

# Inter Electronic



# INTRODUCTION



InterElectronic Hungary Ltd. offers equipments, machines and different materials (ESD) of different production technologies (SMT/THT/LED). Including high quality, special request fulfilling soldering machines, devices, tools, instruments and materials for the electronic industry and services.

### **SERVICES**

Our each and every product has a warranty granted by the InterElectronic Hungary Ltd. For more complex appliances our company offers a well-needed training for set up and usage. We grant the repair of all of the products traded by our company during and after the warranty period. As well as we guarantee the continuous supply of accessories and instruments.

### **DEMONSTRATON**

In case if any of our products aroused your interest the InterElectronic Hungary Ltd. would be glad to visit your company and hold a presentation of the product of your interest. As far as possible we serve you by bringing demo devices with us. In the most cases of our products we are proud possessors of references nation-wide. Major machines also could be observed at our partners' site.

### **PRICE LIST**

Most of the prices of our products can be requested on our website and will be sent via email to you. In case of special and more complex machines the prices are given after consultation individually through a price offer. If you are interested in more information or user manuals of our products we recommend you to visit our website (www.interelectronic.com), which is updated continuously with professional information. We also recommend you to visit our office, where you can purchase any of the needed devices and spare parts of the product of your interest.

### **ORDER/SHIPPING**

Our soon to be partners are welcomed to be helped via telephone, fax or e-mail. We use different ways of delivery, depending on the preference of our partner. We can deliver your purchased product by ourselves, by freight or courier service. The way of delivery might be negotiated previously. We offer you cash on delivery nation-wide!

# TABLE OF CONTENT

# **Professional tools for Electronics Manfacturers to improve control**

The InspectoScan Range offer solutions for both the Assembly SMD and PTH (Conventional), Finishing and Coating Environments.

STP Electronics mission is to provide professional tools to electronics manufacturers to improve and monitor quality. CEM's, OEM's, Subcontractors of electronic assemblies know that Quality monitoring will make a difference to reducing end of line defects and improving process yield.

With over 25 years of field experience, STP Electronics onwardly design and develop hardware and software solutions to meet todays new challenges.

### Product name Page Inspecto Scan-S-A3 4 Inspecto Scan-S-A3 Specifications 5 Inspecto Scan-S-A3 Networking and Software 6 Inspecto Scan-C-A3 9 Inspecto Scan-C-A3 Specifications Inspecto Scan-C-A3: Software 10 Inspecto Scan-C-A3: Inspect-DIAG software 11 Vision Software 12 **Custom Vision** 13



# INSPECTION A3

InspectoScan-S is a quality control tool for automated inspection of printed circuit assemblies. Its uniquely flexible software provides for add-on features to increase inspection coverage, processes and users as you gown.

Developed and manufactured entirely by STPElectronics, the InspectoScan-S is an optically enhanced scanner system with Auto Inspect Software for fast, efficient control & inspection.

Key process applications include FAI and AOI for small to medium volume. Thanks to intuitive software the system is quick to implement and very easy to use.

# **Applications**

- Prototype validation
- Sampling control
- Input Control
- First article inspection (FAI)
- Traceability
- CMS Finishing
- AOI Compliment
- 100% inspection for small/medium volumes
- Rework and Repair

# **Control tests**

- Presence / absence
- Polarity
- Marking
- Flipped
- Tomb stone/Billboard
- Position
- Damaged
- Labels (Ident/Barcode)
- Defined Area Inspection
- .... many more!



