Test Strategy Experts!!

iNETest Technologies India Pvt. Ltd.

www.inetest.co.in
Today’s advanced electronics manufacturing processes pose tough challenge for failure analysis of components and boards. It is becoming increasingly challenging when gadgets are becoming smaller and are produced under large scale manufacturing in the state-of-the-art placement and assembling processes. All electronics systems are gradually becoming complex and more deeply embedded in our daily lives thereby the consequences of failure have become exponentially more serious. Therefore, it is important to find and fix failures before assembling the final products. The answer is to employ a comprehensive, multi-disciplinary approach test & measurement solution providing company i.e. iNETest Technologies India Pvt. Ltd.

iNETest Technologies India Pvt. Ltd. (a Global Technosoft company) offers a wide range of test & measurement solutions which are specifically designed to detect latent complex defects at various levels of boards. The solutions offered are to the specific needs and are highly flexible to meet any line capacity of manufacturing, testing or assembling processes.

iNETest Technologies is a right mix of resources, innovation, technology with agile service support to satisfactorily serve more and more critical test & measurement needs.

Over a period of a decade, iNETest Technologies has increased its footprint and grown phenomenally to expand the scope of operations to PAN India level and has become the leading supplier of T&M solutions in electronics vertical. As a reliable solutions provider in industries like automobiles, LED, mobile phones, medical electronics and laboratory testing, iNETest Technologies has proved its merit to lead the index.

For more details you can visit our website - www.iinetest.co.in

PARTNERS IN OUR PROGRESS

YXLON – Germany
Headquartered in Germany, Hamburg, YXLON International was founded in 1998 and is the worldwide leading manufacturer & supplier of Industrial X-ray Inspection systems & Industrial Computed Tomography (CT) systems.

www.yxlon.com

SAKI Corporation - Japan
Saki Corporation founded in April 1994 Tokyo Japan. They are into development, manufacturing, and sales of 2D and 3D automated optical inspection, 3D solder paste inspection, and 3D X-ray inspection systems for use in the printed circuit board assembly process. Saki Corporation has acquired a worldwide position in the field of automated visual inspection equipment for printed circuit board assembly. The Company has achieved this important goal guided by the motto embodied in its corporate principle — “Challenging the creation of new value.

www.sakiglobal.com

Aurotek Corporation – Taiwan

PBT Works s.r.o. – Czech Republic
Established in 1992 is a leader in cleaning solutions with presence in more than 33 countries. PBT range of product includes Stencil Cleaning , PCB cleaning , Misprint Cleaning , Pallet Cleaning ,Parts Cleaning catering to various segments such as Automotive , Aerospace , Electronic & Semiconductor.

www.pbt-works.com

Specialty Coating Systems (SCS) – USA
Specialty Coating Systems (SCS) is the world leader in parylene conformal coatings for the Medical, Electronics, Automotive and Military industries. In addition to this, SCS also offers industry-leading lines of liquid spray coating systems, spincoat systems, dipcoat systems and UV cure systems and ionic contamination Tester. www.sccsoatings.com

HG Laser – China
HG Laser is the main subsidiary company of Huagongtech Co., Ltd set up in 1999, located in Wuhan, China. HG Laser is leading company manufacturing Laser De-Panelling machines for PCBs & Laser marking machines for PCBAs, Metals (Stainless Steel, Aluminium), Plastics (ABS, Polymer), etc. http://en.hglaser.com/

Spectral Dynamics – USA
Spectral Dynamics, Inc. founded in 1961, Headquartered in San Jose, is a leading worldwide supplier of systems and software for vibration testing, structural dynamics, and acoustic analysis. Spectral Dynamics products are used for design verification, product testing and process improvement by manufacturers of all types of electronic and mechanical products. Spectral Dynamic offer a broad range of Electrodynamic shaker systems, Head expanders, Combo base slip tables and fixtures.

www.spectraldynamics.com

TYRON Engineering – USA
Penn engineering are the founders and the global leaders in self clinch fastening technology and have a wide spread dealer network in more than 30 countries serving industries from various segments like telecom, computers, medical equipments, automotive, machineines and equipments.

www.pemnet.com

Teradyne Inc. – USA
Started in 1960’s, Teradyne Inc - USA is a leading manufacturer of In-circuit Tester worldwide, with its off line & in Line In Circuit Tester and with few 100 test points to 15,000 test points. Teradyne continues to deliver competitive advantage to the world’s leading electronics companies with its three major business units: Semiconductor Test, System Test, and Wireless Test. www.teradyne.com

Takaya Corp. – Japan
The first Takaya flying probe tester, introduced in 1986, was founded on a very simple principle—to provide a fast, easy to use, and dependable fixtureless tester for the manufacturing world. Now in its 6th generation, the Takaya flying probe tester continues to remain the #1 name and choice with the leading manufacturing companies around the world. www.takaya.co.jp

JTAG Technologies – The Netherlands
JTAG Technologies was formed in 1993, JTAG Technologies specializes in solving physical access problems involved in testing and in system programming printed circuit boards. This is done with technology based on the boundary-scan technique: IEEE Standard 1149.1. www.jtag.com

Data I/O Corporation – USA
Data I/O is the world’s leading provider of manual and automated device programming systems for Flash, Microcontroller and Logic devices.

www.dataio.com

ETSP Co. Ltd. – Korea
ETSP Co. Ltd. provides wide range of Environmental Test Chambers which meet highly specialized customers request both standard & Custom designed chambers, viz. Temp, Humidity, Thermal Shock, Walk-In, Salt Spray, Altitude, Rain, Dust, ESS, HAST, PCT, UV Chambers. www.etsp.co.kr

Martin – Germany
Martin GmbH is a world leader in manufacturing BGA Rework Stations. Martin was founded in 1982 in Munich Germany. Martin products deliver the key benefits needed for reworking advanced devices such as precise temperature, hybrid heating technology, outstanding placement accuracy and very large board handling capacity. In 2009 Martin GmbH, Germany (www.martin-smt.de) acquired Martin GmbH, & thus expanded their product range with manual and semi automatic rework systems.

www.martin-smt.de

JBC Soldering S.L. – Spain
More than 80 years of specialized experience have placed JBC at the technological forefront of manufacturing, rework of soldering equipment and tools in the electronics. JBC has revolutionized the hand soldering process by providing controlled power and clean solder joints. JBC tools can efficiently solder at 350°C, competitors tools can’t. www.jbctools.com
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### Vision

INETest aspires to be the leading sales & solutions channel to the manufacturing & service industry, providing diverse technical products & solutions.

### Mission

We offer innovative and integrated solutions to our customers and business partners, enabling their goals optimally.
**In-Circuit Tester (ICT)**

Started in 1960's, Teradyne introduced their first integrated circuit tester (J259) in 1966. It was the first tester to use a minicomputer to control a series of test steps, and it launched the automatic test equipment (ATE) industry. Today Teradyne continues to deliver competitive advantage to the world's leading electronics companies with its three major business units: Semiconductor Test, System Test, and Wireless Test.

**TestStation: Fastest In-Circuit Test Platform:**

TestStation in-circuit test systems provide full structural and functional coverage for a wide range of manufacturing, component, process, and performance defects for high-performance analog, digital, and mixed-signal devices used on modern PCBs.

