

The ASM Process-Expert is the next step in electronics production



To ensure top quality, modern SMT lines employ measurement and inspection systems in the form of vision, SPI and AOI systems. Unfortunately for the user, however, they perform their checks only within the framework of thresholds set by the operator. With the ASM ProcessExpert, ASM has developed the world's first self-learning inline expert system for electronics production. The ASM ProcessExpert does not just check processes, but stabilizes, optimizes and controls them proactively.

The ASM ProcessExpert measures process results, evaluates them, and proposes ways to improve them. At the operator's request, it can even make proactive changes to the settings on other machines based on the contents of its knowledge database. The DFM (Design for Manufacturability) HealthCheck demonstrates the potential of such a self-learning expert system. With this unique feature, the ASM Process-Expert supports electronics manufacturers already during the planning phase by simulating the printing process on the basis of the stencil's Gerber data and information from the knowledge database.

Interested?

Please visit TechDay – PCB Inspection on the 9th of October and get more information and the possibility to set up a personal appointment at the ASM SMT Center of Competence.



www.asm-smt.com

Agenda



9 OCTOBER

INSPECTION DAYS - by PARTNERTEC

We are pleased to invite you for Partnertec Inspection Days. This Seminar is organized in cooperation with our partners ASM, MEK and Nordson Dage. During this seminar we will inform you about the latest trends and technologies on SPI, AOI, X-Ray and CCI.

More information: <https://partnertec.nl/techday-pcbinspection/>



10-11 OCTOBER

PROCESS DAYS - PRINTING & STENCILS - ASM

Everything you need for a solid printing process. This high-intensity workshop focuses on the interaction of SMT paste printing, stencil design, and printing materials. Day 1 covers stencil technologies and printing materials, while Day 2 concentrates on the printing process itself with special emphasis on the printer and its options.



10-11 OCTOBER

OPERATOR DAYS - ASM

At the ASM Operator Days you'll learn about the latest features and tools for your equipment that will keep you production up to date. We'll also demonstrate directly at the machine how you can get the most out of your ASM production line and operate it even more efficiently.



12-15 NOVEMBER

PRODUCTRONICA - MÜNCHEN

Productronica is THE leading international trade fair for the development and manufacture of electronics. It is the only place in the world where you can find the entire value chain in electronics manufacturing, all of Industry's key players and the latest development and innovations!

More information can be found on our website www.partnertec.nl/agenda



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Foreword

The hottest summer ever is behind us. Despite the heat there was no time to lay back and relax for Partnertec. During the "summer sales" we received orders for three complete new SMD lines plus several orders for other equipment. In total we plan to install over more than 10 P&P machines this year. A tremendous result we're proud of in our third year with ASM-Sipace. We are even more proud that one of these SMD lines will be the first SMD line ever in Luxemburg.

Partnertec is rapidly expanding his service capacity and investing heavily in training to scope with his growing business. We are also rolling out a new CRM system to keep track of all communication with our customers and serve you even better than before.

By the end of this year we will sent out new service contracts for 2020. These service contracts offer you best in class support on your valuable equipment. The contract will not only cover preventive maintenance but also gives you an 8 hour response guarantee in case of an emergency break-down situation against an attractive reduced service rate.

On October 9th we will again organize a Partnertec Tech Day. This year's theme; PCB Inspection!

Together with our suppliers ASM, MEK and Nordson Dage we will give you an update on the latest developments on X-ray, SPI, AOI, THT and conformal coating inspection. During live demo's we will present various inspection machines, such as MEK's 3D AOI M1A with self-learning algorithms and the brand new DAGE Explorer 1, the most affordable high-end X-ray system in today's market.

Looking forward to see you at our Tech Day in October and the upcoming Productronica later this year.

Maurits van der Laken
Managing Director Partnertec



Overcoming the challenges of THT inspection

Long programming times and high false call rates are two fundamental concerns that have traditionally stopped THT manufacturers from implementing automatic optical inspection.

