



ABI Electronics

Test & Measurement Systems

EXTENDING THE LIFE OF YOUR PCBs SINCE 1983



WELCOME TO ABI

ABI Electronics offers unique time-saving and flexible products which are used by companies operating in a wide range of sectors. ABI's fully integrated hardware and software solutions allow our customers to take control over their electronic maintenance requirements, automate quality tests on new products and generate schematics for legacy equipment.



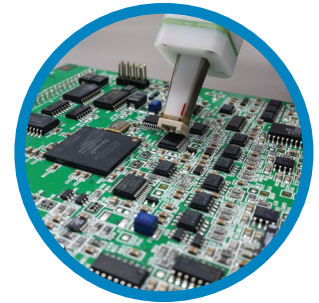
MANUFACTURING



MASS TRANSIT



ARMED FORCES



MAINTENANCE



AEROSPACE



OIL & GAS



AUTOMOTIVE



EDUCATION

ABOUT US

ABI Electronics has designed and manufactured high quality test, diagnostic and measurement instrumentation in the UK since 1983. ABI's range of products are commonly used in the test and maintenance of highly complex systems across a variety of industries and applications worldwide. Customers choose ABI products for their flexibility, affordability and time-saving features.

The company founders developed the world's first low cost test solution for integrated circuits that turned into a great success amongst engineers in the UK and abroad.

ABI has now over 40 years experience of developing the highest quality testing and fault-finding equipment, backed by a global reputation for quality and service. It is also certified in accordance with ISO 9001-2018.

Over all these years, ABI has remained loyal to its principle of full design and build high quality products in the UK.



CHANGING VALUES & BEHAVIOUR IN THE INDUSTRY

Created in 2015, ABI's initiative '**Repair, don't waste**' has become a global movement aimed at increasing awareness to the benefits of industrial electronics repair over replace across the business spectrum. The "Repair, don't waste" movement has reduced waste, downtime and created quality job opportunities around the world.



WHAT CUSTOMERS SAY

"We are proud to join the #RepairDontWaste community." The whole world stands to profit massively from industrial electronics being kept going for longer.



Join the **#RepairDontWaste** community and keep up to date with our latest news.