TestStation models can be configured specifically for the following end-product testing:

- **High-Reliability Products**
  Automotive and Industrial applications that require extreme fault detection capability, and parts per-billion defect rates for the end-consumer

- **High-Complexity Products**
  Network, Computing, and Communications applications tests that incorporate large numbers of devices and require capability beyond 15,000 test points

- **High-Volume Products**
  Consumer and Wireless applications that require extremely low cost of test and no-touch manufacturing solutions

TestStation is a scalable design that allows users to easily configure size, pin count, instrumentation, automation options, and other test features to match your specific test needs and satisfy throughput, and budget requirements.

**Teradyne ICT Test Capabilities**

- Shorts & Opens
- Unpowered Analog Tests
- Vectorless Tests
- Powered Analog
- Powered Functional
- Boundary Scan
- Basic Digital
- Powered Vectorless Test
- Advanced Digital
- Cluster Functional Testing
- In-System Programming
- Parametric Verification

**TESTSTATION SYSTEM IS A SCALABLE PLATFORM THAT SOLVES DIVERSE MANUFACTURING REQUIREMENTS**
TestStation Multisite - Offline & In-Line System:

- Supports up to 5 card slots per site
- Designed to easily integrate within the TestStation Automated Inline Handler or other industry-leading automation equipment suppliers
- Multi-Site parallel test capability for the fastest inline production speeds
- Pin counts up to 2560 for single site configurations or 5120 for dual site configurations

TestStation Single Site System

Features
- Satisfies low and high pin count applications
- Configurable with analog only, pure pin, hybrid, and high density pin cards
- Comes equipped with built-in features for testing large, complex, and heavily-integrated PCBs.
- System Frequency/Time Measurement (SFTM)
- Framescan FX Vectorless Test
- High performance UltraPin II Digital Driver and Sensors Pin cards
- Independent Clock Drive, Clock Sense, and Trigger (CST)
- TSLH supports max pin counts up to 4,096
- TSLX/LX2 supports pin count range from 256 to 15,360
X-ray Inspection System

YXLON International a company of COMET Group is worldwide leading manufacturing and supplier of Industrial X-ray Systems and Industrial Computed Tomography (CT) systems for non destructive testing of materials (NDT). YXLON offers Application and Testing services with customer support worldwide.

Y. Cougar
- Detail detectability <1 µm
- 25 – 160 kV, 0.01 – 1 mA, 10 W Target power; 64 Watt Tube power
- Max. Target Power: 15W (Optional)
- Standard 5 axis manipulation system
- Optional 8 axis system
- True-X-ray Intensity Control (TXI) for steady long-term X-ray intensity
- High resolution digital flat panel detector “Panel 1308 High Speed”
- +/- 70° oblique viewing by tilting the detector, 140° in tilting total
- Geometric Magnification 2,000X
- Total Magnification 17,500 X
- Frame Rate: 10 FPS, 30 FPS & 60 FPS
- Max. sample size: 440 mm x 550 mm (17” x 21”)
- Max. inspection area: 310 mm x 310 mm (12” x 12”)
- Software modules available for automatic inspection of BGAs and die-attach
- Micro 3D Slice (Optional)
- Oil free vacuum pump

Y. Cheetah
- Detail detectability < 500 nm & < 350 nm
- 25 – 160 kV, 0.01 – 1 mA, 10 W Target power; 64 Watt Tube power
- Max. Target Power: 15W (Optional)
- Standard 5 axis manipulation system
- Optional 8 axis system
- True-X-ray Intensity Control (TXI) for steady long-term X-ray intensity
- High resolution digital flat panel detector “Panel 1308 High Speed”
- +/- 70° oblique viewing by tilting the detector, 140° in tilting total
- Geometric Magnification 2,000X & 3,000 X
- Total Magnification 17,500X & 25,500X
- Frame Rate: 30 FPS & 60 FPS
- Max. sample size: 800 mm x 500 mm (31” x 19”)
- Max. inspection area: 460 mm x 410 mm (18” x 16”)
- Software modules available for automatic inspection of BGAs and die-attach
- Micro 3D Slice (Optional)
- Oil free vacuum pump
Automated Optical Inspection System (AOI)

SAKI Corporation was established in 1994, Japan. SAKI Corporation designs and manufactures both 2D and 3D Automated Optical Inspection (AOI) systems for Printed Circuit Board (PCB) production. SAKI Machines can inspect all size components such as 01005, 0201 and 0402s and packages like BGAs, CSPs, LGAs, PoPs, and QFNs for applications that include smart phones, tablet terminals, laptops, cloud servers, base stations, facility equipment, navigation systems, on-vehicle modules, and aircraft devices.

Inline High Resolution and High Speed Automated Optical Inspection System:

- BF-Frontier II provide accurate and stable inspection results.
- With a superior resolution of 18µm and scanning line color CCD camera
- Solder fillets on components as small as the high density mounted 0201(0603) chip, as well as IC’s with 0.4mm pitch lead are easily inspected and analyzed.
- Saki’s original alternate scanning system that captures several lighting images in one scanning.
- Newly developed color capturing system enable to make scanning speed twice faster than previous model.
- Only 10 seconds to capture L-size board [460x500mm]. Overall tact time including inspection also become shortened dramatically.

Benchtop High Resolution, High Speed Automated Optical Inspection System

Saki new desktop AOI, BF-Comet C.

BF-Comet C is designed for high density mounting PCB with 01005(0402) chips. Bench Top Model BF-Comet C supports PCB Size : 50*50 mm – 250*330 mm with the Resolution of 18µm. SAKI is having one of the fastest AOIs in the Inspection Field with Tact Time of approx. 15.5 sec and Image Scanning can be done within approx. 8 sec for this model.

Dual Lane High Resolution and High Speed Automated Optical Inspection System

- BF-10D is a dual lane automated optical inspection system with Saki’s original alternate scanning system which provides high throughput.
- Additionally, programming has been greatly improved, and brings enhanced productivity.
- Scan time is 30% faster. Operating system is 64 bit with multicore processing, enable faster throughput and at the same time, compatible with the conventional systems.
- Tact time is about 16 seconds for two M-size 250 x 330 mm (10 x 13 in.) boards
PCB De-paneling System

Aurotek Corporation was founded in 1980, Taiwan. Aurotek offers a wide Variety of PCB De-Paneling systems like In Line – Dual Stage and Single Stage Systems. Aurotek is one stop solution provider for PCB Routing Solutions in Segments Automotive, EMS, LED, Telecom, over the decades.

γ - S168CE / γ - S330L

Features

- Fast and Precise: The max. running speed can reach 750mm/sec & 1000mm/sec without comprising its high precision
- Fiducial recognition: The Machine is equipped with fiducial recognition for high accuracy
- Easy and Accurate: An assistant CCD camera set will zoom in PCB 10 times and show a cross scale and cutting range on the screen
- Route Duplication: User only needs to set 2 reference point to duplicate a same route
- Routing Bit Sectioning: Setting a distance and have the routing bit shift up and shift down in order to multiply the life of Routing bit
- 2 way Sliding Work Exchanger: Providing a simultaneously in and out working space to limit the idle time. Left and Right table can be loaded with 2 different programs allowing mix model operations
- Safety area sensor
- Bit break detection

γ - S330 IN-LINE SR/SL

New In – Line PCB Separator

Additional Features of S330 In-Line SR/SL

- Fully loading / unloading automatic processing in line machine
- High Speed Precision
- Touch screen Man machine Interface
- High C/P Values
- Safety Door Designs assures operator's safety and provides 7 axes motor system
**Stencil and PCBA cleaning solutions**

PBT Works s.r.o was founded in 1992, Czech Republic is a leader in cleaning solutions. PBT offers products includes Stencil Cleaning, PCBA cleaning, Misprint Cleaning, Pallet Cleaning, Parts Cleaning catering to various industries such as Automotive, Aerospace, Electronics and Semiconductor.