Mek THT AOI overcomes these challenges of automated through-hole inspection with a unique combination of mechanical, optical and software design alternatives, unavailable in many conventional systems.

In addition to unique, low profile bottom-up, top-down, modular and bottom + top mechanics with 9 camera capability, the software and detection strategy employed directly addresses the wide variations in THT joint appearances. We don't use commercial component libraries like many other manufacturers – the SpectorBOX algorithms are histogram based measurements capable of delivering high yield and high detection rates.

Detectable defects include:

- Mounting errors; no pin, no solder, solder without pin
- Solder deficiency; pin without solder
- Solder Ball detection
- Land wetting defect; pin present, solder attached to pad
- Convex fillet with no discernible lead
- Meniscus deficiencies
- Improper wetting leading to poorly shaped connection
- Circumferential wetting deficiency or excess

During the special Seminar – PCB Inspection – we will demonstrate THT and CCI inspection. Subscribe on our website, and we will inform you about the latest technology on PCB Inspection.

www.partnertec.nl/techday-pcbinspection

mek[®]
marantz electronics ltd
www.marantz-electronics.com

ZESTRON launches a world's first: ATRON[®] DC, a water-based decoater for coating frames

ATRON[®] DC is the world's first water-based cleaning agent specially developed for maximum decoating power at the highest level of operator safety.

The mild formulation ensures a high degree of operator safety, while still offering superior cleaning performance and great material compatibility. The use of aggressive stripping chemicals is no longer necessary.

It reliably removes different coating materials, such as acrylics, polyurethane, epoxy, UV curable types or parylene, from coating frames, pallets and fixtures. ATRON[®] DC is suitable for all common maintenance cleaning machines, but is especially designed for immersion and ultrasonic processes. Additional benefits include a shortened decoating process and increasing operator efficiency.

Key benefits of ATRON[®] DC:

- Water-based formulation
- High operator safety - use of aggressive stripping chemistries is not necessary anymore
- Strong decoating performance
- Good material compatibility – both selective processes and complete frames/pallets submersion are possible

Application

- Decoating
- Coating frames

Process

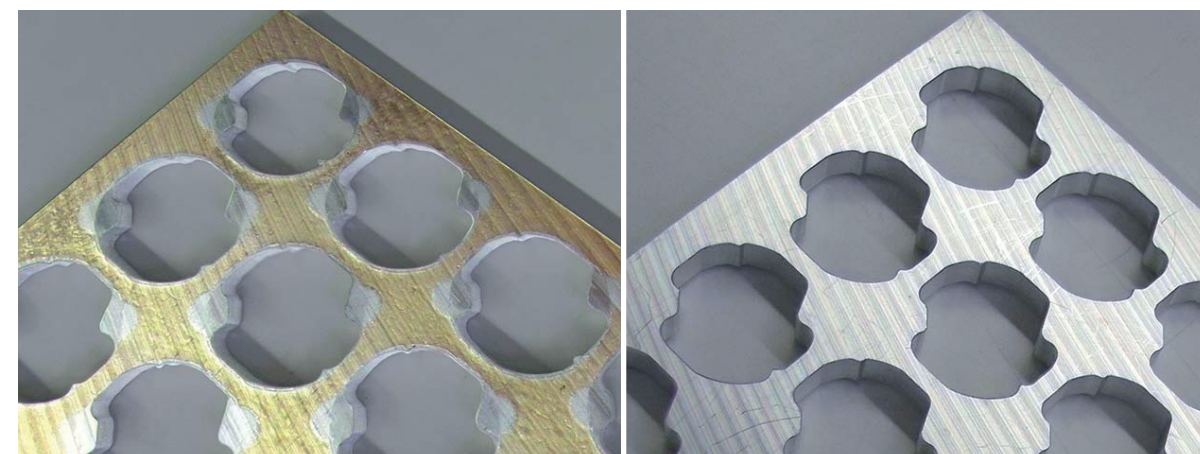
- Ultrasonic
- Spray-in-air
- Dip tank cleaning