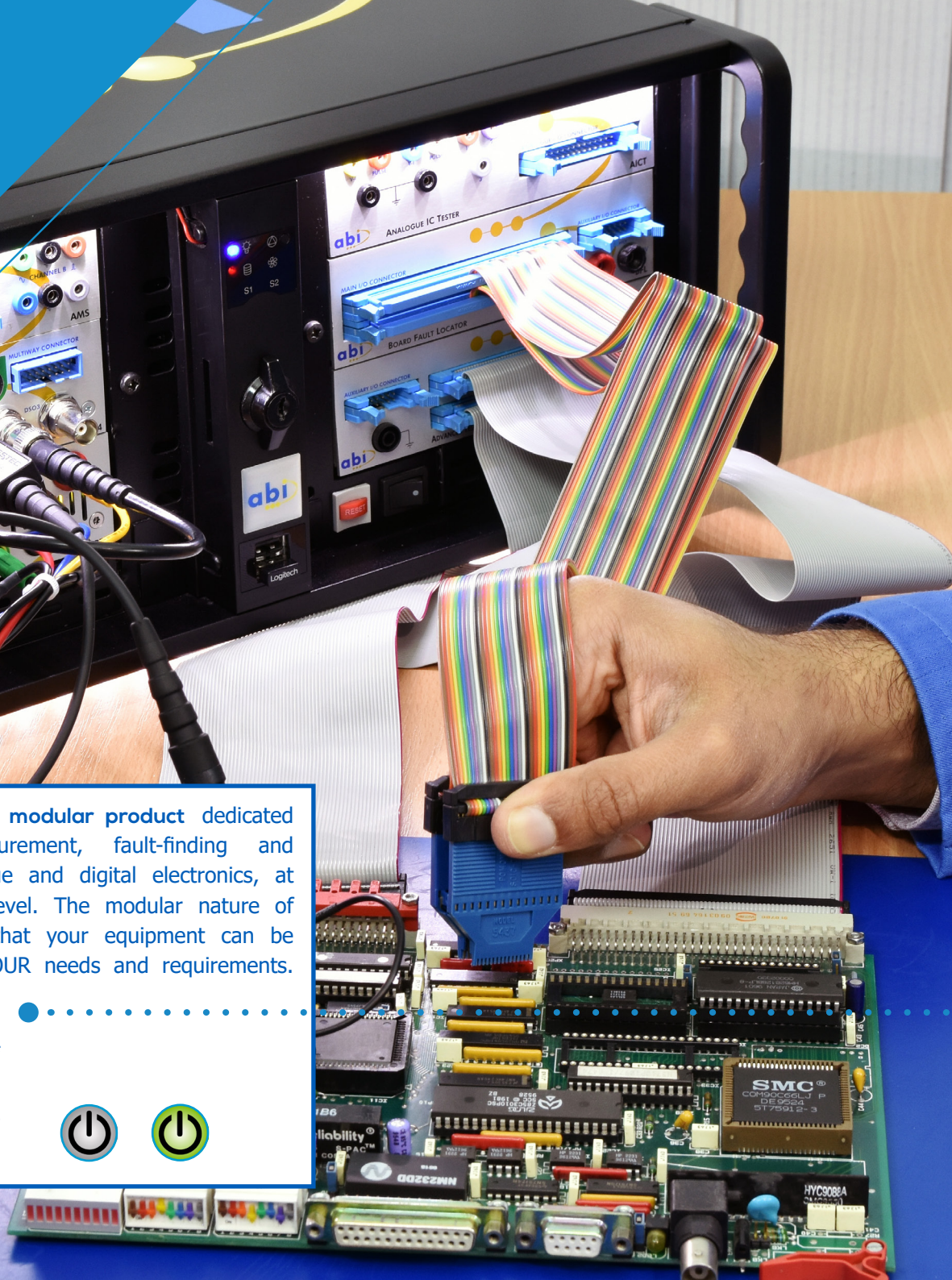
Find out more at **RepairDontWaste.com**



THE HARDWARE

The BoardMaster is a modular product dedicated to the test, measurement, fault-finding and repair of both analogue and digital electronics, at component or board level. The modular nature of BoardMaster means that your equipment can be customised to meet YOUR needs and requirements.

Testing and diagnostic of components under
POWER-OFF conditions
POWER-ON conditions



WATCH VIDEO



BoardMaster 19" Rack

ABI's Universal Diagnostic System

The ABI BoardMaster 19" Rack Universal Diagnostic System is a uniquely versatile, self-contained and easy-to-use test system. It offers the most comprehensive set of test instruments for fault-finding on almost any kind of PCB. As the product of choice to companies operating in rail transport, aerospace, military, automotive, telecoms and a range of other industrial sectors, the BoardMaster is ABI's top of the range solution that saves customers time and money, increases asset availability and reliability. With the full range of instruments and a variety of test methods guaranteeing the best possible fault coverage, the BoardMaster 19" Rack provides the ultimate in diagnostic tools.

Component and board level testing

Digital & analogue functional tests

Power on and power off tests

Multi-point measurements

Automated test procedures

User-friendly software

Data logging and report

• • • • Customisable instruments

19" Rack

Windows PC included



Also available in

5, 7 and 9 Bay USB Case | 7 Bay PC Case



THE SOFTWARE

SYSTEM 8 Ultimate

ABI's BoardMaster and SYSTEM 8 Modules come complete with the user-friendly, multi-license SYSTEM 8 Ultimate Software package. Ultimate is a Windows-based software designed by ABI to control its range of modular products. Customers receive access to free updates for life and benefit from a range of customisable features, user access control and ABI's TestFlow Manager as standard.

