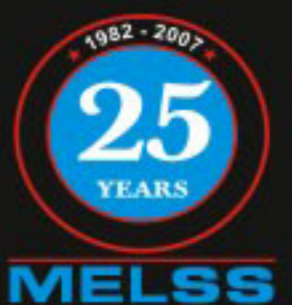




TESTING INSPECTION REWORK



MELSS Agency division markets and supports a wide range of capital equipment for applications in manufacturing and maintenance.

PCBA Testing

www.tri.com.tw

Test Research Inc (TRI), Taiwan is a market leader with over 5000+ tester installations in Asia. Combined with MELSS support in India, customers can now look forward to a whole new experience in price, performance and service.

Manufacturing Defects Analyzer (MDAs)

The 518 series of high speed MDAs from TRI are available in a variety of configurations such as CMOS or reed-relay switch matrix, low or high channel pin count (upto 3584 points), vacuum or pneumatic press-down fixture, and with HP Test jet® and Intel® Socket Test options. 1000s of TRI MDAs are currently used in sectors such as IT hardware, consumer electronics, and telecom.



In-circuit Testers

The 8100 series of high performance ICTs from TRI, offer extensive fault coverage with high throughput. The testers provide high flexibility with non-multiplexed architecture upgradeable up to a maximum of 5632 channels. (1:1 driver / receiver behind each pin). In addition to standard MDA, analog and digital tests, the 8100 series also supports boundary-scan testing, low voltage testing, SPI, ISP, Flash Programming and HP Test jet®.



Combinational Testers

The 5000 series, is a unique range from TRI, that can be field-upgraded from a standard MDA to a full fledged digital in-circuit tester and can also incorporate PXI based functional test capabilities. Using reed relay switches for high reliability and speed, the tester can be upgraded up to 3200 points. The testers can be configured with vacuum or pneumatic press-down fixtures.

Fixtures and Test Jigs

www.melssindia.com

MELSS manufactures fixtures and jigs at its own facility in Chennai. From vacuum and push down fixtures for standard ICTs, to customized jigs for functional test applications, from



specialized fixtures for high-voltage, high-current testing to customized clips and accessories, MELSS can offer interface solutions to suit any application.

PCBA Inspection

www.tri.com.tw

Complimenting its range of MDAs and ICTs, TRI also offers Optical inspection (AOI) and X-ray inspection systems.

The 7500 series of pre and post reflow AOIs from TRI are available in "Mono" or "Color", single or multiple cameras and with different types of lighting options. They are available in both offline (desktop) and inline configurations. Pattern matching, pixel calculation, image based warpage compensation, continually variable multi-angle lighting control are some of the other unique features.



The 7006 series of solder paste inspection systems from TRI use a patented parallel triangulation method to make accurate 3D measurements for calculation of solder volume.

PCBA Rework

www.okinternational.com

With increasing adoption of lead-free technology, the need to reduce thermal stress on boards and save them from potential damage has gained importance.

The OKI Array Package Rework (APR) series - full convection BGA / CSP rework system delivers excellent thermal performance similar to that of high cost high-end systems. For those who have experienced the limitations of IR based systems, the OKI APR is a welcome choice.

The OKI PS 800, MFR and MX-500 series of hand soldering and rework systems, are based on the legendary Metcal Smartheat technology. Metcal Smartheat systems come with "Calibration not required" certificate. The main advantage of Metcal Smartheat is its ability to operate at lower temperatures and still deliver substantial improvement in throughput without compromising on solder joint quality.



Device Programming

www.bpmicro.com

BPM Micro offers Engineering programmers, Concurrent programming systems®, and Fine-pitch automated programming systems. BPMs manual and automated production programmers are the fastest in the industry, supporting 1000s of devices. New programming algorithms are released almost every day.



Testing & Measurement

www.chromaate.com

MELSS offers a range of test equipment from Chroma ATE. Please ask for our 200 page PDF catalogue. Some of the most popular applications are listed below for reference.