Technology

- Water-based

Conformal coatings

- Acrylate
- Epoxide
- Silicone
- Polyurethane
- Parylene



ZESTRON
High Precision Cleaning
www.zestron.com

Head Electronics purchased a Soltec ZEVAm Selective Soldering System



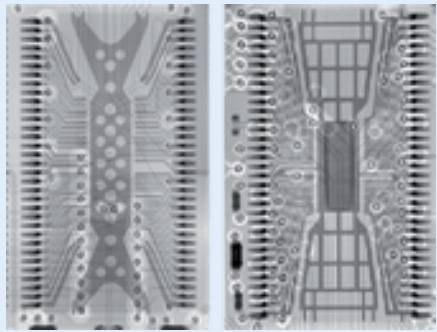
HEAD Electronics, a Dutch company specialized in design and assembly of industrial electronics recently invested in selective soldering equipment from Vitronics Soltec. Head is a customer-oriented company, offering development, global sourcing of components and all including assembly from prototype till series production.

After a thorough testing period, Head purchased Soltec's ZEVAm Selective Soldering System. They experienced the advanced capabilities of the ZEVAm, and could see that this tool would be a valuable asset in their Netherland manufacturing facility in Katwijk.

"The ZEVAm will add automated selective soldering capabilities that will allow us to attract new markets and stay ahead of new developments in the electronics market," said Willem Kok, HEAD Electronics CEO. "With fine-pitch components becoming more common, we feel the ZEVAm is a sound investment." The ZEVAm brings patented soldering technology that excels at meeting the challenges of miniaturization. Tilting allows the ZEVAm to solder at any angle to guarantee proper soldering results for the ever-decreasing pitch of components. ZEVAm can process three PCBs simultaneously for high throughput in a high mix environment and offers a choice of wettable and non-wettable nozzles. An optional Solder Drainage Conditioner (SDC) prevents bridging and reduces defects.

Partnertec is excited to supply this latest model in our region and we thank HEAD for their trust and long term relationship.

Vitronics Soltec
www.itweae.com



X-ray images of 2 identical packages which have been built by different manufacturers

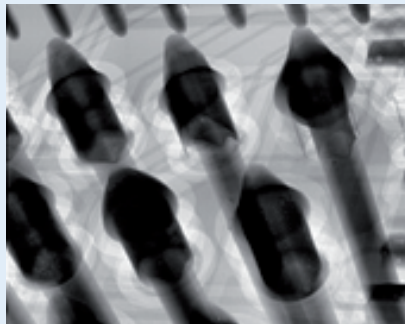
X-Ray Inspection Systems

Nordson Dage is leader in X-ray Inspection for the electronics industry. It offers the highest feature recognition and resolution X-ray systems, not only within failure analysis laboratories but also within the production environment.

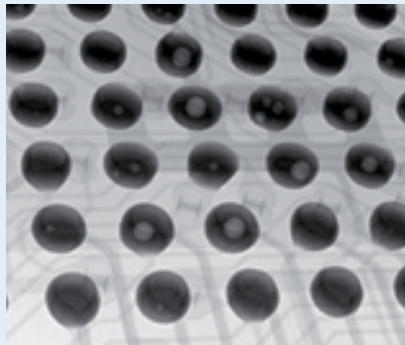
The Explorer™ one enables you to quickly understand the quality of your product before it leaves the factory! It detects a wide range of manufacturing defects including, BGA, PTH filling, QFN, cable and connector quality and counterfeit component screening.

Easy to operate
Operators can perform quality inspection quickly, easily and with minimal training. Explorer one gives real-time feedback so you can navigate around products and find defects fast. Automated inspection routines ensure fast throughput when inspecting batches of boards.

