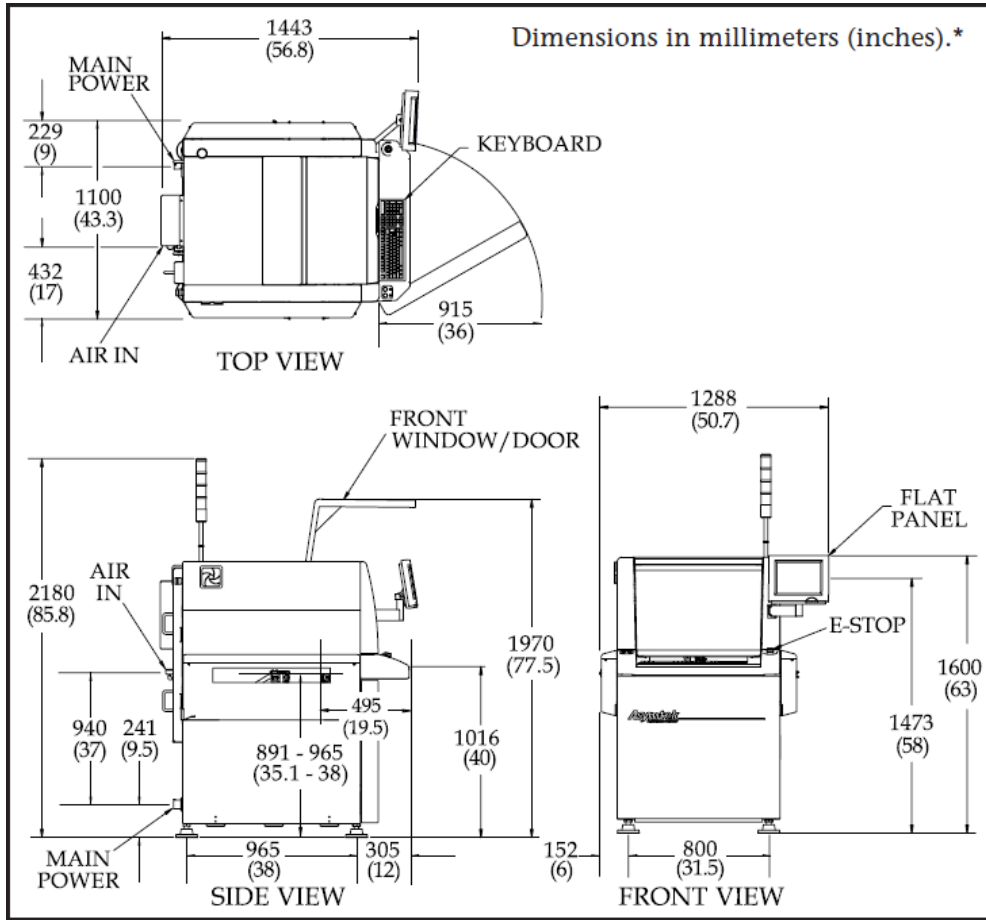
## Other Standard Features

Calibration Module: vacuum purge station and needle sensor  
Light Beacon with audible alarm  
Low Pressure Sensor  
Tactile Height Sensor

## Optional Features

Cleanroom Compatible  
Dual-lane Configuration  
Dual-action Dispense Head for selective dispensing of two different materials  
Exterior 600 cc (20 oz.) reservoir for offline bulk fluid feed  
High Precision Z Axis  
Laser Height Sensor  
Lift Pins (with or without vacuum) for underboard support  
Low Fluid Sensor  
Material Handling: Freestanding Loaders/Unloaders, Film Frame Wafer; Bare Wafer  
Mass Flow Control Module for fluid weight calibration and automatic flow rate adjustment (Nordson ASYMTEK patented)  
RTD Needle Heater  
SECS/GEM Interface

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\*All dimensions taken with board transfer height of 965 mm (38 in.)

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