Power-supply Testing : Programmable DC Electronic loads, Programmable AC / DC sources, Power analysers, SMPS and Telecom power supply test systems and many more..

Passive Component Testing : LCR meters, Transformer testers and many more..

Video / Display Testing : LCD/CRT Video pattern generators, Color analysers etc.



Safety Testing : Hipot testers, IR testers, Ground-bond testers, Safety analysers etc.

Cable & Harness Testing

www.cabletest.com

Cabletest offers specially configured test systems that can automatically scan - switch and electrically test - tens of thousands of cable / connector points within a short time. Low-voltage, low-current tests as well as high voltage break down / insulation tests can be conducted on cable assemblies, harnesses, backplanes etc. Cable test products are extensively used in Defence, Aerospace and Ship industries.

Reliability Testing

Vibration Testing & HALT / HASS Chambers

www.qualmark.com

Vibration testing is an essential form of reliability testing in Electronics, Automobile, Defence and Aerospace segments. MELSS has over 20 years of experience in selling and supporting the Shinken range of vibration systems in India.

MELSS has now added a wider range from Ling Electronics USA, a subsidiary of Qualmark USA. Shakers are available from 100 force pounds to 12000+ force pounds. Erection and maintenance of these systems will be done by MELSS.

Qualmark also offers their widely popular Typhoon series of HALT/HASS (Highly Accelerated Stress Screening) chambers to Indian customers through MELSS.

Environmental Chambers

www.envirotronics.com

Envirotronics, (which is also a recent addition to the MELSS portfolio) offers a range of standard and custom built chambers for simulating environmental conditions such as temperature, humidity, altitude and shock. Chambers with built in vibration simulation table are also available.



Customized ATE (for PCBA Repair)

Teradyne & LASAR Platform

www.teradyne.com

The Teradyne Spectrum 9100 functional test platform along with the LASAR Simulation software, is an open standard COTS - test platform - widely adopted by the defence / aerospace industry across USA, UK and Asia. MELSS offers complete turnkey solutions built around this platform including migration and rehost of old test programs from legacy testers to this new tester.

Melsswizard Platform

www.melssindia.com

The Melsswizard (earlier known as Boardwizard) as a standard product, has been sold to over 500+ PCB repair and maintenance labs across Telecom, Defence, Space, Machine Tools, Power, Textile, Petroleum, Transport and Steel industries. Now, MELSS offers customized solutions built around this proven and cost effective platform, including development of test programs for specific boards.

cPCI / VXI / PXI Platform

www.melssindia.com

MELSS also specializes in manufacturing custom functional ATEs based on COTS platforms such as cPCI, VXI and PXI, integrating custom built switch matrix cards, programmable power supplies and standard instruments. MELSS develops custom software for functional Go / No-Go test as well as component level diagnostic test using tools such as Labview, Labwindows and Visual Studio.



SMT Production

www.uic.com

www.apsgold.com

Please ask for our detailed catalogue on production lines and assembly tools.

MELSS represents Universal Instruments Corporation and Automated Production Systems Inc in India for their range of SMT equipment for both low volume and high volume applications. This includes, manual, semi automatic and automatic screen printers, reflow ovens from 3 zones to 16 zones, and pick and place machines from 600 CPH to 120,000 CPH.

About MELSS

MEL Systems and Services Ltd, (formerly a division of Murugappa Electronics Ltd) has been at the forefront of cutting edge technology since 1982. MELSS became an independent company in 1995.

Our competencies :

Technology and process consulting, pre-sales support, sourcing and supply of suitable equipment, manufacturing, engineering design and system integration, project implementation, technical / application support and service support.

Customer segments :

Electronics Manufacturing and Maintenance
Telecom Testing, Photonics and Fiber Optics
Defence Electronics, Aerospace
Industrial Automation & Process control

www.melssindia.com/EMS
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www.melssautomation.com



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