TechDay - PCB Inspection
During our special seminar we will also demonstrate The Explorer™ one. Please subscribe to get the latest trends and technology that provides powerful process control and development on SPI, AOI and X-Ray Inspection.



Oblique angle viewing capability shows PTH solder filling



Oblique view shows pad adhesion and reflow quality
See head in pillow (HIP) cold joints using oblique angle viewing



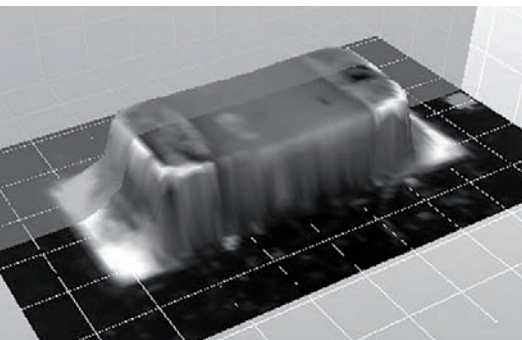
Partnertec Tech Day

PCB Inspection - 9th of October

PCB Inspection is the basis for more efficiency and quality in your electronics production. We are pleased to invite you for our annual Partnertec Technology Day on the 9th of October.

By understanding the science behind the electronics assembly process, and the needs of the OEM and EMS industry, our global suppliers are at the forefront of developing pioneering Inspection solutions for the electronics assembly industry.

Board inspection is an important step in your production process and is a real benefit. This seminar is organized in cooperation with our partners ASM, MEK and Nordson Dage. With Seminars and live demonstration we would like to show you the latest trends and technologies that provides powerful process control and development on SPI, AOI and X-ray Inspection.



What PCB Inspection: The basis for more efficiency and quality in your electronics production!

Where VerkadeFabriek
Boschdijkstraat 45
5211 VD 's-Hertogenbosch

Agenda

09:15	Partnertec	Introduction
09:30	MEK	AOI for SMT False Calls Management; Using machined solder joint programming by using Artificial Intelligence
10:00	Nordson Dage	Prove your Quality Cost effective best in class X-ray inspection Seeing is believing
10:30	MEK	AOI for THT Bottom & Top AOI; Quality Assurance in Power Electronics
11:00		COFFEE BREAK
11:30	ASM	Process Optimization Process Expert (SPI) as self-learning expert system
12:00	MEK	CCI AOI for Conformal Coating Inspection
12:30		LUNCH
13:30	Partnertec	Live Demonstrations
14:00	DAGE MEK MEK	Explorer ONE - Live demo 3D AOI - ISO Spector M1A met AI - Live demo AOI bottom solder inspection / top UV inspection (coating) - Live demo
15:30	Partnertec	Closing Presentation
16:00		DRINKS

This unique day is entirely free of charge and includes lunch and a social drink to end this event. Please register online at: www.partnertec.nl/registerinspectionday

We are looking forward to meet you on the 9th of October!

Maurits van der Laken
Managing Director Partnertec

Edwin de Blauw
Sales Manager



www.partnertec.nl/registerinspectionday



AOI for SMT

False Calls Management; Using machined solder joint programming by using Artificial Intelligenceprogramming by using Artificial Intelligence

Among systems in a SMT/THT assembly line, automated optical inspection systems, being the youngest technology and the most complex, very software oriented and dependent on computer processing power, have the most headroom for development and improvement.

Since the emergence of Smart Factory concepts with the focus on connectivity and data exchange, the attention for the technical capabilities of the connected systems seem to be diminished. Especially AOI systems, more specifically with 3D measurement capability, are a key part in a Smart Factory environment as they are the hubs for quality control, by giving valuable feedback to the production machines. However, connectivity is only useful when the provided data is accurate. Mistakes made by an AOI like false positives (escapes) are typically not discovered directly and in case of false negatives (pseudo defects) connected systems get piled up by incorrect suggestions. Smart Factory with AOI can only work if the AOI results are reliable.

