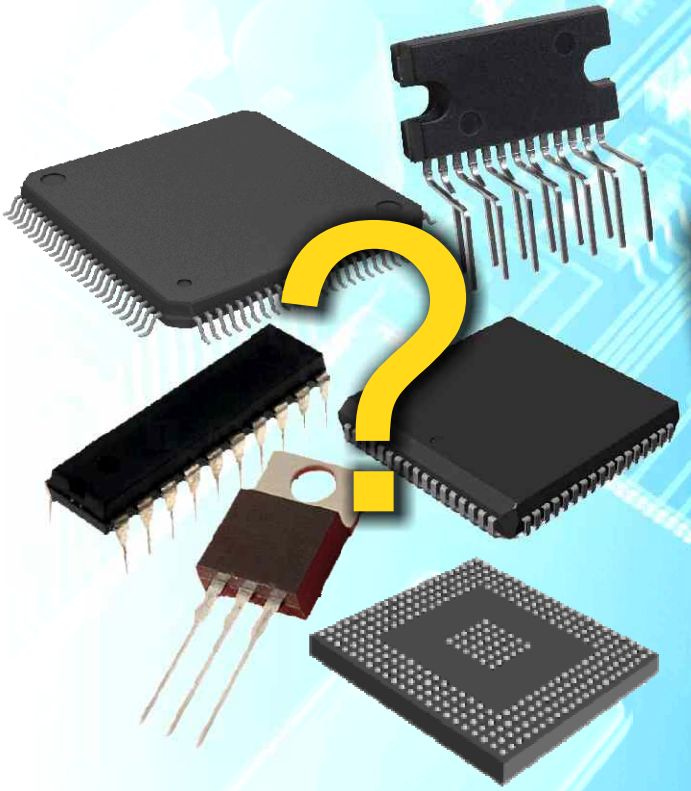
Are you able to protect your business against counterfeit ICs ?



No technical knowledge needed •
Suitable for all devices/packages •
Flexible, easy to install & use •
Simple pass / fail results •
Configurable software •
Full analysis report •

SENTRY
Counterfeit IC Detector

The ABI SENTRY is a unique solution for the quick and easy detection of counterfeit ICs and components.

Through a complex PinPrint test algorithm, SENTRY is able to identify components that have a different internal structure, or no structure at all, and even components originating from a different manufacturer.

SENTRY is your very own electronic sentry, guarding the entrance to your production/distribution facility from the infiltration of counterfeit devices.

abi

www.abielectronics.co.uk

SENTRY - a simple but powerful instrument

SENTRY Counterfeit IC Detector is a product designed to help electronics companies protect their production and distribution facilities from the infiltration of counterfeit electronics components. It is an easy to use instrument with a dual purpose:

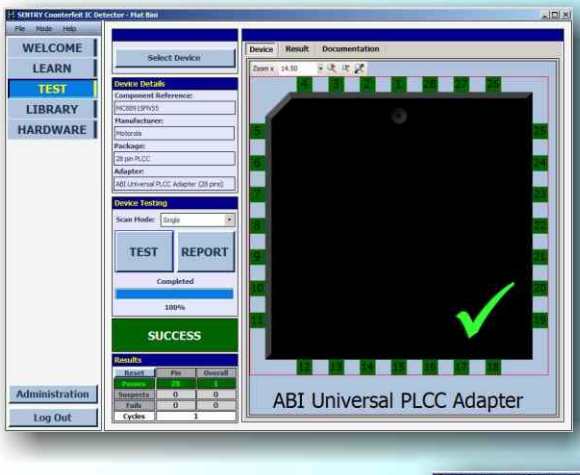
- To check components as they are received by the stores department and ensure that they are valid. Staff from a goods inwards department can use the system with no knowledge of electronics.

- To review potentially fake components and analyse the test data with suppliers. Advanced users can use the full report to determine the origin of failure.