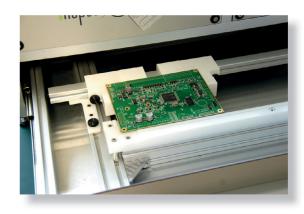


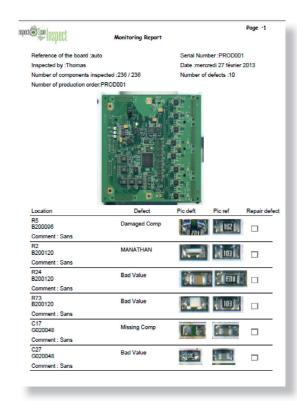


- Low cost automated inspection
- High quality image
- Minimal operator training
- Quick to implement
- Archiving and Traceability



# **Specifications**







# **Technical Specifications:**

- Exterior Dimensions: H 30 x D 60 x L 80 cm

- Weight: 45 kg

Acquisition by linear 1200dpi sensor
 Lighting ShadeControl: Concept by

STPElectronics

- Positioning Rails: 310 X 455 mm

- Scan Area : 294 X 431 mm - Height components : 30 mm

- Positioning Rails : ESD

Safety CatchCE certified

- PC Windows Environment

# **Software Functionality:**

IS-Inspect, inspection Software, can be used with different input data for intuitive programming:

- The board

- The layout diagram with bill of materials

- Pick and place data file

- Fiducial alignement markers

The production interface offers 3 control modes:

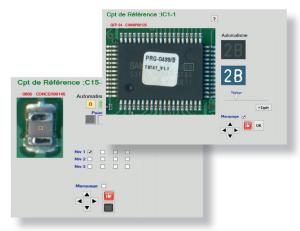
- Manual mode : operator assisted

- Semi automatic mode : stop on defect

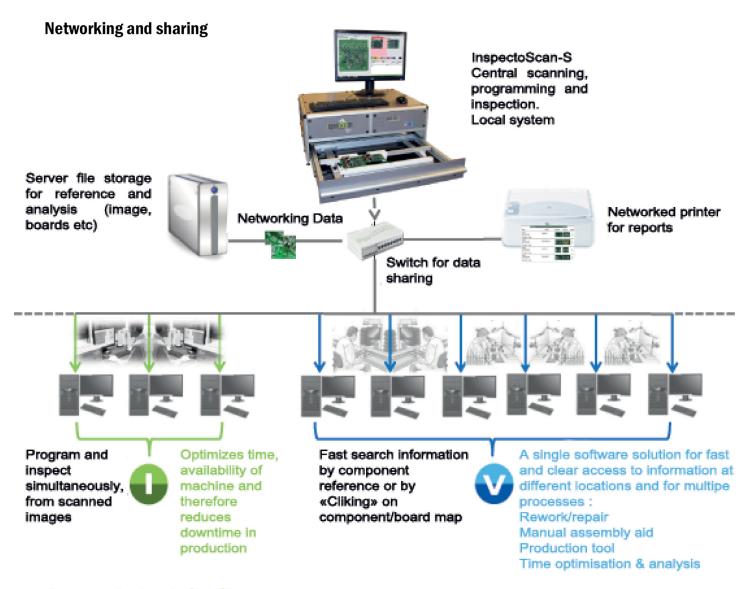
- Automatic mode : non stop with defects logged

Tests are based on analysis of colour using a specifically developed threshold algorithm.

A simple, quick programming method provides a fast, reliable detection rate in automatic mode with little user training.



# **Networking and Software**



# **Associated Software:**

# **Component value testing / verification**



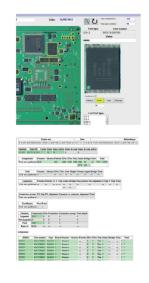


# Uses : Prototype control FAI control (SMD place-

ment reel control)