3D AOI's, being such important hubs, need to get increased focus on their technical capabilities. As the industry agrees that the technical specifications of an AOI system typically do not fully reflect its actual capability. For prospects AOI equipment selection is probably the one of the most difficult choices in a PCBA production line. Typically, evaluation engineers need to base their choices on few hours snapshots of evaluated systems. Depending on how well prepared an evaluation is, most decisions end up based on emotions and "safe" choices by what others in their network are using. This may lead into that new, technologically advanced solutions are being overlooked.

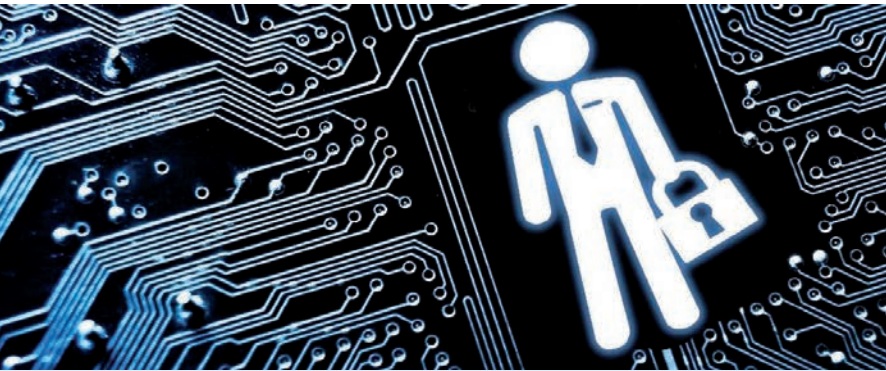
Mek (Marantz Electronics Ltd.), a since 1997 established, well known manufacturer of AOI and SPI systems with over 8,000 worldwide installations keeps investing in innovations, research and development. While at the headquarters in Japan a large engineering team is working on the connectivity capabilities of the system, a larger team focuses on inspection and programming performance.

The latest addition to the wide range of products is the Mek ISO-Spector M1 series full 3D AOI with Artificial Intelligence. A true, full range, no compromises fast to program 3D AOI system.

The Mek ISO-Spector M1 took several years to develop and is built up from scratch using the latest what modern technology has to offer in terms of hardware and software. The result is a self-learning, high specification, high accuracy system that is easy to program with programmer independent inspection results. The self-learning part with Artificial Intelligence is what making this unit especially special.



www.marantz-electronics.com



Service Contracts 2020

Reliable Production Equipment is crucial in today's competitive industry. With our service Agreement packages Partnertec offers a complete Maintenance and Service program for your SMT Equipment.

Key benefits

- Maximum productivity
- Minimise downtime
- Keep your equipment within factory specifications

Service Agreement
Partnertec offers a strong combination of global expertise and local presence with our team of highly trained engineers. Electronic production equipment needs to run all day and night. To minimize break-downs, Partnertec can provide a preventive maintenance program enabling you to get the best from your equipment 24/7, from installation up to 7 years old.

Process Support
Achieving high Yield and high quality productivity is a finely tuned and controlled process. Partnertec can help you to find any bottlenecks in your production line and identify the best solutions to optimize your production process.

Training - Knowledge is key!
Our training programs are designed to help machine operators learn the best and most efficient working methods. With accurate knowledge off all steps of the production line, you can ensure you get the best out of every step in the process. We can even provide customized on-site operator and maintenance training to make your production flow as efficient as possible.

Health Check
With our Health Check solution, Partnertec provides a complete performance analysis for your production equipment. During the process, we analyse the performance of each module of the production line, identifying the potential weaknesses and overall condition of your equipment.

Helpdesk
Partnertec provides a technical helpdesk with dedicated support and expert advice for all our customers. When visiting your site frequently we are able to check every aspect of your SMT production line, not just those directly associated with your equipment.

Please contact us for more information and a customized proposal!

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www.partnertec.nl