SENTRY is designed to accommodate all types of components, from simple two-pin devices to more complex packages such as :

- Dual In-Line (DIL)
- Small Outline Integrated Component (SOIC)
- Small Outline Package (SSOP, TSOP)
- Plastic Leadless Chip Carrier (PLCC)
- Quad Flat Pack (TQFP, PQFP, LQFP)
- Ball Grid Array (BGA)

ABI Electronics offers a range of adapters for all packages, from standard sockets to customised solutions.



Did you know ?

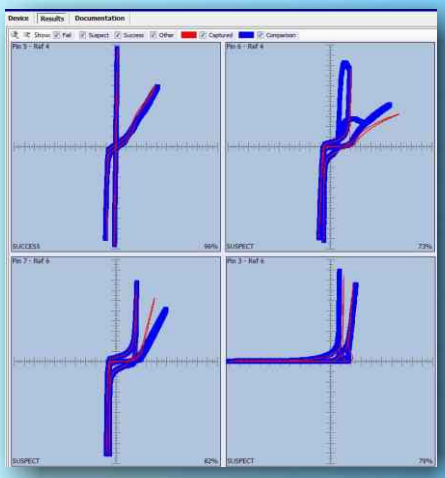
Every year, it is estimated that export of counterfeit (fake) ICs accounts for more than 8% of global merchandise trade, which is equivalent to a financial loss of over $10 billion.

These devices may originate from scrap boards ("pulls") or even be wrongly manufactured in "ghost shifts".

How does SENTRY work ?

The fundamental principles 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 PinPrints of a device are the electrical characteristics of each of its pins when submitted to a dynamic stimulus. The response from each of the pins is directly related to the nature of the device, its internal structure and the manufacturing processes it was subject to.



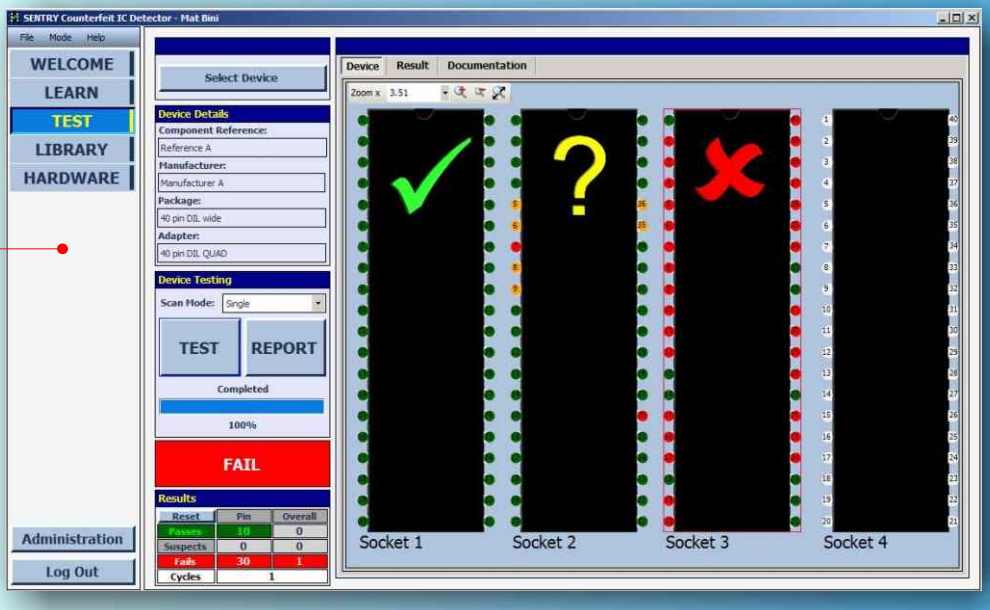
The set of PinPrints thus acquired by SENTRY becomes the unique 'identification card' for this device.

PinPrints can be viewed in details (picture, left) along with the comparison mask used to determine the validity of the component.