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**SUPER SWASH**

DIRECT SPRAY AGAINST SURFACE TECHNOLOGY FOR PCBA & STENCIL CLEANING

**APPLICATION**
- Universal cleaning solution
- (PCBA, misprint, stencil in one system)
- Designed to clean difficult Hi-density PCBA, with low standoff components
- Cleaning before wire bonding
- High throughput & low process cost stencil cleaning
- Excellent PUMP PRINT® stencil cleaning
- Solder pallet cleaning

**UNIQUE FEATURES**
- 4 step process - each split to 5 substeps
- Easy process optimization due to glass door
- Efficient air knife for drip-off and fast drying
- DI water reclaim plant is integrated
- Optional selective single-side cleaning

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**COMPACLEAN**

HIGH PRESSURE/ HIGH VOLUME PCBA CLEANING SYSTEM

**APPLICATION**
- High capacity & low process cost PCBA cleaning
- Solder pallet cleaning

**UNIQUE FEATURES**
- Fixed nozzle system
- Basket oscillation
- Uniform covering of cleaned area
- All processes totally separated
- Closed DI water loops available
- 4 step process - each split to 5 substeps

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**STENCIL CLEAN MINI SWASH**

AUTOMATIC CLEANING SYSTEM FOR STENCILS AND PCB

**APPLICATION**
- Price-effective & reliable stencil cleaning
- Very suitable also for PUMP PRINT® stencil
- Effective for PCBA cleaning
- Very competitive price/performance level

**UNIQUE FEATURES**
- Double motor driven manifold with liquid and air knife system to ensure direct effect
- Synchronous spraying and drying from both sides
- This prevents stencil from damaging
- Rinsing by cleaner, water or DI water
- Controlled drag-out compensation
- Heating in cleaning medium
- Anticollision system
- Easy setting & operation
BGA Rework System

Finetech is a 23 year old company founded in Berlin Germany. Finetech manufactures innovative, high-accuracy equipment for leading micro assembly and rework challenges. The FINEPLACER® systems are designed to be modular for maximum process flexibility and come in manual, semi-automatic or automatic configurations.

FINEPLACER COREPLUS

The FINEPLACER® coreplus is an all-round hot air rework station for electronic components and assemblies. The complete rework cycle, including desoldering and soldering the component, residual solder removal and reballing can be performed on the same compact rework system. The spectrum of compatible surface-mount devices ranges from very small (01005) to large components (BGA).

Highlights
- Components from 0.125 mm x 0.125 mm to 90 mm x 90 mm
- JEDEC/IPC conform thermal management with top and bottom heating systems
- Automated pick-up and touch-down with force measuring
- Automated processes
- Process traceability with Smartdent
- Intuitive user experience with SmartControl
- Compact machine design

FINEPLACER MICRO RS

The FINEPLACER® micro rs is an enhanced hot air rework station for assembly and rework of all standard types of SMD components. A high level of process modularity allows all rework process steps within one system. The system is at home in production environments, R&D, process development and prototyping.

Features
- Integrated Process Management (IPM)
- Modular design
- Real time process observation camera
- Adaptive process library
- Process transfer from system to system

Application
Soldering of: BGA, µBGA/CSP, QFN, DFN, PoP, QFP, PGA, SON, Small passives down to 0201, RF shields, RF frames, Connectors, sockets, Sub assemblies, daughter boards, Flipchip (C4), (PiP) Pin in Paste, (THR) Through Hole Reflow and Single ball rework
Martin BGA Rework Station

Bernhard Martin started the company in 1982 in Germany. Martin is one of the leading manufacturer of BGA Rework Stations. They have BGA Rework Station for small Mobile PCBs to very big Telecom PCBs. In 2009 FINETECH GmbH, Berlin acquired Martin GmbH. Together they have a wide range of Rework Stations for a wide range of applications.

**Expert 10.6 HXXV BGA Rework Station**

Features

- Maximum PCB Size: 530x710mm
- Motorised XYZ Axes
- Automated Pick-up, alignment and placement.
- Alignment is with AVP (Advanced Vision Placement) Software
- Bottom Heater: 5000 – 10,000 W, 9 IR Lamps

**Technical Specifications**

- Component Sizes: 1x0.5m² - 65x85m²
- 5 Mega Pixel CMOS Camera
- LED Ring Light Illumination
- IR Sensor
- Auto Lens Detection
- Resolution Motion System: 0.001mm
- Flux Dipping
- Solder Paste Printing

**Expert 10.6 Series BGA Rework Stations**

- EXPERT 10.6 HXXV 530x710mm², max. 10,000W
- EXPERT 10.6 HXV 480x480mm², max. 5,500W
- EXPERT 10.6 HV 305x305mm², max. 3,000W

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**Expert 10.6 HXXV BGA Rework Station**

- Hybrid Bottom Heater
- Hot Air+IR Heater
- Clear Vision
- New APP Tools
- Automatic Alignment
- Residual Solder Removal
- Dispensing
Specialty Coating System

The Global Leader in Specialized Coating Solutions

Specialty Coating Systems is the global leader in delivering innovative coating solutions for advanced technologies. For more than three decades, customers have turned to SCS for the planning, development, engineering and application of thin-film Parylene polymer coatings to their critical components. In addition to coating services, SCS also designs and manufactures industry-leading coating, curing and testing equipment. Being an exclusive distributor of SCS iNETest is very glad to introduce most Competitive Coating Solution in India.

SCS Precisioncoat V (Conformal Coating Systems)

The SCS Precisioncoat spray and dispense system precisely applies 100% solids, solvent-based and water-based coatings, such as photo-resists, acrylics, adhesives, solder mask and antimicrobial coatings, to virtually any surface or substrate, with maximum accuracy. The Precisioncoat's standard configuration applies coatings with a three-axes system with an accuracy of 0.001 inches. Fourth and fifth axes can be added for tilt and rotate functionality. The Precisioncoat is controlled by proprietary software on a operating system and features convenient offline Windows®. The optional fourth and fifth axes offer tilt and rotation programming and file backup, for spray and dispense application. Optional features, including programmable tilt and rotate, fiducial recognition, needle calibration and barcode reader capability, are available to maximize efficiency and meet any production requirement. The System is SMEMA Compatible & has safety interlocks for Spray booth door & Exhaust.

Common coating applications include:
- Circuit Board assemblies
- Semiconductors
- Fuel cells
- Gasketing
- MEMS
- Wafers
- Photovoltaic arrays

Ionic Contamination Tester

SCS Ionograph SMD V & BT Series

SCS Ionographs® are designed for fast and accurate ionic contamination cleanliness testing. Each module uses an ultra-pure alcohol/water extraction media and a “dynamic method” to test product samples quickly and non-destructively. The family of test equipment offers a full range of capacities and controls to fit the needs of any lab or manufacturer. For those performing ionic contamination testing using “static test” methodology, the SCS Omegameter is the industry standard and provides effective and practical quality assurance for commercial cleanliness as well as accurate, repeatable and rapid results.