SYSTEM 8 Ultimate

Save Test results

Share knowledge

Generate Reports
CSV HTML

Add Media
http:// Office PDF

Add Schematics

Save Instrument settings

Design your Instruments

TestFlow Report

Step	Start	End	Pass/Fail
1- PCB = ASS09999-0007	10:00:00	10:00:00	Pass
2- Power Supply Test	10:00:00	10:00:00	Pass
3- Voltage CP 8 D3	10:00:00	10:00:00	Pass
4- Voltage CP 8 D5	10:00:00	10:00:00	Pass
5- Voltage Q18 & Q7 D9	10:00:00	10:00:00	Pass
6- CH4508 Signal process P012	10:00:00	10:00:00	Pass
7- CH4508 Signal process P012	10:00:00	10:00:00	Pass
8- CH4508 Signal process P012	10:00:00	10:00:00	Pass
9- CH4508 Signal process P012	10:00:00	10:00:00	Pass
10- Track signal from edge connector FC 1	10:00:00	10:00:00	Pass

DVM CHANNEL 1
+12.130 V

EXTERNAL COUNTER CHANNEL 2
8.019 kHz

1.2V SUPPLY
11.943 V 0.2 mA

1.5V SUPPLY
3.269 V 0.2 mA



SAVE INFORMATION AND PROTECT YOUR KNOWLEDGE

WATCH VIDEO



The TestFlow Manager is a step by step sequence generator that guides operators during fault-finding or test processes. The TestFlow greatly reduces the risk of inaccurate measurements and automatically saves all test results on a customisable report.

CUSTOMISE YOUR REPORT



ANYWHERE YOU ARE



THE EQUIPMENT | SYSTEM 8 Multiplexed Matrix Switch

With the MMS and ABI's SYSTEM 8 Range of modular instrumentation, you will be able to route signals for design verification and data acquisition applications, run automated functional test on components and PCBs, measure and compare signals from up to 64 points on a circuit as well as making more efficient use of cables, clips and probes. Better still, you can easily achieve high level results without the need for programming and for a fraction of the cost of a traditional ATE, PXI or LXI instrumentation.

WATCH VIDEO



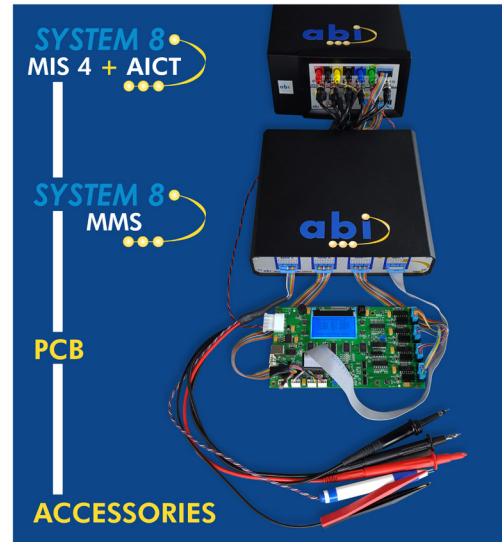
SYSTEM 8
MMS



MULTIPLEXED MATRIX SWITCH



Example configuration



The MMS in details:

- Is a 16x16 matrix (256 cross points) to connect any channel to any channel, with up to 16 unique paths.
- Is a Multiplexer/demultiplexer with flexible architecture e.g. 1 to 64, 2 to 32 ... 16 to 4 or anything in-between.
- Provides signal routing from DC to 60MHz through standard IDC connectors
- Switch signals of up to 100V or 1A with the 10W rating
- Is expandable, with multiple systems working together to increase testing possibilities.

THE EQUIPMENT | SYSTEM 8 SmartSwitch

The SYSTEM 8 SmartSwitch is a fully programmable, 2 Channel USB interface designed to operate exclusively with ABI's SYSTEM 8 Ultimate software and test equipment. Consisting of a hardware plug & play module that connects to a standard full-size USB port, the SYSTEM 8 SmartSwitch provides 2 channels that can take on up to 4 switch inputs. These inputs can be provided by standard triggering mechanisms such as foot or hand switch, safety buttons, conveyors and compatible sensors.