Advantages : Software validated Test reports

# **Complement AOI**

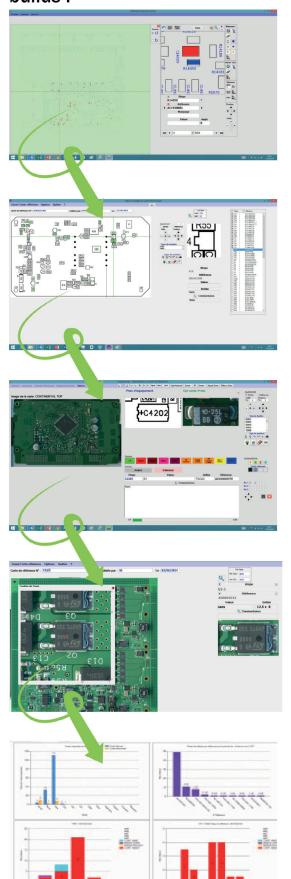


Uses : Final control Increase test coverage

Advantages : Uses AOI data fil (faults) Paper free solution Saves time Clear information

# **Networking and Software**

STPElectonics offers a complete software suite to conceive your protoype builds:



# MAP

# For help creating your plans

This software allows you to create your control plans, layout diagrams...

use your own original data (PDF)

After each component is created, duplication by part reference is automatic!

Save time managing documents.

# ASSEMBLY

# For help with component assembly

After creating the plan, no need to print.

On-screen guidance shows the operator the location and orientation of each component in turn.

Fast accurate assembly for protoype and low volume assembly.

# INSPECT

# For help with your quality control

The assembled prototype must be checked!
InspectoScan-S will scan the board and the Inspect software will inspect each component and compare the plan.

No need to use paper plan and manually compare. If the protoype is good you can inspect additional boards in automatic mode.

# $\bigvee$ ISU

# For help with rework

In case of defects the repair stations are equiped with VISU software.

Requiring no programming the software presents the golden board image with click-able component map so that the operator can find all information to provide a fast, effective repair.

# STAT

# Statistical Analysis Reporting

All inspection data is stored, offering fast analysis of common defects, customer/product assembly issues. Allows comparison by product, customer, component, defect type

Provides useful feedback for process improvement.

# INSPECTION OPTICAL INSPECTION

InspectoScan-C utilises a micro camera, white and UV light together with a laser to provide automated inspection of traditional through-hole boards and finishes on final assemblies.

The key objective of the InspectoScan-C system is improve finished product

quality ready for delivery.

# **Applications/Benefits**

- Input control
- Finishing control (Conformal coating...)
- Improve final product quality
- Avoid customer returns
- Avoid repairs / reworks
- Increased inspection coverage
- Wide application range (PCB, assemblies, finished products...)

# **Control Features**

- Glue
- Screws
- Polarity
- Soldering
- Conformal coating
- Mechanical parts
- Connectors
- Alignement of cabling,
- Reading of code, label, barcode...
- Finished products, marking
- Custom specific tests





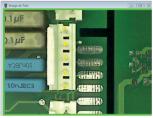














- Simple operation
- Fast, easy programming
- Automatic inspection
- Flexible and evolutionary
- Attractive price



# **Specifications**





# Why Standalon?

- Final control before delivery
- Increased test coverage
- Wide application range (PCB, assemblies, finished products...)
- Multi-tests in the same inspection cycle
- FAI / AOI table

# Size and weight machine:

- Width : 750mm - Depth : 750mm - Height : 600mm

# **IN LIGNE**

# **Traditional through-hole**





Manual rework

Conformal coating

# Why in ligne?

- Before or after wave solder
- Counting components, leads, or solder joints
- After conformal coating system
- Optimised AOI coverage

# Machine size and weight

Width: 1300mm Depth: 750mm Height: 1400mm Weight: 90kg

# **Specifications**

# **INSPECT SOFTWARE-TFV**

# **Control software for Traditional, Finishing and Varnish**

Friendly, easy to use interface

>> The programming mode allows you to create and define each test function and sequence that will be used in the production mode.

Programming is intuitive using simple drop-down menus for fast test creation.



- >> The configuration mode allows you to optimise the sequence for the production mode.
- >> The maintenance mode allows control of the system for maintenance
- >> The production mode allows programmes to be run, providing automated optical inspection on complete production batches



# **Technical Specifications**

### Micro cameras:

- 2X5 mega pixel micro cameras
- One fixed camera for overview of test products
- One mobile camera on a motorized axis with a 360° rotation and 0-90° angle adjustable by 1° steps.

