When it comes to PCB inspection...

There's no substitute for certainty.

n=1 Checker **FAI**

THE FUTURE OF FIRST-ARTICLE INSPECTION.

Printed-circuit manufacturers have long awaited an alternative to performing first-article inspections by hand. The wait is finally over. Meet the **Newly n=1 Checker FAI**. By automating every phase of the inspection process, it prevents waste and error, reduces downtime, and allows for rapid line changes to maximize your productivity.

INCREASED ACCURACY. INCREASED PRODUCTIVITY.

Unlike time-consuming, error-prone first-article inspection by human technicians, **Newly n=1 Checker FAI** is a rapid, fully automated process that accurately compares the pilot board to the preloaded specs from the program profile.

- **Perform FAI checks up to ten times faster than human inspection (average manual inspection time per component: 10+ seconds; average n=1: 1 second)**
- **Precise LCR value testing (Inductance, Capacitance, Resistance)**
- **Testing for component presence or absence, orientation and serial number**
- **Assisted visual inspection with correct product specs alongside magnified image of every component**

SIMPLE. POWERFUL. CUSTOMIZABLE.

Say goodbye to piles of handwritten reports and wasted money on highly skilled engineers performing manual tests. The N=1 is easy for anyone to use and requires minimal training to operate.

With explicit **FAIL/OK** results, detailed electronic reporting and rapid reconfirmation of failed components, you'll diagnose problems quicker and prevent them from entering production.

Whether you're changing reels, changing shifts or starting production on an entirely different printed circuit board, just load the program profile, check the first article and you're good to go. This maximizes your production uptime and reduces the number of faulty boards rolling off the line.

- **Pilot run testing**
- **Model changes, alterations, reorders**
- **Sampling checks (shift change, reel change)**
- **Super dense PCBAs such as smartphones**
- **Small component testing** (0201 mm/008004", 0402 mm/01005")

NEWLY TSUCHIYAMA

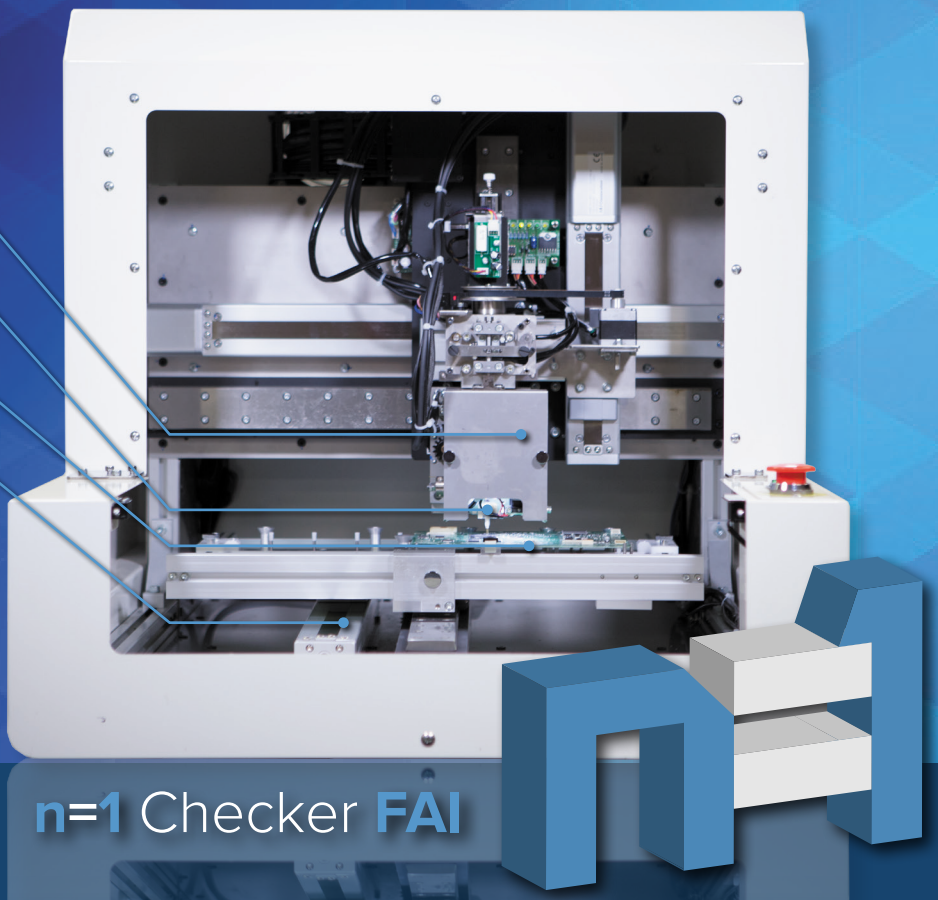
n=1 FEATURES

Optical Verification Camera
350K resolution to aid in visual inspection of components, serial numbers and orientation

Probe Unit
7 individual probe sets for testing values of virtually any component size

UUT Stage
Unit under test platform holds PCB in place

Linear Motion Tracks
Allows smooth glides along X and Y axis for automated and visual inspections



n=1 Checker FAI

10x faster than manual inspection

n=1 BENEFITS

- Verify all components are present and mounted correctly
- Test LCR values (inductance, capacitance and resistance)
- Eliminate human error
- Streamline and increase accuracy in the optical inspection process
- Speed up changeovers on production line by ***10x***
- Automate quality assurance (QA) data capture, logging & reporting

SPECIFICATIONS

Product	n=1 Medium (M)	n=1 Large (L)
Net. Wt.	203 lbs.	260 lbs.
Dimensions	2.2'W x 2.6'D x 2.1'H	2.8'W x 3.2'D x 2.1 H
Test Area	X: 13"; Y: 9.8"* *Max. component height: 0.54" above PCB surface	X: 20"; Y: 15"*
Test Time	1 second per component (average)	
# of Steps	Max. 10,000 steps	

IMPEDANCE TESTING

Component Test	2-terminal chip capacitors, 2-terminal chip resistors, resistor arrays
Component Size	0603, 1005, 1608, 2012, 3216, 4532, 5025 mm (0402 mm Optional) 0201, 0402, 0603, 0805, 1206, 1812, 2010 inch (01005 inch Optional)
Mounting Angle	0°, 90°, 180°, 270° (45° or Free-Angle Degrees Optional)
Measurement Range	C: 0.94F to 199.99F; R: 0.01Ω to 19.99Ω
Measurement Voltage	1.2 Vrms

OPTICAL VERIFICATION

Camera	100 mm x 65 mm camera with 350K resolution/magnification
Display	6mm x 4mm display area (W: 461px x H: 307 px)
Optical Comparison	Component size, mounting angle, alphanumeric characters, 1-pin direction, positive & cathode orientation, missing component

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