

MYPro series A40DX™

pick-and-place

Specifications
November 2023



Specifications MYPro series **A40DX™**

PLACEMENT SPEED AND ACCURACY	
A40DX-13/17	
Rated speed ⁽¹⁾	59,000CPH
IPC 9850 chip net throughput ^(2, 3)	44,000CPH
IPC 9850 chip throughput ⁽³⁾	47,000 CPH
IPC 9850 chip repeatability 3σ (X, Y, Theta) ^(7, 8)	30μm, 1.8° ⁽⁶⁾ 45μm, 1.8°
IPC 9850 QFP repeatability 3σ (X, Y, Theta) ⁽⁴⁾	21μm, 0.054° ⁽⁹⁾ 30μm, 0.12° ^(6, 8) 45μm, 0.21° ⁽⁸⁾
IPC 9850 QFP accuracy @ Cpk 1.33 (X, Y, Theta) ^(4, 5)	35μm, 0.09° ⁽⁹⁾ 50μm, 0.2° ^(6, 8) 75μm, 0.35° ⁽⁸⁾

The above specification achieved with a machine configuration including high precision mounthead (Midas), high speed mounthead (MX7), line scan vision system (LVS), inline conveyor T460 and 15mm component max height. The IPC 9850 net throughput and accuracy numbers are obtained simultaneously, with the same machine settings. The rated speed value is obtained under conditions optimized for speed.

- (1) Depending on component and application.
- (2) According to IPC 9850. Net throughput = (no of parts x 3,600)/(board build time + board transfer time).
- (3) According to IPC 9850 0402C verification panel.
- (4) According to IPC 9850 QFP64/QFP100 verification panel.
- (5) According to IPC 9850 Cpk 1.33 = 4σ + offset.
- (6) High precision setting, recommended for small chip or fine pitch.
- (7) IPC 9850 chip accuracy @ Cpk 1.33, Theta = 2.6°
- (8) High-speed mounthead - MX7
- (9) High-precision mounthead - MIDAS

SYSTEM FEATURES
A40DX
On-the-fly mount order optimization
Vision autoteach with snap-to-grid
Automatic illumination settings
Intelligent feeder concept—Agilis
Automatic feeder and component recognition
On-the-fly feeder loading
Dynamic feeder positions
Automatic board stretch compensation
Automatic conveyor width adjustment
Intelligent surface impact control
Tool collision avoidance
Multi-user, multi-tasking system software
Open software interfaces for factory integration
SQL database engine
Hermes

COMPONENT RANGE	
HIGH PRECISION MOUNTHEAD—MIDAS	
Component specification	Min: 0.3 x 0.15 (0.012 x 0.006") (03015) Max: 99 x 73 x 15mm (3.89 x 2.87 x 0.59") ^{(1) (3)} Max: component weight: 140g ⁽²⁾

- (1) With 4K vision. Max component size with 2K vision: 99x56x15mm (3.89x2.20x0.59"). Customized tall component capability 22mm (0.86") available.
- (2) Depending on mounthead, mount tool, package, and production altitude.
- (3) Components with diagonal larger than 58mm must be presented in the same angle as placed.

HIGH SPEED MOUNTHEAD—MX7	
Component specification	Min: 0.4 x 0.2 mm (0.016 x 0.008") (01005) Max: 45 x 45 x 15 mm (1.77 x 1.77 x 0.59") ⁽¹⁾ Max: 150 x 40 x 15mm (5.90 x 1.57 x 0.59") ⁽¹⁾

- (1) Components with diagonal larger than 52mm will if needed be rotated over the place area

ELECTRICAL VERIFIER (OPTIONAL)	
Component range	Resistor, capacitor, unipolar capacitor, diode (forward voltage, reverse current), Zener diode (reverse voltage), bipolar transistor (current gain), FET/IGBT (gate threshold voltage). Smallest chip size 1.0x0.5 mm (0.04x0.02").