When used within a TestFlow, the SmartSwitch setup will be recorded and recalled automatically the next time the user runs the same TestFlow file.

NEW
PRODUCT
RELEASES!

WATCH VIDEO



SYSTEM 8
SmartSwitch

Key benefits:

Keep your eyes on the PCB whilst you're performing a test.
Activate the SmartSwitch when you are ready to move on.

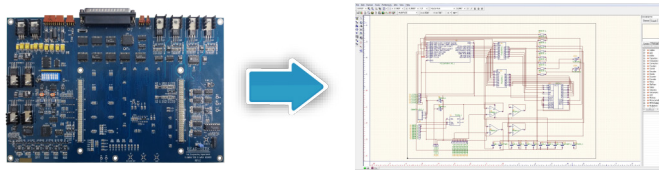
- Create, save and recall configuration profiles for the most used SYSTEM 8 instruments.
- Use the SmartSwitch to interact with existing SYSTEM 8 instruments as well as the TestFlow Manager.
- Easily trigger events once cables and probes have been positioned correctly.
- Start/Stop data acquisition without having to use a mouse anymore!

THE EQUIPMENT | RevEng Schematic Learning System

A simple to use system designed for the generation of schematics from a sample board.

FROM YOUR PCB TO SCHEMATICS!

The efficiency in the maintenance and repair of electronic PCBs can be compromised by the lack of circuit diagrams. RevEng is the answer!



Cabinet Systems

- High pin count system for multiple requirements and large circuits.
- Cabinet equipped with control card and 1024 to 2048 measurement channels.
- Systems can be expanded to 2048 channels at any time after installation meet changes in budget availability or application requirements.



MultiLink Systems

- Entry level system for low budget or small to medium circuits.
- MultiLink unit equipped with 256 measurement channels.
- It can be expanded to 768 measurement channels.

MAIN FUNCTIONS

- **Learns Connectivity**
Through clips and connectors linked by the operator to every device on the PCB
- **Generates a Net List**
List of components & interconnections
- **Creates a Circuit Diagram**
By a very easy automated process

KEY BENEFITS

- Reduce fault finding time
- Replace less components
- Reduce PCB scrappage
- Generate professional circuit diagrams
- Stop and resume the process at any time

WATCH VIDEO



THE EQUIPMENT | JTAGMaster

Complete and powerful solution for the testing, fault finding and in-system programming of complex PCB assemblies featuring JTAG-enabled devices.



Increase test coverage by accessing components that cannot be probed

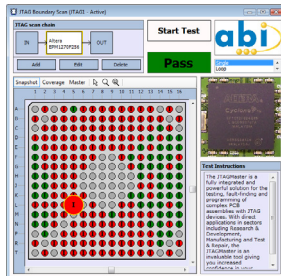
- Program devices in-system irrespective of the manufacturer
- Integrate the JTAGMaster easily into your existing setup
- Implement this solution at all levels, from R&D to production

Test coverage

- Manufacturing defects (eg. open circuit/shorted pins)
- Logic errors (eg. pin failing to toggle/faulty device)
- Programme errors (eg. incorrect/corrupted program)
- Faults in external circuitry (eg. missing or stuck input signal)

Features

- Individual pin monitoring with graphical interface
- Non intrusive testing during normal PCB operation
- Exttest mode for the manual control of pins
- Record and compare data on complete JTAG chains
- Generate documented test sequences



THE EQUIPMENT | SENTRY

A unique solution for the quick detection of counterfeit and non conforming components. SENTRY is an ideal addition to existing anti-counterfeiting measures run by component suppliers and electronics manufacturers.

SENTRY operation

The fundamental principle of SENTRY is to acquire the PinPrints of a reference device, to store this information and to compare these PinPrints with another device under test. The reference device can be the first component of a batch or a device imported to the library.