Labcoter 2 Parylene Deposition System (PDS 2010)

For Parylene laboratory research, applications development and testing, the SCS Labcoter 2 Parylene Deposition System (PDS 2010) performs reliable and repeatable application of SCS Parylene conformal coatings. The portable Labcoter 2 applies Parylene coatings. The portable Labcoter 2 applies Parylene coatings to components such as circuit boards, sensors, wafers, medical devices, MEMS and elastomeric components for research, development and repairs.
Takaya Corporation: Flying Probe Tester APT-1400F/ SL

The APT-1400F is a next-generation flying probe test system which has unprecedented performance in terms of test speed, positioning accuracy and test coverage, thus making APT-1400F Ultrafast machine & capable of having the probes contact to extremely small test pads deployed on the latest SMT boards with a high degree of accuracy.

The APT-1400F has no compromise between speed, reliability and long life. The design of the XY table has been completely reworked and optimally adapted to the high traversing speed of the test needles as well as the new mechanical design of the axes. An outstanding measuring unit and numerous innovative test algorithms enable a significant increase in the test coverage on your modules.

In addition, the APT-1400F is provided with the breakthrough 4-heads & 6-flying probes and additional sensors i.e.,
- 4 Tilted probes
- 2 Vertical probes
- 2 IC open sensors
- 2 LED color test sensors

MEASURING DEVICE
- 16-bit DAC / ADC measuring device including 3 x DC 4-quadrant voltage supplies
- R, L, C measurements
- Kelvin measurements & Guard functions
- Transistors / FET / Optocoupler / Relay / etc.
- DC / AC current and voltage measurements
- Voltage regulators / operational amplifiers / transformers
- Frequency measurements & AC signal generator
- Cluster tests
- IC Open Sensor & LED tests (color and intensity)
- Integration of external power supplies and test systems (Boundary Scan, In System Programming, etc.)

DRIVE TECHNOLOGY AND MECHANICS
- 25% more accurate, smallest contact area 60μm
- New design of the axes and the XY table in granite
- Soft Touch Control (Attenuating contact Pressure of Probes)
- Transport system with automatic width adjustment and SM

OPTICAL SYSTEM
- High density CCD color camera
- Detection of reverse polarity, missing, offset or incorrect components
- Color recognition of components
- Color Real Map Function for graphical view of assemblies and contact points
Device Programming Solutions for Global Market

Data I/O is the world’s leading provider of manual and automated security provisioning and device programming systems for Flash, Microcontroller and Logic devices. Since 1972 Data I/O has developed innovative solutions to enable the design and manufacture of electronic products for automotive, Internet-of-Things, medical, wireless, consumer electronics, industrial controls and other markets. Today customers use Data I/O’s security provisioning and programming solutions to reliably, securely and cost-effectively bring innovative new products to life.

Data I/O with headquarters in Redmond, Washington and offices located in Shanghai, China and Munich, Germany, is the only true global programming solutions provider offering local service and engineering support 24/7.

PSV Family—Automated off-line programming solutions

- Scalable up to 24 programmers (96 FC3 sockets / 112 LumenX sockets)
- Concurrently installed media options for zero mechanical changeover
  - Tape-in / Tape-out
  - Static tray-in/tray-out
  - Automatic tray feeder
  - Tube-in/Tube-out
  - Fiber-laser marker
  - 3D co-planarity
  - Small parts handling down to 1.5mm x 1.5mm
  - Large parts handling up to 42.5mm x 42.5mm

FlashPAK III – Desktop Manual Gang Programmer

- Programs up to 4 devices in parallel
- Programs at the speed, Read and write speeds > 20MBytes/s, Support for files > 16GBBytes
- Ethernet connectivity (100 Base-T)
- Stand alone operation, using Compact Flash Card
- TLWIN for easy Job setup and process control

RoadRunner 3: Just-in-time Inline Programming

- In-line device programming solution
- Attaches directly to SMT placement systems, the RoadRunner family supports most major SMT machines.
- 100% good/tested parts passed to mounter for placement
- Lean manufacturing – no offline preprogrammed inventory
- Optimizes testers by removing programming burden
- FlashCORE III technology – fastest programming possible
- Network addressable - Remote monitoring, IP security
- Proprietary socket modules for highest quality yield available
- Optimizes testers by removing programming burden
- FlashCORE III technology – fastest programming possible
- Network addressable - Remote monitoring, IP security
- Proprietary socket modules for highest quality yield available

Universal Device Support

- Flash Memory (NOR, NAND, MCP, MMC, e.MMC, SD, MovNAND, OneNAND, iNAND, Serial Flash, EEPROM, EPROM and more), Microcontrollers and Logic devices ( CPLD, FPGA’s, PLD’s and more)

Package Support

- PLCC, SOIC, SON, WSON, SSOP, CSP, BGA, uBGA and FPGA, QFP, TQFP, TSOP, PoP, DIP and more

Socket Adapters Support

- Standard Socket Adapters
- Receptacle Socket Adapters
- HIC (High Insertion Count) Socket Adapters

Device Testing

- Continuity, checksum, blank check, mis-insertion test, verify & backwards device.
Boundary Scan Testing

JTAG Technologies, The Netherlands based company was formed in 1993. Since then they have lived and breathed the technology that has revolutionised the manufacture and test of digital and mixed signal PCBs the world over. JTAG Technologies remain the number one dedicated boundary-scan company. Through network of sales offices and in association with valued distributors have been able to solve thousands of board test problems by actively engaging with customers & world-wide support network.

Why boundary-scan?

Boundary-scan solves circuit access problems that arise from the use of advanced IC packages, such as ball-grid arrays (BGAs). The technique, based on the industry-standard IEEE 1149.1 specification, enables rapid precise testing and high-speed in-system programming (ISP) of densely-packed printed circuit boards. Boundary-scan’s effectiveness is proven in thousands of applications across every segment of the electronics industry.

The power-full benefits
- Shorter time-to-market
- Faster, automated generation of test vectors and ISP files
- Easier troubleshooting of structural faults
- Simpler flow for PLD and flash programming

JTAG ProVision

Test Development Software

Go from design to ready-to-run, fast and thoroughly. With JTAG ProVision, you don’t have to be a JTAG expert to prepare top-notch tests and ISP routines. ProVision’s wizard automates the import of netlists from virtually any CAD system and guides you step-by-step. No need to build the scan chains: JTAG ProVision does it for you.

Want to partition the chains for top system performance? It’s done, with JTAG ProVision. Use the built-in links to JTAG Visualizer™ and coverage analysis reports to optimize your design before layout. Then start testing.

JTAG ProVision

All Station

Controller Types:
JT3705/USB
JT37x7/TSI/PCI/RMI

Hardware

Rugged equipment, reliable operation

Boundary-scan test and programming applications are only as dependable as the hardware they run on. JTAG Technologies has the industry’s most reliable IEEE 1149.x controllers, specifically designed by us for high throughput and the best signal integrity. High-speed DataBlaster controllers are available in all of the popular formats (PCI, PCIe, PXI, USB, Ethernet, Firewire) and are performance-scalable. If economy is a priority, the Explorer controller with a USB interface is the ideal choice.

JT 5705 Mixed-Signal JTAG Tester
**Functional Test Solutions**

iNETest Technologies aims to provide the best & world class functional test solutions for Production and end-of-line functional test of electronic, Sensor and mechatronic devices.

