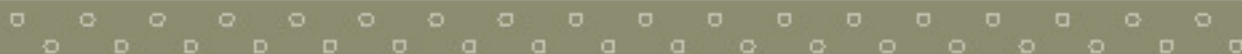




Board Level Total Solutions

Solving Tomorrow's Test Challenges Today





Around the world. Around the clock.

Wherever you are, ECT global locations are connected to provide around the world, around the clock engineering, test programming, manufacturing, installation, and service.

When your day ends in the Americas, we are continuing to work on your project in Asia to meet the time-to-market demands for your product. If your product test requirements change, we are there, on-site at your global CEM to facilitate your ECO process.

We take total ownership of your PCBA test requirements, communicating with you locally while managing your product through our global network.

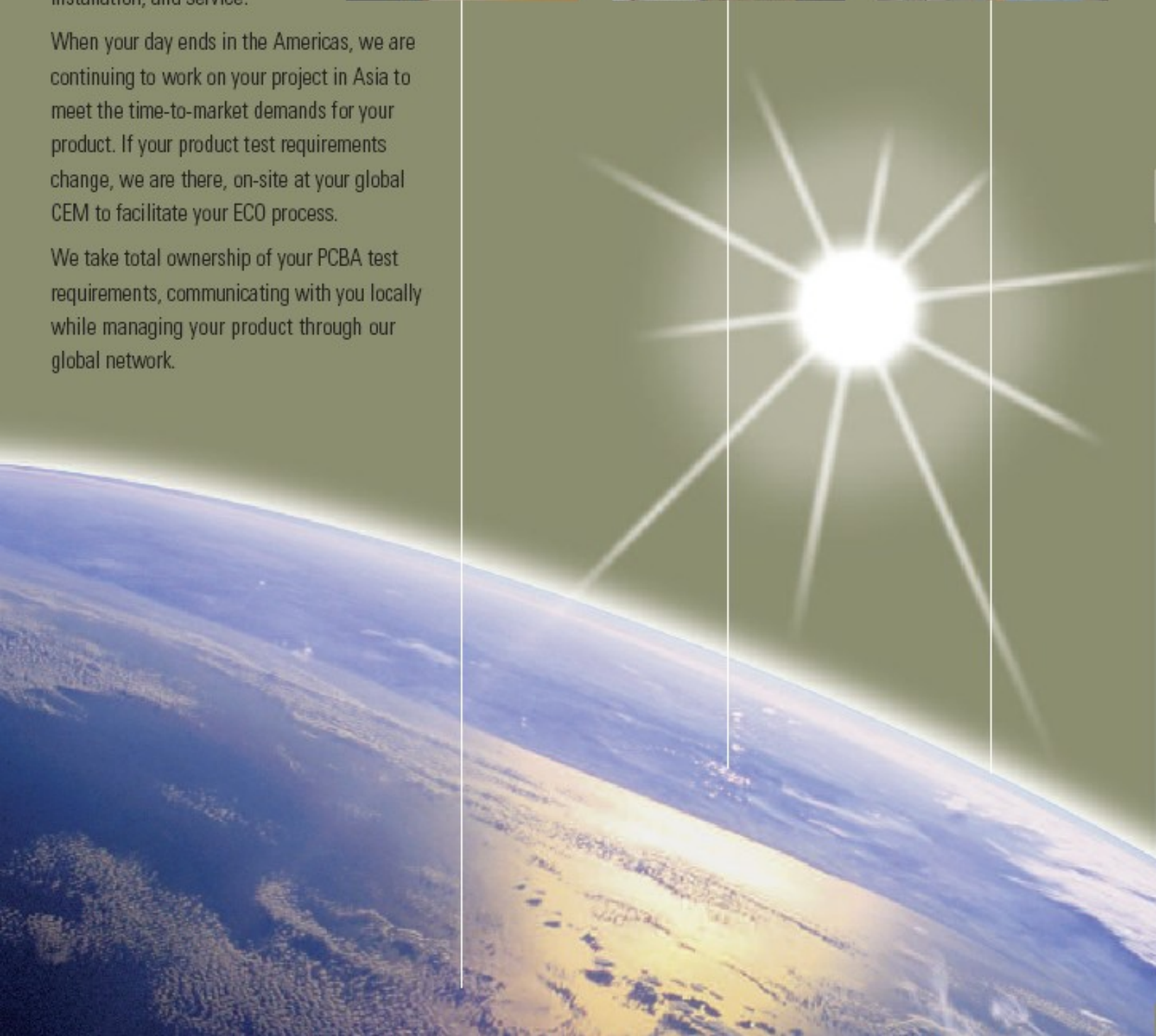
Design-for-Test seminars and real-time project reviews for testability analysis