Should a reference device not be available, users are presented with two options:

- Obtain the reference PinPrints from another user, thanks to the database import and export functions.

- Pick one device from a batch and use it as the reference device in order to check for consistency with the other devices in the batch.

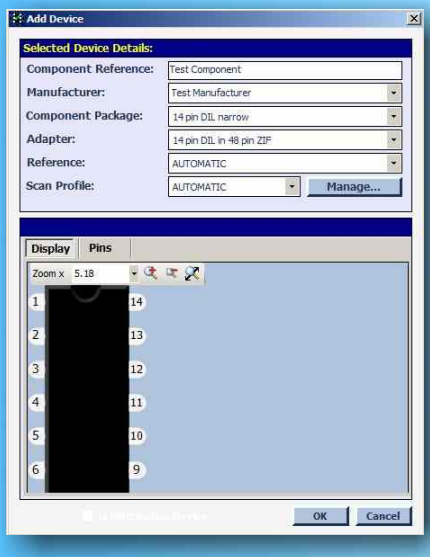


SENTRY Software Interface

The SENTRY software was specifically designed for ease of use with a limited amount of operator actions required - ideal for users with limited computer experience. However, advanced users still benefit from configurable parameters to alter the operation of the SENTRY unit.

Mode of operation

SENTRY is aimed at a whole range of users, from production and goods inwards operators to high level technicians and engineers. Therefore, the user interface was designed with clear features to speed up operation whilst retaining a degree of flexibility for experienced users. Two main sections can be found in the software: LEARN, the section dedicated to acquiring the PinPrints from reference devices and TEST, the area concerned with testing existing devices and comparing the results with reference data.



Data Entry

Adding a device to the library before learning PinPrints is quick and easy. Enter the:

- **Component Reference**, which is usually the part number of the device
- **Manufacturer**, for reference purposes as manufacturers may offer the same device
- **Component Package**, which is the number of pins and shape of the device
- **Reference mode**, which is set to automatic for ease of use
- **Scan Profile**, which is also set to automatic to simplify operation

The process of acquiring the reference PinPrints is completely automated thereafter and needs no further input from the operator.

Once data is acquired and saved, operators move to the TEST section to evaluate the rest of the components. Each device will be clearly marked with one of the following symbols after test :

Good device (✓) Suspect device (?) Bad device (✘)

Advanced Users

Experienced operators can gain access to further options. These include changing the way the reference pin of the device is chosen, as well as specifying different scan profiles. A scan profile is a set of electrical parameters that are applied to the device under test.
Although a range of packages and adapters are supplied as standard, users can also design their own packages for specific applications or unique requirements. Virtual adapters can also be added to allow for multiple devices to be tested in series. Access to the library of devices will give users the chance to exchange data with the import and export functions. Changes to the standard tolerance levels for comparison can also be made.

Data viewing and reporting

To reinforce the level of protection and improve the chances of detecting potentially counterfeit devices, extra features are included in the SENTRY software. It is therefore possible to attach a range of documents to a device saved to the database, including text documents, spreadsheets, PDF datasheets and webpages. Photos can also be attached, either by importing images or by capturing live photos using a standard USB camera. Visual inspection and compliance with technical data often form part of the counterfeit detection process.

Users can chose to view each PinPrints of the device under test in the result section of the software. The comparison mask created by the reference data is also visible, clearly indicating the pins that have passed or failed the comparison.