Functional testing is a quality assurance process and a type of black box testing that bases its test cases on the specifications of the component under test. Functions are tested by feeding them input and examining the output.

Automatic or Automated Test Equipment (ATE) is any apparatus that performs tests on a device, known as the Device Under Test (DUT), Equipment Under Test (EUT) or Unit Under Test (UUT), using automation to quickly perform measurements and evaluate the test results. An ATE can be a simple computer controlled digital multimeter, or a complicated system containing dozens of complex test instruments (real or simulated electronic test equipment) capable of automatically testing and diagnosing faults in sophisticated electronic packaged parts.

**Fields of application addressed are**

1. Automatic Test Systems for ECU
2. End of line testers integrated in automatic assembly lines
3. Electronics for Automotive
   - Vision & Haptics
   - Powertrain
   - Infotainment System
4. EMC Test Load Box
5. Automatic Test Equipment for Telematics System
6. Electronics and Mechatronics functional test benches
7. Sensor’s programming and calibration stations
8. Cluster’s needle insertion machines
9. Smart keys test and data programming
10. Automatic Test System for Telematics System

**Electronics for Automotive - Vision & Haptics**
Test to perform Functional test system for Infotainment component,
Electrical tests, Test interface memory cards, Buttons Test, Knobs Test, CD insertion test

Tests performed are -Functional test system for Infotainment cluster,
Electrical tests, Vision tests, Display test, Symbols, logos, printings verification, LED color test, LED light intensity test.

**Electronics for Automotive – Powertrain**
Control Unit Test System to perform Simulation of the sensors that are connected to the ECU,
Simulation of the digital signals that simulates the engine synchronism (eg. Crankshaft, camshaft etc.), Fault detectors, Fault detector of electronic power supply, Unit under Test (UUT) communications test.
Inverter functional tests including a real load, Over Voltage Inverter functional test, Under Voltage Inverter functional test, DC/DC Functional test, over Voltage DC/DC test, under Voltage DC/DC functional test.

**Electronics for Automotive – Infotainment**
The equipment is able to verify the functionality of the navigation and infotainment systems:
Check of the signal transmission and reception of: Bluetooth, GSM, Radio Signal, WiMax, WiFi, RDS, Sirius, Audio, Dab Daq.
ICT Fixture

We offer complete line of ICT / ATE test fixtures and program development for Teradyne TestStation, Spectrum 8862/52, GenRad, Agilent i3070 & i1000D ICT, MDA tester and also specialise in custom mechanical fixtures along with Servo motor and Pneumatic activation. With more than 10 years of fixturing experience, iNETest strives to deliver high end fixture with many advance test solution embedded like FCT during ICT, Parallel Digital contact testing, dual stage etc....

Test Technology Consultant services: Design for test and test nodes reduction


Probe Capability: 100 mils, 75 mils, 50 mils, 39mils

Programming Capability:

- Standard Programming
  - Pin Test
  - Open / Shorts testing
  - Standard Analog Test
  - Vectorless Test
  - Standard Digital Library Test
  - Powered Analog Test
  - Frequency Measurements
  - Measure Voltage
  - Polarity Test

- Advance Programming
  - Boundary Scan and Chain
  - ISP On-Board Programming
  - Flash, EEPROM, OTP, CPLD
  - MAC Address, Barcode Programming
  - Enhance Program Services
  - MCU Programming
  - Cluster Test
  - Test Node Reduction/Split Fixture Programming

Test Options:

- Vectorless test options
  - OpenXpress, Framescan FX
  - TestJet, VTEP
- LED color test
  - Smart FINN
  - Feasa Analyzer
  - Optimistic light probe
- Strain Gauge Test Report

ICT Projects (Application)

- Automotive Boards
- Network Products
- Aerospace Products
- Industrial Products
- Defence Products
- Test Instrumentation Products

Fixture Clamp options:

- Types of clamps
  - Mechanical hold down gate
  - Vacuum enclosed cover
  - Pneumatic top press

TERADYNE TSO Fixture with Top Cover
(2 up Dual Test Head, Bar code Scanner, Vacuum gauge)
Improve your product yield and reliability, throughout the product life cycle.

In today’s electronic design and manufacturing climate, there is an increasing emphasis to shorten time-to-market, improve product quality and reduce cost. The ability to verify that PCB designs have been developed with adequate DfT (design-for-test) in mind and determine the most effective test strategies based on accurate test coverage estimations, is crucial in improving competitive advantage, lowering cost and determining the quality of a product.

Test coverage metrics: PPVS devised by ASTER Technologies

The PPVS model defines the coverage balanced against the defect opportunities. So where there is a greater opportunity for defects occurring (such as a 100 pin BGA device), you need to have a greater level of test coverage than is required for a 2 pin resistor or capacitor.

This group of coverage facts can be further broken down, so that the Placement coverage is split out as checking the Presence and the Polarity of each device. The Material coverage value maps directly across as a Value coverage calculation. The Solder coverage remains the same. It is this PPVS coverage criteria that is used to calculate the coverage for every component within a board design.

Selection of Test Strategy

Define the manufacturing line; including a combination of assembly, inspection and test machines. This helps to Maximize test and inspection coverage by estimating coverage aligned to selected test strategies. Perform ‘what-if’ analysis to select the optimal test strategy, to achieve maximum coverage. Eliminate redundant test steps.

Test strategies includes: AOI, AXI, BST, ICT, FPT, Functional test.

Program Generation (Output Processors)

ASTER offers assembly, test & inspection program generation for assembly machine, in-circuit test (ICT), flying-probe, X-Ray, Automated Optical Inspection (AOI) and Boundary-Scan (BST) test, i.e. these programs can be generated automatically during test strategies simulation.

There are numbers of current assembly/test/inspection machines that ASTER have developed output processors for. For any non developed machine, ASTER is always willing to develop according to customer demand.

eDFT Analysis

- Provides an efficient method for ensuring a consistent and comprehensive eDFT analysis.
- Ensures that each board analysis is verified for adequate implementation of electrical DIT.
- Identify design & DIT violations early in the product life cycle so improvements can be implemented prior to committing to layout.
- Inadequate testability will lead to poor test coverage and an increased number of bad boards shipped to customer.
- Inadequate eDFT will place more emphasis on functional test to detect structural faults, leading to poor diagnostics & increased bone pile in rework.

QuadView - The next generation of board viewers

- PCB visualisation from native CAD
- Pin-level navigation
- Reconstruct schematic from net list
- Hot-link interaction with all documents
- Manufacturing & test document creation and management
- Cross-probing between all views and reports
Mobile Test Solutions

For more than 80 years, Rohde & Schwarz has stood for quality, precision and innovation in all fields of wireless communications. The privately owned company is strategically based on four pillars: test and measurement, broadcasting, secure communications, radiomonitoring and radiolocation. The electronics group, headquartered in Munich (Germany), has a global presence and is among the world market leaders in all of its business fields.

The R&S®CMW wideband radio communication tester offers universal, efficient test solutions for all modern cellular and non-cellular standards. The R&S®CMW is the world’s most widely used T&M platform for development, production and service. It meets all of the requirements for a state-of-the-heart wireless communication tester. The R&S®CMW can also emulate network operation under realistic conditions for protocol and RF tests.

