High-precision, enormous-pin capability for high-density, fine-pitch boards

Throughput is key for mass production testers

High-speed throughput

■Faster than the industry-fastest 1107

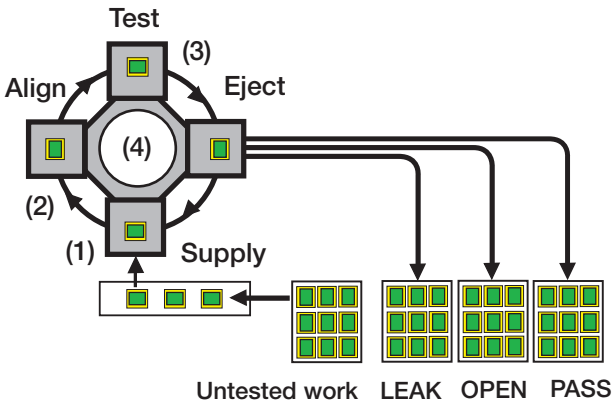
The 1231 asswres throughput that is 20% faster than the 1107.

Index table system

Wait-free multitasking

■Index system for simultaneous supply, alignment, testing, and ejection of work

(1)Dual supply heads supply work alternately, eliminating wasted time.
(2)The alignment unit features a high-speed mechanism with a high-resolution camera.
(3)The testing unit boasts a high-rigidity mechanism that supports up to 16,384 pins.
(4)A more lightweight board clamping unit enables high-speed rotation while reducing dead time.



Featuring the new 1230 measurement engine

Support for high-density wiring boards

■Test up to 16,384 pins.

The 1231 supports 4-wire testing of high-density wiring boards with up to 16,384 pins (a 200% increase over previous models).
【Up to 12,288 pins on each side for a total of 16,384 pins】

Space-saving design

Lowering costs with a small footprint

■The 1231 uses less than half the space of past models on a per-pin basis.

Comparison with past model							
	W(mm)	H(mm)	D(mm)	Area (m^2)	Volume(m^3)	Pin count	Volume/pin
1231	1,500	1,680	1,750	2.62	4.41	16,384	269cm^3/pin
1107	1,415	1,900	1,890	2.67	5.08	8,191	620cm^3/pin

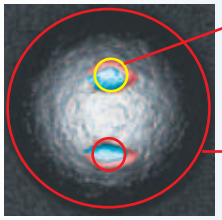
Thanks to a new, shorter design, the 1231 appears less imposing.

Probing precision of 10 µm

Support for fine pattern probing

■High-precision probing

Thanks to a high mechanical repeatability of within 10 µm, the 1231 is capable of probing boards with increasingly fine patterns.



Repeatability:The 1231 delivers probing with a repeatability of within 10 µm.

Bump: Diameter of approx. 70 µm

Impact mark (blue): Mark after 1 probing iteration
Impact mark (red): Mark after 5 probing iterations

Delivering measurement you can trust through easy operation

Detecting latent defects

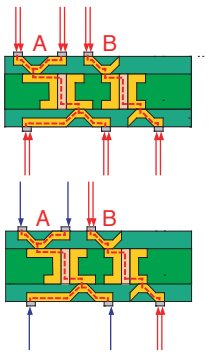
Respected HIOKI Measurement

■Open via measurement

Because wiring resistance and contact resistance can be cancelled out with 4-terminal low-resistance measurement, it is possible to detect minute variations in resistance.
In order to detect pseudo-contact and open vias, it is necessary to use 4-terminal measurement with an instrument that is both high-resolution and high-precision.

■Poor contact detection using 4-terminal measurement

Four-terminal measurement, a low-resistance measurement method, is an effective way to detect open vias. However, having 4-terminal probes for all points would increase test fixture cost.
The 1231 uses the independent 4-terminal method to limit fixture cost while enabling reliable open via detection.



■Four-terminal probe method

Four-terminal probes are used for all points (2 probes per point).

■Independent 4-terminal method

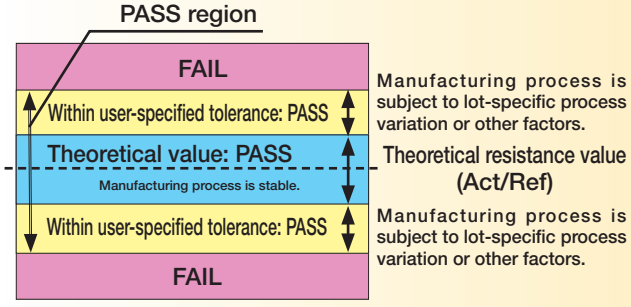
The independent 4-terminal method can be used for patterns like (A), halving the number of probes required.

Support for lot process quality control

Pattern theoretical resistance test function

■Integration with U-ART ™

Enhanced measurement functionality enables quality control of lot processes with a logical resistance test function.



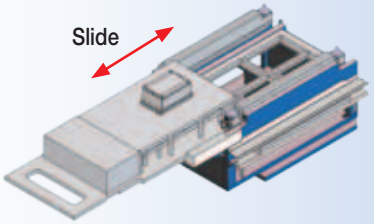
One-touch fixtures

Improved setup

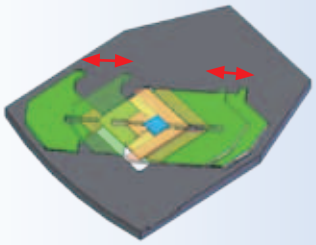
■Test fixtures with a simple, one-touch mechanism

The 1231's one-touch fixture design simplifies setup changes by eliminating the need for previous models' time-consuming procedures for connecting cables and acquiring test fixture offsets.

※Offsets only need to be acquired the first time a test fixture is used.



■There's no need to change the board clamping unit for boards that fall within the size range of 13 × 13 mm to 55 × 55 mm.



Advanced yet easy-to-use functionality

Intuitive interface

■Newly designed software

Easy-to-understand icons help ensure intuitive operation, and the 1231 can also graphically display connection information for electronic components.