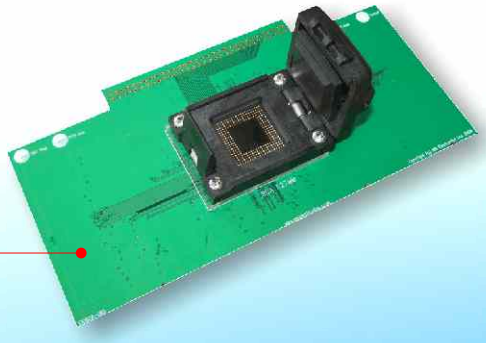
SENTRY also includes a reporting facility to allow users to produce test reports and to provide evidence as well as traceability of data. This report can be customised and includes the following options:

- Component details
- Comparison tolerances
- Overall result
- Images (reference and under test)
- Component overview
- Pin summary
- Pin details

Report
The report can be customised to include the information that is deemed relevant by the user.

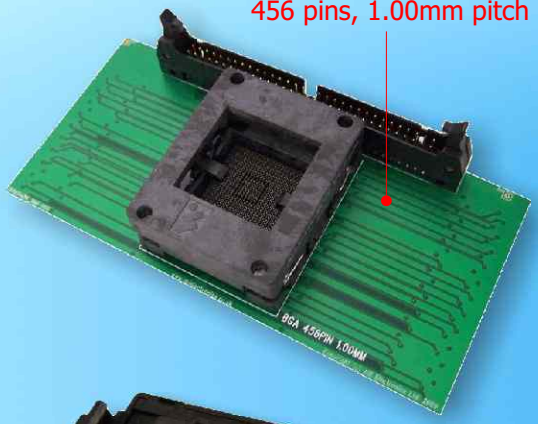
SENTRY adapters

Universal PLCC adapter
One adapter to test devices with 20, 28, 32, 44, 52, 68 and 84 pins

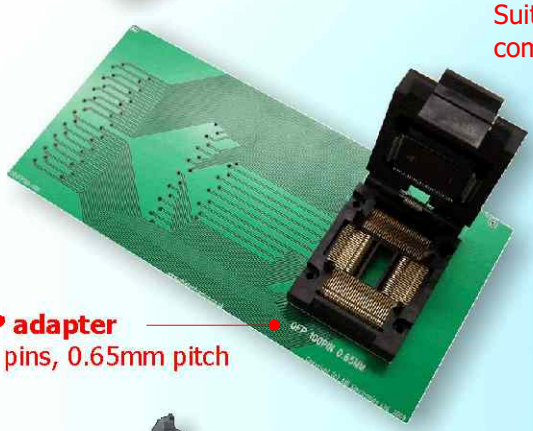


BGA adapter
292 pins, 1.27mm pitch

BGA adapter
456 pins, 1.00mm pitch

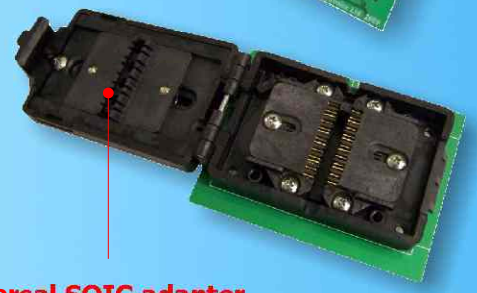


Tweezers
Suitable for 2-pin discrete components



QFP adapter
100 pins, 0.65mm pitch

BGA socket adapter
on SENTRY unit



Universal SOIC adapter
One adapter to test devices up to 44 pins with body widths from 0.150" to 0.6"

Technical specifications

Electrical requirements

Operating voltage: 85 - 264 VAC
Operating frequency: 47 - 63 Hz
Power consumption: 150 VA max
CE approved & RoHS compliant

Environmental requirements
Operating temperature: 10°C to 30°C
Humidity: 20 to 80%

Computer requirements
Microsoft Windows XP, Vista, 7, 8
Pentium 4 or above
Minimum RAM: 512 MB
Hard disk space: 200MB
USB 2.0 high speed port
Mouse, keyboard & monitor

Physical specifications
Dimensions: 27 x 25 x 9 cm
Weight: 3.5 Kg

Accessories
User Manual
USB cable
Software CD (including drivers and manual)
Calibration kit (Optional)
Range of adapters available

Notes :

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