The camera movements are controlled directly with softwrae interface, allowing adjustement of zoom, focus, luminosity and positioning in rotation and angular viewpoint.

# Integrated light sources:

- Withe LED light with 550 lumens
- UV lighting 365 nano meters
- Integrated laser at the centre of head rotation

### At startup:

 Automatic calibration at start up using positioning system parameters of axes and engines (without software)

### Mechanical

- System with drawer or conveyorised
- Maximum inspection size A3
- Product maximum height : 60mm



# **Inspect-DIAG Software**







# **Inspect-DIAG software:**

The remote post was realized to answer for a production need.

It allows analyzing test results on products on remote station to do not lost time on system. It can be associated with a repair post to analyze and repair defect products.

The software show you automatically the defect, gives you the information for repair and you have to validate

# **CUSTOMIZATION**

# Software

- Development of specific functions
- Development of interface software associated

Example: **Inspection Software** ball BGA components



- Size
- **Dimensions**
- **Motors**
- Axe
- **Cameras**



If necessary, our standard evolves!

# S DEVELOR YOUR APPLICATION CONTROLS



IS-Vision is a software for automatic inspection for all products.

Enjoy a unique programming interface and functions of vision, usable across multipe cameras simultaneously.

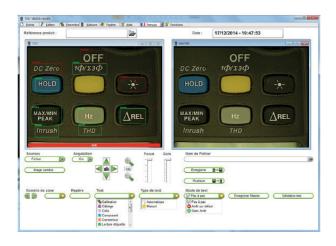
Facilitate the internal development of all types of applications.

# Software functioning

- Server License
- Floating License
- Up to 10 cameras by soft
- Also works from image stored
- Inputs USB cameras
- Ouput DLL or autonomous production interface
- Statistics

### **INCLUDED FUNCTIONS:**

- Color analysis
- Filing tests
- Counting of surface
- Data matrix
- Marking and characters
- Different labels
- Varnishes



Lets us help you choose a compatible camera for you application, you can create/design your own test application or work with us to develop a working solution. We can offer development, testing, validation etc...





Compatible

- Use the software with your own hardware
- Use adapted USB camera
- Control your costs
- Help you create your own solutions



# COMPLETE CUSTOM DESIGNED SOLUTIONS

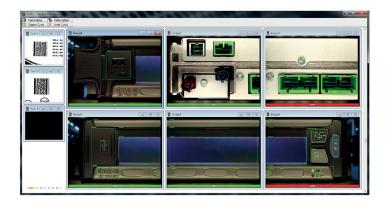
# Control of connection of a module on electronic cards





- Measurement and distance display between connector male and female
- Reading of data matrix code
- Verification and display of color of connectors
- Detection of mechanical parts upper and lower for control according to the versions
- Integrated application in Delphi
- Multi-products
- Ambient lighting without protection
- 2 micro-cameras

# Control and assistant to cosmetic tests



AND MANY MORE OTHER ...

This tester allows to bring an assistance on cosmetic tests for a product of type car-radio.
On the same tester, a first support allows to control the connections and the screws on the back of the product. The second posage allows to realize a functional and cosmetic test

- of vision on the whole face before Integrated application in Delphi
- Multi-products
- Lighting with white leds
- 2 micro-cameras
- 1 camera embarked on axis motorized and guided step by step.



# PROFESSIONAL TOOLS FOR ELECTRONICS MANUFACTURERS TO IMPROVE CONTROL



**INSPECTOSCAN C A3** 



# THE INSPECTOSCAN RANGE OFFER SOLUTIONS FOR BOTH THE ASSEMBLY SMD AND PTH, FINISHING AND COATING ENVIRONMENTS



**INSPECTOSCAN S A3** 





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