Global test program development on Agilent, Genrad, and Teradyne platforms



Test program, test fixture debug and installation anywhere in the world



Board Level Total Solutions

ECT Total Solutions drives the standard for board level manufacturing test. We provide support for Supply Chain and Product/Project managers with sales, programming, engineering, manufacturing and service centers in the Americas, Europe, and Asia.

Our value to you:

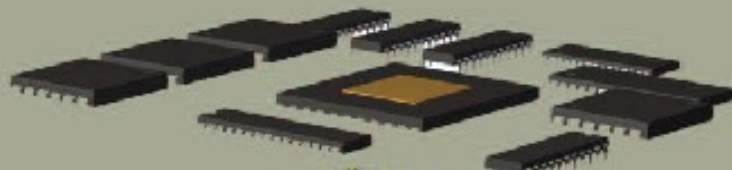
- Global footprint
- Project management
- Expert technical capabilities
- Reduction of risk



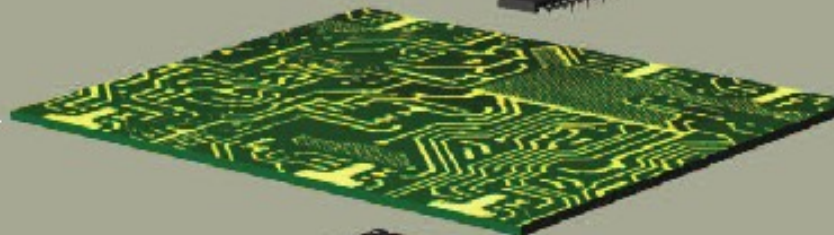
One Central Source for all of your test needs.

Everett Charles Technologies has been a leader in the development of advanced technology board test products since 1965. Production professionals worldwide look to ECT when testing the limits.

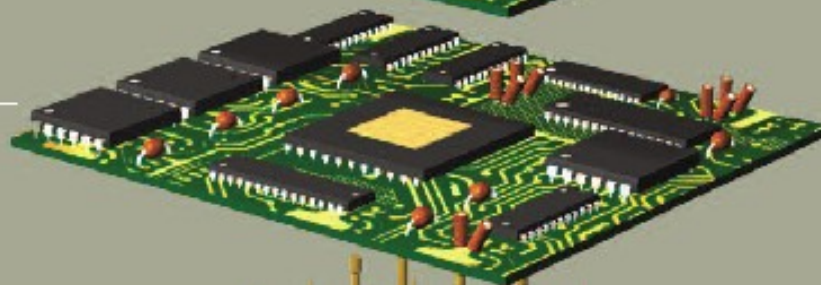
*Semiconductor Test Sockets,
Performance Boards, and IC
Handling Equipment*



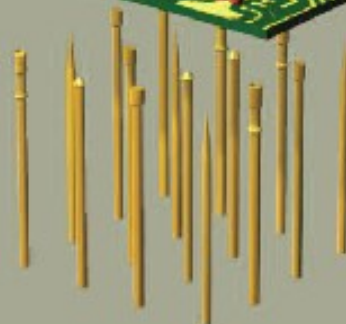
*Bareboard Test Equipment including atg
Flying Probers and Eliminator®, Bareboard
Test Fixtures including Valugrid®, and Zeus™*



*Loaded Board Total
Solutions: Test Programs
and Test Fixtures*



*Contact Products Test
Probes including
POGO® Contacts*





The ECT Daylight/Starlight Process

When you work with ECT, you have a partner throughout the product cycle. While other companies may offer only test programs or fixtures from only one or a few sites, ECT provides total solutions globally with test programming and fixture centers connected for continuous operation, day and night.