Features

- Suitable for digital and analogue components
- Compatible with all packages using adapters
- Minimal knowledge of electronics required
- Flexible software with report generator



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SENTRY - Component Test Report					
COMPONENT DETAILS			Comparison Tolerances		
Component Reference : 1825AC-5			Nominal Tolerance : 5		
Package : 14-pin SO, 14-pin			Input Tolerance : 10		
Adapter : 14-pin SO, Q100			Pin Pull Tolerance : 10		
Manufacturer : 1825			Pin Solder Tolerance : 50		
Operator : User 002			Pin of Fault Tolerance : 5		
Date : 12 January 2017			Fail If Suspect Tolerance : 15		
Time : 13:27 PM			Suspect of Fault Tolerance : 10		
Suspect of Fault Tolerance : 10			Suspect of Fault Tolerance : 10		
OVERALL RESULT					
SUCCESS					
IMAGE - Component Under Test			IMAGE - Reference Component		
Date : 07 July 2017 Operator : User Comments : C: 1825			Date : 12 January 2017 Operator : User Comments : C: 1825		
COMPONENT UNDER TEST					
PIN SUMMARY					
Pin 1: 100% SUCCESS	Pin 2: 100% SUCCESS	Pin 3: 100% SUCCESS	Pin 4: 100% SUCCESS	Pin 5: 100% SUCCESS	Pin 6: 100% SUCCESS
Pin 7: 100% SUCCESS	Pin 8: 100% SUCCESS	Pin 9: 100% SUCCESS	Pin 10: 100% SUCCESS	Pin 11: 100% SUCCESS	Pin 12: 100% SUCCESS
Pin 13: 100% SUCCESS	Pin 14: 100% SUCCESS	Pin 15: 100% SUCCESS	Pin 16: 100% SUCCESS	Pin 17: 100% SUCCESS	Pin 18: 100% SUCCESS
Pin 19: 100% SUCCESS	Pin 20: 100% SUCCESS	Pin 21: 100% SUCCESS	Pin 22: 100% SUCCESS	Pin 23: 100% SUCCESS	Pin 24: 100% SUCCESS
Pin 25: 100% SUCCESS	Pin 26: 100% SUCCESS	Pin 27: 100% SUCCESS	Pin 28: 100% SUCCESS	Pin 29: 100% SUCCESS	Pin 30: 100% SUCCESS
Pin 31: 100% SUCCESS	Pin 32: 100% SUCCESS	Pin 33: 100% SUCCESS	Pin 34: 100% SUCCESS	Pin 35: 100% SUCCESS	Pin 36: 100% SUCCESS
Pin 37: 100% SUCCESS	Pin 38: 100% SUCCESS	Pin 39: 100% SUCCESS	Pin 40: 100% SUCCESS		
PIN DETAILS					
Pin 1: SUCCESS	Pin 2: SUCCESS	Pin 3: SUCCESS			

DID YOU KNOW...

It is estimated that the yearly export of counterfeit ICs accounts for more than 8% of the global component trade, equivalent to a financial loss of over US\$10 billion.

WATCH VIDEO



THE EQUIPMENT | OUT-OF-CIRCUIT IC TESTERS

ABI's popular handheld solutions for the functional test of digital and analogue devices out-of-circuit.

- FUNCTIONAL TESTS FROM INTERNAL LIBRARY
- CONDITIONAL LOOP TESTS FOR INTERMITTENT FAULTS
- IC IDENTIFICATION FOR UNKNOWN COMPONENTS
- FUNCTIONAL TEST PROGRAM GENERATOR (ON PC)
- POWERED WITH BATTERIES OR USB

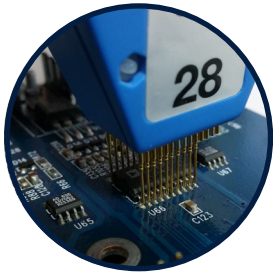


LinearMaster and ChipMaster Professional

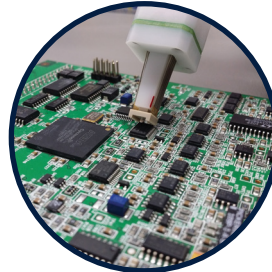
ACCESSORIES

ABI provides a wide range of accessories.

