

# A7a Pro Flying Probe Test System

Automated Test for Rigid and Flexible Boards

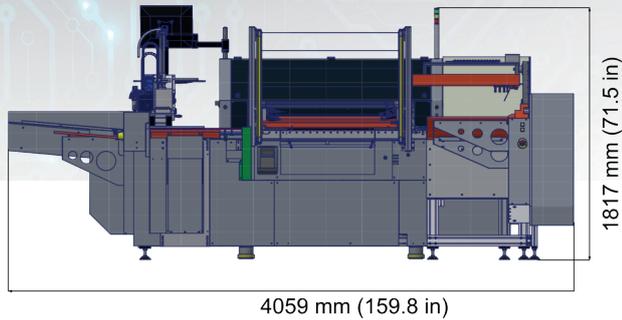


- ▲ 8 Test Heads
- ▲ High Speed Direct Linear Drives for X and Z motion
- ▲ Light weight Carbon Z-Axis
- ▲ Fully Automatic “Lights-out” Operation
- ▲ Tension Shuttle System for thin core product
- ▲ Fast 280 mA Kelvin Testing

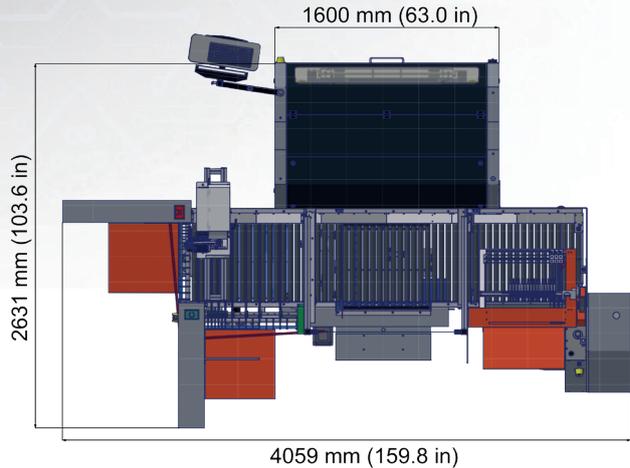


# A7a Pro Technical Specifications

## Flying Probe Test System



Front View



Plan View

### Mechanics

Fully automated test system for different board sizes in lights-out operation. Basic unit with 8 test probes (4 top, 4 bottom)

### Board Handling

	Manual mode	Automatic mode
Max. board size (X × Y)	635 mm x 535 mm	635 mm x 535 mm
Min. board size (X × Y)	25 mm x 25 mm	100 mm x 100 mm
Test area (X × Y)	610 mm x 510 mm	610 mm x 510 mm
Board thickness	up to 7 mm	up to 5 mm
Loader capacity	390 mm 240 boards / 1.6 mm thickness	
Cycle time automation	< 20 s (clamping mode) < 24 s (tensioning mode)	

Smallest pad	50 μm / 2.0 mil
Smallest pitch	100 μm / 4.0 mil
Resolution measurement system	± 0.1 μm / ± 0.004 mil
Repeatable accuracy	± 4 μm / ± 0.16 mil
Soft touch probes	5 g to 10 g

### Electronics

Continuity test	1 Ω to 10 kΩ
Isolation test	up to 25 MΩ (FM), up to 100 GΩ (ohmic) MicroShort Detection®
Test voltage	100 mV to 1000 V

### Camera System

4 color cameras for fast optical scanning of top and bottom side. Resolution 6 μm / pixel

### Options

- 4-wire measurement with max. 280 mA test current  
0 Ω to 1 kΩ ± 2 %, min. ± 25 μΩ  
with Kelvin probes 0.3 g to 2.5 g  
Smallest pad 80 μm / 3.2 mil\*  
Smallest pitch 120 μm / 4.8 mil\*  
\* special setup
- Embedded components test  
R 0 Ω to 1 MΩ ± 1 %, min. ± 0.5 Ω  
1 MΩ to 200 MΩ ± 3 %  
C 0 F to 100 μF ± 2 %, min. ± 30 fF  
L 0 H to 10 mH ± 5 %, min. ± 0.25 μH  
Diode / Varistor U<sub>F</sub>, U<sub>R</sub>, U<sub>BR</sub> 0 V to 12.5 V
- BackDrill Stripe detection
- LaTest® open detection  
with LaTest® probes 1 g to 10 g  
High current 1.4 A (1 kHz)
- Label printer with barcode support
- Retest of fault files from external grid test systems on inquiry
- Repair software with barcode support
- Tensioning modules for flexible boards

Data input format	IPC-D-356A
Network connection	Ethernet, TCP / IP
Power supply	3 x 400 V, 50 Hz (3 x 208 V, 60 Hz), 2500 VA
Compressed air	8 bar / 115 psi, filtered
Temperature	18 °C to 27 °C
Relative humidity	40 % to 60 %
Machine weight	1500 kg

All information subject to change without notice!  
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