"X" MINIMUM
(Center of Pad
to Component
Max Boundary)

0.040 Between
and Component

PCB
Component

0.025 Over
Component Height

RESEARCH AND DESIGN

PRODUCT DEVELOPMENT

Design for Test



DFT Analysis Services

Involve ECT as early as possible in your design cycle to:

- Reduce cost
- Improve product quality
- Impact total cost of ownership

Design for Test services include:

- CAD, Schematic and BOM review
- Strategy recommendations
- Access analysis and test point reduction
- Testability analysis
- Test point size, spacing and proximity analysis
- ECT exclusive front-end tool

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A small segment of the in-depth DFT reports ECT can provide. We work with your design team to ensure the best possible test for your PCBA.

Design for Fixtures

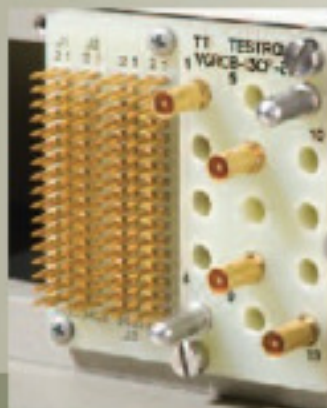


PCBA Design for Fixturing

ECT works with PCBA designers and test engineers to ensure that PCBA Designs can be properly fixtured for reliable probe contact and minimal board flex.

Functional Test Development

We can help determine the proper test equipment, software, mass interconnect interface, and fixture hardware to functionally test your product at loaded board, sub-assembly and/or final box stage.



VG Mass Interconnect products provide a common interface for your custom test rack to simplify functional test across your product line.



PROTOTYPE

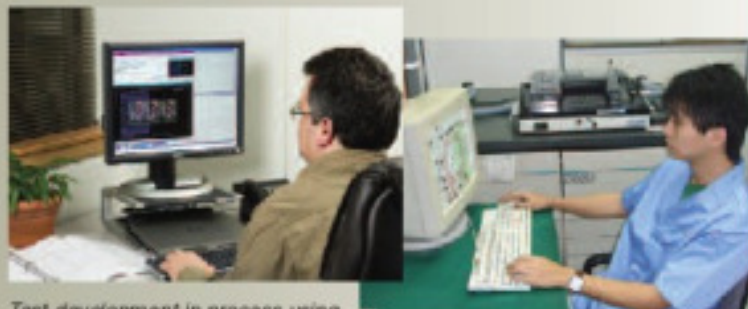
ICT Program Development

Test Programming

ECT is the global leader in solutions for complex, high technology products.

What you get:

- Full service with all device types and complexities
- Custom solutions
- Model development
- Specializing in all aspects of boundary scan
 - BSDL
 - Complex chains
 - Silicon Nails testing
- Static and variable device programming
 - FLASH, EPROM CPLD, PIC, Real Time Clock
- Creative solutions for switching power supplies
- High coverage solutions on limited access products
- ICT-based functional test solutions



Test development in process using world-class software tools. US and Asia ECT programming teams are connected to provide continuous development capability.

ICT Fixture Design

CAP™ (Computer Aided Processing)

What you get:

- Customized fixture specifications shared with all ECT sites
- Rules based materials software ensuring consistent global designs
- Engineering and manufacturing process control
- Global support network with a single point of contact

CAF™ (Computer Aided Fixturing)

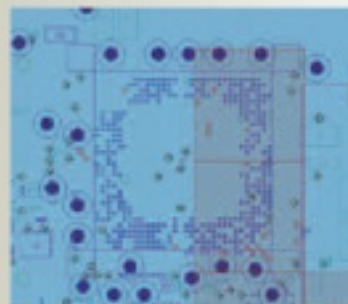
SmartFile™ processing and software automation using your CAD and AVL-BOM

What you get:

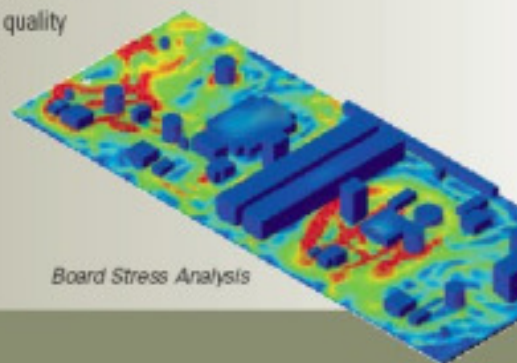
Automated and Accurate

- ZeroFlex™ routing
- TestJet processing
- Push Finger / Hard Stop locations
- Probe tip selection
- Collision check

These and more automation tools are designed to provide quality fixtures in the shortest time possible.