For more information contact us on sales@abielectronics.co.uk



EZ Prober
16 pin with 5.5mm gauge, 28 pins with 10mm gauge.
Custom designs available.



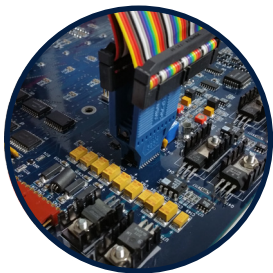
QFP, TSOP, TSSOP probes
Made-to-order designs available on request.



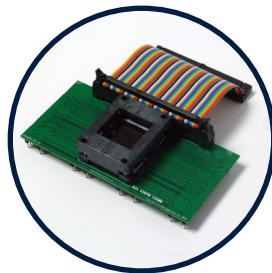
PenProbe 4-piece Set
Type 1 (3 pin transistors, SOT23 and similar), type 2 (3 pin transistors, TO72 and similar), type 3 (3 pin transistors, TO220 and similar), type 4 (3 pin transistors, TO92 and similar)



PLCC Clips
Available for 20, 28, 44, 52, 68 and 84 pin devices.



SOIC Clips
Available for 8, 14, 16, 20, 24 and 28 pin devices.



Out-of-circuit adapters
Available for SOIC, PLCC packages as standard.
Made-to-order designs available on request.

WHY CHOOSE US?

Since 1983, ABI Electronics has helped customers worldwide by developing hardware and software products that are easy to use, affordable and supported all over the world.

A common problem faced by organisations whose operations are supported by electronic and automation systems is that external repair is costly and time-consuming. If a part becomes obsolete, a whole system can be deemed unrepairable which can lead to numerous problems. This could mean companies would have no choice other than to buy a brand new PCB from the original manufacturer or upgrade a large portion of their infrastructure.

Apart from issues of timescale and cost, this would be an environmental concern for many organisations, as they would be throwing away complete electronic assemblies that only require minimal maintenance, given the right equipment.



OUR CLIENTS

ABI products are used all over the world by companies operating from railway, automotive, aerospace and heavy industry to armed forces, industrial maintenance and education.



SUPPORT

We are here to help!

Customer service is part of our commitment to continued quality and product development. We always strive to provide quick and efficient support to our customers worldwide. Service, maintenance and upgrades are available for our range of products as well as customised solutions to suit special requirements.

Tech Support

Direct access available to technical support from ABI's engineering team based in the UK and from our global distributors.



Global reputation for quality and service

ABI Electronics is certified in accordance with ISO 9001-2018. The system is based on an ongoing commitment to quality, professional fulfillment of duties and constant expansion and development.



Certificate n°: 3133



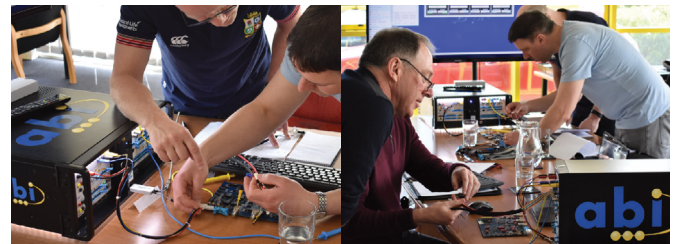
Upgrades

Stay current with free upgrades to software and maintenance releases.



ABI Training and Certification

We are also committed to meeting every customer's training needs. We offer a range of training courses, complete with hands-on opportunities, which can be delivered in house or on-site.



" I wonder if it still works ? "

The initial concept for the business came from a simple incident when ABI's founder accidentally stepped on an electronics IC which had fallen to the floor.

The company produced the ICT-24, the world's first low-cost digital IC tester, and expanded rapidly as sales of this popular product grew.



Connect with us! Follow ABI on YouTube, LinkedIn and Twitter, and stay up to date with our latest news, case studies and product developments!



More than 60 distributors worldwide



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