Today's production lines for wireless devices require an optimal combination of flexibility, performance and capacity utilization. As the leading supplier of T&M equipment for the production of wireless devices, Rohde & Schwarz meets these stringent requirements with the R&S®CMW platform. The R&S®CMW500 wideband radio communication tester and the R&S®CMW100 communication manufacturing test set are ideal for use in production.

CMW500 Wideband Radio Communication Tester

The R&S®CMW protocol tester provides a complete protocol stack reference implementation of various cellular technologies such as LTE, WCDMA, TD-SCDMA, CDMA2000® and GSM. The protocol tester can be flexibly configured and tailored to create any wireless signaling test care for verification & integration of a wireless device protocol stack.

Advantages of CMW500

- Supports both signaling & non-signaling in one box
- Frequency range upgradeable up to 6GHz
- Supports all cellular & non-cellular technologies in one box
- CMWrun turnkey production software for both signaling and non-signaling
- CMWrun supports both cellular and non-cellular technologies
- CMWrun supports all the popular and widely used chipsets in the market
- Fully tested with chipset reference designs
- Fully optimised and customisable (testing configuration, frequencies, BW, etc)

CMW100 Communication manufacturing Test Set

The R&S®CMW100 can perform receiver and transmitter tests for cellular and non-cellular technologies. Like the R&S®CMW500, the R&S®CMW100 features high measurement accuracy. The R&S®CMW100 offers parallel testing and can be used to optimize test time and capacity utilization.

Key facts for the R&S®CMW100 communication manufacturing test set

- Turnkey R&S®CMWrun based production solution for different chipset suppliers
- Support EMTC and NB-IOT which is sub 6 Ghz technology for upcoming 5G technology
- Multitechnology solution
- Parallel testing on up to eight RF ports
- High measurement performance
- High measurement accuracy
- Support of a wide range of methods for reducing test time and maximizing capacity utilization
- Minimum space requirements and footprint

Different test modes

Single DUT  DL Broadcast  Interleaving
ETSP is one of the leading manufacturers of modular and cost-effective environment simulated equipments. These include Temperature & Humidity chamber, Hot & cold chambers, Walk-in chambers, Temperature ovens, Thermal shock chambers, Salt spray chamber, CCT chamber, HAST chamber, PCT chamber, Dust chamber, Rain chamber, UV chamber, Altitude chamber, etc.

TEMPERATURE & HUMIDITY CHAMBERS
- Temperature range: -40 to +180 °C & -70 to +180 °C (changeable according to user’s demand)
- Accuracy: Less than ±0.1 °C & ±1.5% RH
- Temperature uniformity: Less than ±0.5 °C
- Humidity range: 20% ~ 95% RH (10% ~ 98% RH is optional)
- Volume: 60L, 150L, 392L, 1000L
- Controller: Programmable type TFT color LCD 5.7” controller (Max 120 patterns, Max 1200 profile)

INDUSTRIAL OVEN
- Temperature range: RT to -250 °C & RT to -350 °C
- Temperature uniformity: Less than ±0.5 °C
- Temperature stability: Less than ±0.85 °C
- Temperature recovery within 5°C /min
- Volume: 96L, 175L, 275L, 600L, 1000L

THERMAL SHOCK CHAMBER
- Both Three Zone and Two Zone chambers are available.
- Temperature range: Cold zone RT to -75 °C, Hot zone RT to +200 °C (changeable according to user’s demand)
- Temperature stability: Less than ±0.5 °C
- Temperature uniformity: Less than ±1.5 °C
- Temperature recovery within 5 °C /min
- Volume: 27L, 64L, 125L, 500L, 1000L

WALK IN CHAMBER/ Solar module chamber
- Temperature range: -65 to +180 °C (Solid construction type)
- Temperature range: -40 to +70 °C (Panelized type)
- Temperature stability: Less than ±0.5 °C
- Temperature uniformity: Less than ±2 °C
- Heat up rate: More than 5 °C /min
- Cool down rate: 0.5~5 °C /min
- Volume: 8000L, 15000L, 26400L, 36000L

OTHER CHAMBERS
- SALT SPRAY CHAMBER
- ALTITUDE CHAMBER
- HAST CHAMBER
- DUST / RAIN CHAMBER
Laser Marking and Laser Cutting Machine

Wuhan HGLaser Engineering Co., Ltd is one of the largest laser equipment manufacturers in China. HGLASER, relying on HUST Background, set up in 1997, located in Wuhan, China. HGLASER is the 1st Chinese stock listing company in the laser industry, it's the core subsidiary company of HGTECH Group (Stock Code: 000988).

PCB LASER MARKING MACHINE

PCB Laser Marking Machine from HGLASER is designed for laser permanent marking Barcode, 2D Code, Characters, Graphic and other information on different kinds of Printed Circuit Board, to instead of Label Sticker or Ink Printing. Integrated with high-performance CO2/Fiber laser source, high-pixel CCD camera and micron-level motion module, PCB Laser Marking Series is competent to pre-marking automatic positioning, tiny or big dimension marking, and post-marking feedback reporting.

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>LCD 10C</th>
<th>LCD 20F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Type</td>
<td>CO₂ 10W</td>
<td>Fiber 20W</td>
</tr>
<tr>
<td>Laser Wavelength</td>
<td>10600 nm</td>
<td>1064 nm</td>
</tr>
<tr>
<td>Output Power</td>
<td>10W</td>
<td>20W</td>
</tr>
<tr>
<td>Marking Area</td>
<td>500mm*460 mm</td>
<td>500mm*460 mm</td>
</tr>
<tr>
<td>Repositioning Resolution</td>
<td>± 0.10 mm</td>
<td>± 0.10 mm</td>
</tr>
<tr>
<td>Min. Line Width</td>
<td>0.15 mm</td>
<td>0.10 mm</td>
</tr>
<tr>
<td>Min. Character Height</td>
<td>0.30 mm</td>
<td>0.20 mm</td>
</tr>
<tr>
<td>Positioning System</td>
<td>Paraxial CCD Camera</td>
<td>Paraxial CCD Camera</td>
</tr>
<tr>
<td>Control System</td>
<td>IPC</td>
<td>IPC</td>
</tr>
</tbody>
</table>

FPC LASER CUTTING MACHINE

Adopted with high-performance UV laser cold light source, high-precision CCD image positioning technology and self-developed visual laser control software, the Flexible PCB Laser Cutting Machine from HGLASER perfectly implements contour cutting, drilling and marking of FPC and PCB, and precision processing of composite membrane.

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Description</th>
<th>LBA12U</th>
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</thead>
<tbody>
<tr>
<td>Laser Type</td>
<td>UV</td>
</tr>
<tr>
<td>Laser Wavelength</td>
<td>355 nm</td>
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<tr>
<td>Output Power</td>
<td>12W</td>
</tr>
<tr>
<td>Scan Area Range</td>
<td>45 mm x 45 mm</td>
</tr>
<tr>
<td>Focus Spot Diameter</td>
<td>&lt;20µm</td>
</tr>
<tr>
<td>Cutting Area</td>
<td>400 mm x 330 mm</td>
</tr>
<tr>
<td>Cutting Thickness</td>
<td>&lt;1.0 mm</td>
</tr>
<tr>
<td>Minimum Line Width</td>
<td>20µm</td>
</tr>
<tr>
<td>Stitching Accuracy</td>
<td>±5µm</td>
</tr>
<tr>
<td>X-Y Table Repositioning Accuracy</td>
<td>±4µm</td>
</tr>
<tr>
<td>CCD Matching Accuracy</td>
<td>3µm</td>
</tr>
<tr>
<td>Paraxial Visual Positioning System</td>
<td>B/W CCD</td>
</tr>
<tr>
<td>Auto Focusing System</td>
<td>Z-axis Auto Focusing</td>
</tr>
<tr>
<td>X-Y Working Platform Motion System</td>
<td>AC Servo Motor</td>
</tr>
<tr>
<td>Base Platform</td>
<td>High-precision Marble Platform</td>
</tr>
</tbody>
</table>
Bench Top Laser Marking Machine

**LSF20 FIBER LASER MARKING MACHINE**
Fiber laser marking machine is replacing the lamp-pumped solid-state laser marking machine for high reliability, long life, high energy conversion rate, beam quality. It has been widely used in different fields like Electronics, Electrical products, Integrated Circuits, Hardware Tools, Automobile Parts, Plastic Products, Precision Equipment, etc.

