

Analyst^{ems} 12KN System

In-Circuit / Functional Test System

Test system designed for large boards with up to 5200⁺ test points

- Standard, dual level probing for ICT and isolated Functional Tests
- No extra cost for standard ICT fixtures
- Available TestJet Technology, Boundary-Scan, and MultiWriter part programming
- Ergonomically friendly slide-in fixtures, straight-in and out, top and bottom lock-in for safety
- Fully-integrated CheckSum test system software environment

- Operator safety light curtain
- Built-in SPC measurement tools; easily integrated into factory data system
- Rapid and smooth press actuation
- Integrated rack/cabinet

The CheckSum Analyst ems 12KN is designed for testing all types of circuit assemblies. The System combines manufacturing process testing with TestJet Technology to test a single assembly or a panel of multiple assemblies.

The Analyst ems 12KN is designed to test most single or doubled-sided SMT/through-hole circuit assemblies. It can perform effective power-down testing for most analog or digital assemblies being manufactured today.

Dual level probing and optional power-up functional test capability is ideally suited for lower frequency analog assemblies with some digital content.

The Analyst ems 12KN can test the entire assembly and individual components without power applied. Using sophisticated measurement techniques such as DC or complex-impedance measurements in conjunction with multi-point guarding, this system provides the capability to find the majority of faults such as shorts, opens and wrong or incorrectly installed components. By finding the majority of faults while the board is in a safe unpowered mode, and with very specific fault diagnostic messages, faulty boards can be repaired quickly.



Fully Tested

Dual Level System Operation

- Connect the system to a standard compressed air line and an AC outlet.
- Slide-in the fixture top and base then press the fixture lock keys. Fixture change-over takes only a few seconds.
- Each test requires only one load/unload cycle, with no lids or doors for the operator to manipulate between tests.
- The operator places the unit-under-test (UUT) on the fixture guide pins and then presses the start test key.
- The system automatically lowers the lid to the ICT position and compresses the spring-probes. For operator safety, if the light curtain detects any object, the lid immediately stops.
- The system will automatically move the lid to the functional test position when needed so that only the spring-probes used for functional test remain in contact with the UUT.
- Once the test is complete, the lid automatically moves up so the UUT can be removed and the system displays the test results.

Abbreviated Specifications

12KN Pneumatic Fixture System Features

- Compatible[‡] with existing CheckSum KIT1000-QC and KIT2KN-QC fixtures
- Fixture KIT28 probe area (approximately) 24x13.2 inches (61x33.5 cm); up to 28 wiring blocks
- Fixture KIT20 probe area (approximately) 16x13.2 inches (40.6x33.5 cm); up to 20 wiring blocks
- Pneumatic press provides up to 2700 pound force (12000 newtons) capability
- Small system footprint: 45x40 inches (114x102 cm) with 7U rack space available for customer selected instruments
- CE Conformance
- Boundary-Scan (Asset, Corelis, JTAG, Goepel) options
- Functional Test and Digital I/O options
- Multiple power supply options

Typical System Resources

- 3200 test points, up to 5200[†] maximum
- TestJet Technology*
- MultiWriter option

System software

- Visual Programming Test Executive runs in Windows environment
- Comprehensive on-line help
- Extensive component ICT functions
- Power-on test functions
- API links to Visual Studio™ and LabWindows/CVI™
- Visual Test System Executive includes:
 - Statistical Process Control (SPC) Tools
 - Test Program Generation Tools
 - Test Program Validation Tools
 - Multi-Board Panel Support

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[†] Maximum number of test points depends on the fixture spring-probe force requirement.

* MultiWriter Technology is protected under U.S. Patent No. 7,802,021.

TestJet Technology is protected under U.S. patent numbers 5,124,660 and 5,254,953.

[‡] Fixture kit top plate modification may be required.