ECT Auto Push Finger and Hard Stop software highlights areas of the PCBA at risk for flex during test.



Board Stress Analysis



NEW PRODUCT INTRODUCTION - MANUFACTURING

ICT Fixture Kits and Options

The Right Fixture Solution

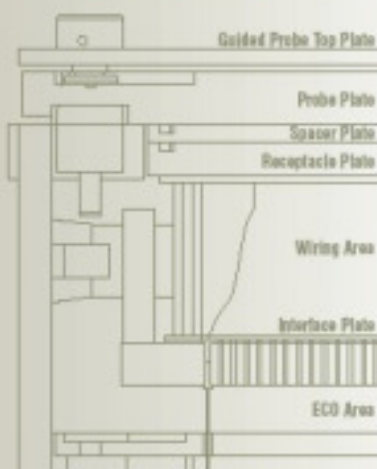
ECT can provide the right fixture solution based on the complexity of your PCBA, production volume, and custom requirements with vacuum, mechanical, or pneumatic applications.

LEDcheck™ and EC-1 Shortwire™

LEDcheck II for true color detection and EC-1 for reliably contacting 1mm test point centers are two of many custom fixture designs and options designed to reduce false failures and improve test yields on high-complexity printed circuit board assemblies.



LEDcheck II is a true color detection device for 2 LEDs with upgraded software/hardware and a reduced size.



EC-1 307x provides access for wiring ECOs.

FCT Fixture Design

Real-World Functionality

ECT leads the global market in functional test applications. What you get:

- An engineering team with 100+ years of experience
- Proven designs based on experience
- Portability to ECT Asia sites for duplication



We continue to add custom functional designs to our database from working with many of the major OEMs in the technology market, so chances are high that ECT may already have a proven design solution for your test challenge.

Custom functional applications are designed based on your test requirements. Mechanical drawings are provided for review and approval prior to manufacturing.





• MARKETING & SALES • • • DISTRIBUTION LOGISTICS • • WARRANTY & SUPPORT

Global Manufacturing



Global Support



World Class Manufacturing, Globally Deployed

We deploy state of the art equipment throughout the build cycle at all ECT sites, including precision drill equipment, automated socket loading, semi-automated wiring, and patented fixture verification equipment.

Fixture customizing sites in the US, Europe, and Asia work together using the same software tools and equipment to provide quality fixtures on time.



proworks™

ProWorks™ enables us to transfer complicated ICT and FCT fixture designs to any one of our global sites for replication.

Global Debug, Installation and Support

Test programs and fixtures

Our ownership:

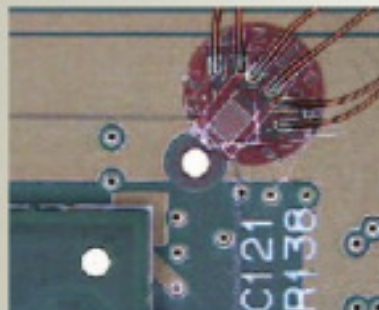
- Test program development
- Test fixture manufacturing
- Program and fixture installation
- Local support and service
- ECOs
- Maintenance and spare parts



ECT resources are located where you need them, when you need them.

Quality Control

Strain gage on demand is one of many examples of how ECT quality is built into every aspect of our business.



About ECT

The history of Everett Charles Technologies spans the entire history of ATE. With more than 75 patents registered since its inception in 1965, ECT has developed industry-standard products including signature POGO® spring contacts, EC-1, and LEDcheck. In 1996, ECT strengthened its leadership position, becoming a part of Dover Corporation's Technology Division, a confederation of high technology companies that are world leaders in their respective categories.

With the acquisitions of TTI Testron and APG Test Consultants, ECT continues to be a technology leader in test programming and fixtures.



www.ectinfo.com



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