**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>LSF20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Source</td>
<td>Fiber Laser</td>
</tr>
<tr>
<td>Wavelength</td>
<td>1064 nm</td>
</tr>
<tr>
<td>Output Power</td>
<td>20W</td>
</tr>
<tr>
<td>Focusing Lens</td>
<td>F=160 mm, marking scope 110mm x 110mm (Standard)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Air cooling</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Single phase, 220V, 1.5KVA</td>
</tr>
</tbody>
</table>

**LSC30 CO2 LASER MARKING MACHINE**
CO2 Laser Marking Machine is integrated with advanced galvo laser marking technology and famous CO2 laser source. It has high performance, mainly applied in marking non-metal materials.

**TECHNICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>LSC30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser Source</td>
<td>CO2 Laser</td>
</tr>
<tr>
<td>Wavelength</td>
<td>10640 nm</td>
</tr>
<tr>
<td>Output Power</td>
<td>30W</td>
</tr>
<tr>
<td>Focusing Lens</td>
<td>F=160 mm, marking scope 110mm x 110mm (Standard)</td>
</tr>
<tr>
<td>Cooling System</td>
<td>Air cooling</td>
</tr>
<tr>
<td>Power Supply</td>
<td>Single phase, 220V, 1.5KVA</td>
</tr>
</tbody>
</table>
YJ Link in Korea since its establishment in the 2003, had undertaken sufficient Factory Automation in Korea to make itself outstanding and be seen by its competitors. The Company comprises of five main teams who are well equipped with knowledge and the technical expertise for their respective scope of responsibilities. All of team is to provide total satisfaction to its customers, therefore endlessly upgrading itself in human resources and goods to demands and requirement from the accounts and market.

**Board Handling and Automation System Equipment**

YJ Link offers below products:
- Magazine Loader & Unloader Line (CE Type, Standard Type, Human Technology Type)
- Vacuum Loader,
- PCB Cleaner,
- Link Conveyor,
- Work Table,
- Gate & Shuttle Conveyor,
- Sliding conveyor,
- Inverter,
- Turning Conveyor
- Buffer Stacker
- NG Stacker
- Buffer stacker,
- Line up Conveyor,
- Wave Soldering IN/Out Feeder,
- Soldering Robot machine,
- Manual Insertion line,
- PCB Cutting machine,
- Label machine,
- Healing Conveyor,
- Case Mounter machine/Srew assy machine,
- Boat Loader & Un-loader (Lead Frame, BGA Board) in semiconductor production
- Laser Marking Machine
SPECTRAL DYNAMICS, INC. - USA

Spectral Dynamics, Inc., founded in 1961, headquartered in San Jose, is a worldwide leading supplier of complete VIBRATION AND SHOCK TEST equipment/solutions. Spectral Dynamics is a leading worldwide supplier of systems and software for vibration testing, structural dynamics (modal) and acoustic analysis.

**Air and Water Cooled Shakers**
- 5 KgF to 30,000 KgF ED Shakers available
- Large diameter, lightweight armature
- Double Field Coils (Upper and Lower) design
- Ultra-Compact energy efficiency amplifier
- Available combined with slip table
- Sine, Random, and Transient Testing
- Standard cooling blower silencer
- Standard Vertical and Horizontal Operation

**JAGUAR and PUMA Sine/Random/Shock/SOR/ROR Control System**
- 4 to 32 input channels with ICP
- Analysis to 40 kHz with 12,800 lines
- Scalable Hardware and Software architecture
- Powerful Multiple DSP architecture
- Comprehensive vibration test capabilities
- Extensive laboratory integration and test automation features

Seismic Simulation Table  Actuator with Table  Dynamic Actuators
Test and Measurement Equipments

FEASA ENTERPRISES, established in 1982 is an ISO 9001 approved, Ireland based company. In 2002 Feasa began the development of a range of Analyzers for testing the performance of LEDs for Color and Intensity (Brightness). Feasa Enterprise offers LED test products like Feasa LED Analyzers and Feasa LED Spectrometer.

Feasa LED Analyser:

The Feasa Analyser is an innovative solution for testing multiple LEDs simultaneously for Color and Brightness. These Analyzers are available in 3, 5, 10 and 20 Channel configurations.

Feasa have different LED Analyser models depending on applications, like to test high brightness LEDs for automotive Headlight testing and low brightness LEDs for automotive backlight, switches and panels.

FEASA LED Analyser Software

The Test Software provides an easy to use interface for multiple LED Analyser modules. It is a complete turnkey LED test system when used with a low cost test fixture and power supply. Key features of this Software include:

- Automatically generated test limits.
- Logging of all test results.
- Csv file output which can be used to generate graphs in Excel
- Ability to connect to multiple LED Analyzers. (Daisy Chain)
- Pass / Fail and yield calculations.
- Test RGB, Hue, Saturation, xy Chromaticity and Intensity automatically

Feasa Optical Heads

Feasa Optical Heads are special receptacles that improve the stability when testing the intensity of LEDs. The robust and compact design delivers consistent and repeatable readings with a <10% intensity change over a 1mm placement of the LED.

The Optical Head addresses the following issues:

- Compensation for LED Placement
- Repeatable Intensity Readings
- Reduced sensitivity to ambient light
Test and Measurement Equipments

MICROTEST CORPORATION founded in 1993 is an ISO-9001 certified company and holds more than 12 patents. They are well organized by a team of talented technical and managerial professionals. The goal of the company is to promote customers' high precision, automatic testing and measuring instruments and equipment in this rapidly growing electronics, information and communication industry.

LCR Meters

Specification:
- Test Frequency: 20 Hz to 20 KHz, 200 KHz, 1 MHz upto 30 MHz
- Accuracy: 0.1%, GPIB/ RS-232 Interface
- Comprehensive Measurement Functions:
  - Impendence IZI, Admittance IYI, Phase Angle (θ), Reactance (X), Conductance (G), Susceptance (B), Inductance (L), Capacitance (C), Quality Factor (Q)
  - Dissipation Factor (D), Resistance (DCR)

3-in-1 Transformer Test System

Flexible Combination possible between Hi-pot Tester + Transformer Analyzer + Impulse/ Surge Analyzer

Specification:
- ±0.1% Basic accuracy,
- Test frequency up to 1MHz
- Fast test speed, up to 30 Test item/sec,
- Open/Short & Correction function
- Full functions completed test
- RS-232 Interface & Easy to link with PC
- Ramp time settable, Programming sequence test
- Built-in PLC remote interface Link 7721 Impulse/Surge Tester
- Graphic LCD Display, RS-232 Interface for PC link function.