FEEDER CAPACITY		
8 MM TAPE	T460	T640
A40DX-13	160	144
A40DX-17	224	208

BOARD HANDLING		
INLINE CONVEYOR	T460	T640
Maximum board size	460 x 510mm (18 x 20")	640 x 510mm (25 x 20")
Minimum board size ⁽¹⁾	70 x 50mm (2.7 x 2")	70 x 50mm (2.7 x 2")
Maximum board train length	436mm (17.1")	472mm (18.5")
Board thickness range	0.4–6.0mm (0.016–0.24")	0.4–6.0mm (0.016–0.24")
Board edge clearance top	3.2mm (0.13")	3.2mm (0.13")
Board edge clearance bottom ⁽²⁾	3.2mm (0.13")	3.2mm (0.13")
Top side clearance (max) ⁽³⁾	15mm (0.59")	15mm (0.59")
Bottom side clearance (max) ⁽⁴⁾	32mm (1.25")	32mm (1.25")
Maximum board weight	4kg (8.8lbs)	4kg (8.8lbs)
Board transfer height	Conforms to SMEMA standard for board transfer height. Height adjustable from 880 to 975mm (34.6 to 38.4").	
Operation mode	Inline, manual, inline odd-board, left-to-right/right-to-left.	

- (1) Board train specification: 90 x 50mm (3.5 x 2") board size, 1.6mm (0.06") min thickness. Max warpage 1mm (0.04").
- (2) Edge clearance 5.5mm (0.22") if component taller than 6mm (0.24"). 14.3mm (0.56") if taller than 19mm (0.75").
- (3) Customized tall component capability 22mm (0.86") available.
- (4) 15mm (0.59") with support pins.

VISION CAPABILITY			
LINESCAN VISION SYSTEM—4K RESOLUTION			
Component type	Field of View	Minimum pitch	Minimum lead width
Leaded components	80mm (3.1")	0.10mm (4mil)	0.05mm (2mil)
Bumped components	80mm (3.1")	0.15mm (6mil)	0.08mm (3mil)

FEEDER CAPACITY			
LINESCAN VISION SYSTEM—2K RESOLUTION			
Component type	Field of View	Minimum pitch	Minimum lead width
Leaded components	63mm (2.5")	0.20mm (8mil)	0.10mm (4mil)
Bumped components	63mm (2.5")	0.25mm (10mil)	0.13mm (5mil)

SOFTWARE
SOFTWARE MODULES (OPTIONAL)
Shared databases
Line mode
PCB ID (2D barcode)
Pre-pick inspection
Barcode software
PRM (Proactive Replenishment Monitoring) software
Hermes

OFFLINE SOFTWARE TOOLS (OPTIONAL)
Data preparation—MYCenter
Optimization and scheduling—MYPlan
Inventory management and kitting—MYCenter
Traceability—MYTrace
Performance monitoring—MYCenter Analysis

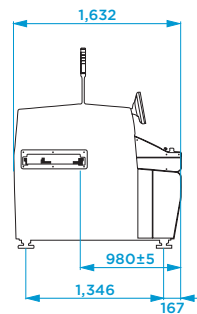
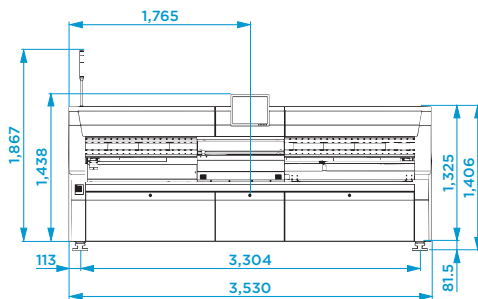
MISCELLANEOUS	
INSTALLATION REQUIREMENTS	
Power requirements	Three phase AC 6.6kVA (3x2.2kVA)
Power consumption	1.5kW (average)
Voltages	3 x 200, 210, 220, 230, 240, 250 ± 10%, Y or Delta
Air supply	No air required
Air temperature	+18 to +35°C (65 to 95°F)
Air humidity	<95% RH non condensing

MACHINE WEIGHT ⁽¹⁾	
A40DX-13	1,600kg (3,500lbs)
A40DX-17	2,200kg (4,850lbs)

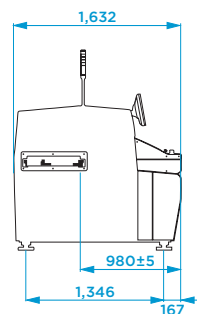
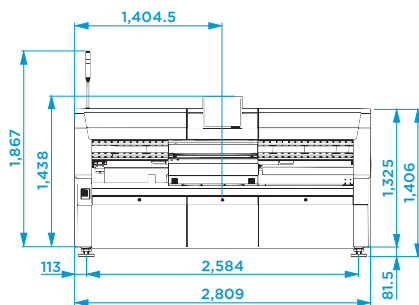
(1) Total machine weight excluding magazines.

DIMENSIONS [mm]

A40DX-17



A40DX-13



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