Hi-Pot Tester

Specification:
- AC Hi-Pot : 100V~5000V AC, 50/60Hz, 0.01~10mA
- DC Hi-Pot : 100V~6000V, 0.01~10mA
- Insulation : DC 100V~1000V, 10~9.999GΩ
- Arcing : 1~10mA
- 21 Channels Scan

Auto-discrimination

7640 Series Hi-Pot/Insulation Tester are high performance, fully automatic test system which integrates a precision hi-pot analyzer with a switch matrix. The system is able to discriminate the defective products even though connected to multiple samples.

Impedance Analyzer

Cable / Harness Tester

DC Bias Current Source

Also Deals in:
- Motor Stator Tester, Motor Armature Tester, LIPS, Inverter ATE, Power ATE,
- Accessories and Fixtures for all above instruments and equipments
A complete range of Soldering, Desoldering, SMT Rework, IR and Conventional Pre Heaters

More than 80 years of experience have placed JBC at the technological forefront of tools for soldering and rework operations in electronics. Innovation, efficiency and reliability are the key features of a wide range of products which have been designed to satisfy the most demanding requirements of professionals. All JBC products comply with EC regulations and ESD recommendations.

Soldering Desoldering SMT Rework Stations with JBC Net Software for a centralized control using internet

RMSE Rework Station:
Designed for Rework and Repair of Through hole and SMT boards

Nano Station:
NANO Station for Reworking of very small components like 0204, 01005 components

TOP Reasons to buy JBC
- Soldering at lower temperature
- Reed and Feed
- Fast Temperature Recovery of 2 sec.
- Tip life 5 times more than competitors
- Easy Cartridge extraction to save time
- 6 different types of tools
- Ergonomic tools
- Easy to use menu
- 400 different cartridge shapes
- Constant product innovation
- Communication with PC
- Sleep and Hibernation mode
Humidity Management Solutions (Dry Cabinets)

Ace Dragon Corporation Established in 1991 in Taiwan. Ace Dragon Corporation Headquartered in Hsinchu Science Park, Taiwan with R&D and manufacturing center. Ace dragon Corporation under the brand name Dr-Storage provides Total Humidity Control System.

Features:
- <1%RH Dry Cabinet
- 5%RH Dry Cabinet
- 20 - 50%RH Dry cabinet
- Baking 40°C Dry cabinet
- Sensor Look Centralized Monitoring System.
- Digital Nitrogen Controller, Alarm Hygrometer
- Data Logger & Reader
- Automatic Light which will be on when door is opened
- Camera Monitoring System
- Smart nitrogen cabinets
- Gloves dry box

200 Ltr  315 Ltr  400 Ltr  600 Ltr  1200 Ltr

Sliding doors with racks

Dry Cabinet for feeder
Quality Vision International

Quality Vision International (QVI®) is the world’s largest vision metrology company. The company designs and builds a complete line of dimensional measuring machines that combine optical, laser, and contact sensors into easy to use systems. QVI systems are used by manufacturers in over 75 countries around the world to measure and inspect their products for quality and process control.

OGP FLASH CNC 300

Smartscope Flash CNC 300 is a large capacity video Measuring system for dimensional verification of manufactured parts.

- Travel axis (XYZ) mm axis : (300 x 300 x 250) mm
- Measuring unit dimensions approx. (LWH): (80x85x80) cm
- Work table: Hardcoat anodized with fixture holes & Removable stage glass, 30 kg load capacity

View Pinnacle

High accuracy, small foot print non-contact metrology System

- Measuring range: (250 x 165 x 100) mm
- Stage Drive velocity: 400 mm/sec
- Load Capacity: 25 kg maximum payload

Itaca Flex Guage

An industrialized and rugged alternative to custom gauging solutions. Useful for precision parts such as gears, valves bodies, turbine blades, shafts, racks.

- Travel axis (XYZ) mm : (350 x 200 x 250) mm
- Touch trigger or scanning probe
Self Clinching fasteners
Leading the way in thin sheet fastening

PEM provides a complete range of self clinching fastener solutions for your thin sheet applications. They are the brand leaders and founder of this technology. We offer product ranges from nuts, standoffs, studs, panel fasteners, inserts, toolings & presses to install the fasteners.

WHY PEM?
- Better threading strength in sheet materials,
- Eliminate loose hardware
- Reduced installation time
- Eliminates spot welding operations
- Flush & cosmetic finish
- Eliminate Rework

PEM provides a complete range of self clinching fastener solutions for your thin sheet applications. They are the brand leaders and founder of this technology. We offer product ranges from nuts, standoffs, studs, panel fasteners, inserts, toolings & presses to install the fasteners.

Applications
- ATM's • Agriculture equipment • Air bags • Alarm systems • Appliances • Arcade games • Automotive • Avionics • Black boxes • Computers • Control panels • Copiers • Consumer electronics • Fabricated metal • Facsimile • Food processing • Gaming machines • Gas pumps • Hospital beds • Laser equipment • Medical equipment • Microwave equipment • Modems • Office furniture • Power supplies • Stereo equipment • Telecom • Telephone systems • Televisions • Test equipment • Truck roll-up doors • Vending machines • VCRs • Sheet-metal boxes • enclosures.

Series 2000
- Fully Automatic or Manual Press
- 400 – 16,000 lb of Ram Force
- 24" Throat Depth
- Touch Screen Control
- Light Stream™ Safety Feature
- Dual Language Available
- Wide Variety of Auto Tooling Option
- 110VAC / 80-120 psi Air Requirement

PEMSERTER presses are designed where applications requiring accuracy and reliability are key. From simple hand-held press equipment, to fully automated motion control presses, PEMSERTER presses continue to set the standard for performance and cost saving.

Series 4 Press

Features:
- Pneumatic power for speed, consistency and simple operation
- Ram Force : 1.8 to 53.4 kN/ 400 to 12000 lbs
- Pressure System Type : Pneumatic/ Lever
- Air Requirement : 6-7 Bar/ 90-100 psi
- Throat Depth : 45.7 cm/ 18 inches
ONE STOP SOLUTION
Board Inspection & Testing

Total Inspection & Testing Solution for the PCB Assembly Line

PBT Super Swash stencil / PCB Cleaning Machine

XRF X-Ray Inspection

Aurotek S-330W PCB Separator

Speciality Coating Systems

Environmental Testing

Spectral Dynamics Vibration Control System

Data IO Automated IC Programmer

Super Swash stencil / PCB Cleaning Machine

Teradyne In-Circuit Tester

JBC Soldering & Desoldering Stations

Eagle Test & Measurement Equipments

SAKI Automated Optical Inspection

Microtest Test & Measurement Equipments

Fuji NXT (Pick & Place)

Spectral Dynamics Vibration Control System

Data IO Automated IC Programmer

Test Strategy Experts!!

Speciality Coating Systems (SCS)

Precision (Conformal) Coating Systems

Aurotek S-330W PCB Separator

Functional Tester

HG Tech Laser Marking Machine

Takaya Functional Tester

Data IO Automated IC Programmer

Spectral Dynamics Vibration Control System

SAKI Automated Optical Inspection

JTAG Technologies Boundary Scan Testing

YXLON X-Ray Inspection

JTAG Technologies Boundary Scan Testing

TAKAYA Functional Tester

YXLON X-Ray Inspection

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