The European Institute for the PCB Community

EIPCSPEeDNEWS

Issue 24— September 2020

NEWS FROM GERMANY

ILFA Feinstleitertechnik GmbH, PCB manufacturer from Hannover Germany, invests in latest technology - in Corona times.

As one of the longstanding HighTech Prototype and Serial PCB manufacturers in Germany focussing on offering a wide technology range, ILFA has analysed and conducted the investments as part of an overall factory technology and capability upgrade for manufacturing state of the art PCBs.

ILFA is dedicated to be ahead of an ever increasing technology level in order to meet customer demands. Both in HighTech as in MiddleTech products.

So ILFA decided to buy the CIMS Galaxy Automatic Optical Inspection and atg-LM Flying Probe Electrical Test systems which are supplied by Dutch based distributor and service provider Adeon Technologies BV. The purchase orders are following extensive benchmarking, from which the results proved to ILFA's management that these are the right products for them.

The CIMS Galaxy AOI offers the latest by CIMS parameterized optical inspection technology. The Cims Galaxy is part of the CIMS SPARK technology. The CIMS AOI systems are capable to work with the wide range of base materials and surface finishes that ILFA is capable to offer to its widely spread customer base worldwide.

The atg-LM technology is partially an expansion, and partially a replacement for the atg-LM equipment that has been in use at ILFA for over a decade already. Especially with the Model A7, equipped with the latest state of E-Test technology, ILFA can test finer pitch, smaller pads and also every type of surface finish. The Model A7 enables ILFA to test Embedded Components and is prepared for 4-wire testing.

Mr. André Bodegom, MD at ADEON Technologies added: “We are proud of having strong and lasting relationships with ILFA as well as our entire customer base. We will never take any purchase order for granted This new step for ILFA has confirmed to us that this philosophy is recognized by market leaders and so we’ll continue this steady course.”

The Managing Partners at ILFA Mr. Thomas Michels & Mr. Christian Behrendt explain their decisions: “The choice for the CIMS AOI and atg-LM secure us of the latest technology, enabling us to stay ahead in the Prototype to Mid-Volume segment of standard rigid/rigid-flex to high complexity PCB manufacturing i.e. hybrid and embedding technology.

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NEWS FROM THE UK

BAE Systems Awards Bronze Supplier Status to Amphenol Invotec

CB solutions expert, Amphenol Invotec, has been awarded with the business **Bronze Supplier Status** by BAE Systems. The Award is in recognition of continued commitment and support to BAE Systems programmes and key business objectives.

Amphenol Invotec's PCB capabilities are among the broadest and most advanced, delivering consistent quality and reliability for demanding systems and mission-critical applications.

According to Terry Dowling, Sales Director at Amphenol Invotec, Amphenol Invotec and BAE have forged a strong relationship over many years and across a wide variety of programmes. This 2020 award is reflection of the partnership and the ongoing commitment to exceptional and sustainable performance to BAE Systems.

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NEWS FROM THE USA

Ventec Strengthens Growing US- and Mexican Market with Appointment of Sales Representative

Ventec International Group Co., Ltd. has announced the appointment of Spectrum Marketing Associates based in Arizona, USA to provide sales and support to customers in the US-West Coast region and Mexico. The two companies have signed a contractual agreement under which Spectrum Marketing Associates will develop new businesses and grow Ventec's market share in the designated territories.

Driven by growth in demand for automotive, medical, communications, industrial electronics, aerospace & defence, and other applications, Ventec is continuing its efforts to expand market share in key regions as part of the company's global growth strategy. To support and complement its direct sales organization in the West Coast region of the US and in Mexico, Ventec has appointed Spectrum Marketing Associates due to its strong position in the market, excellent reputation, extensive reach and proven track record in the electronic manufacturing sector.

"Across our business and particularly for our IMS solutions, we are seeing double digit growth as thermal management materials are becoming more essential to ensure electronic assemblies operate within the required specifications across various end user industries such as automotive and healthcare among others. OEMs and PCB manufacturers recognize the value Ventec can add through its range of products, tech support and experienced technical staff," stated Chris Hanson, Global Head IMS Technology at Ventec. "By appointing Spectrum Marketing Associates to support Ventec's direct sales efforts in the US and Mexican markets, we have strengthened our growth opportunities in this part of the world. We look forward to their contribution and ability to secure new clients in the region," added Hanson.

Carole Dickinson, President of Spectrum Marketing says: "I am very excited to be representing Ventec in our region. Ventec strongly complements our own strategy and strengthens the value that Spectrum can bring to its customers. It has been a pleasure meeting the very professional team at Ventec, and we look forward to promoting their products and services to our customers."

Ventec International is a world leader in the production of polyimide & high reliability epoxy laminates and prepregs and specialist provider of thermal management and IMS solutions. Further information about Ventec's solutions and the company's wide variety of products is available at www.venteclaminates.com and/or by downloading the Ventec APP.

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SEMICONDUCTOR INDUSTRY NEWS

The Battery Problem

Moving electricity is costly, but solutions are still lagging.

ED SPERLING *SEMICONDUCTOR ENGINEERING*

The fires sweeping the West Coast of the United States point to the need for a whole different way of managing power on both a macro and a micro level.

Since the millennium, the power demand from data centers and from mobile devices has been climbing steadily. There are roughly 7.8 billion people on the planet, up from 6.115 billion people in 2000, according to the World Bank. Many of them own at least one electronic device, and some of them own many more than one. And while these devices are radically more efficient compared to a decade ago, the sources of power for those devices are not.

In places like the U.S. Southwest, in deserts in Northern Africa, central Asia, and in other sunny and dry areas like Australia, there is no shortage of solar energy to harvest. In other regions, wind and geothermal energy can be utilized. But the bigger challenge is figuring out how best to store and move that energy, and finding an equitable way to share it.

Moving electrons in the form of electricity (between atoms) is roughly the same challenge that chipmakers face on a nano scale in the form of data (strings of electrons). In semiconductors it's expensive, and the more data that is generated, the more it needs to be utilized locally. It's roughly the same for power. The more electricity that needs to be moved, the more the solution needs to be rethought. When many of these power grids initially were electrified, they were meant to achieve economies of scale by centralizing power. But as more people and more devices need to be powered, much more energy needs to be generated and stored locally.

The problem here is batteries and battery management. While electronics have improved significantly, battery technology itself has proven difficult to scale. Progress happens at a much slower pace compared to transistors and other digital technology. Batteries also are expensive, they don't last long enough, and they are potentially explosive — literally — if they aren't properly cooled.

Solid-state lithium-ion batteries, which use solid electrodes and a solid electrolyte, have been in development for nearly a decade. How much progress has been made depends upon how you measure that prorgress. These devices are still prone to dendrite growth and voids, and they don't last long enough after repeated cycling (charge-discharge-charge). Still, what makes this technology particularly attractive is it is less volatile, which means it can store more energy in a given area than existing lithium-ion batteries. That's a very big deal.

"From a flammability and safety standpoint, they should be much safer," said Lei Cheng, chemist at Argonne National Laboratory. "As a result, you don't need sophisticated battery management to monitor the temperature. But longevity is an unknown. As of now, there is no data because no one has made a complete device. What we've seen so far in existing lithium ion batteries is that the cathode eventually loses activity. The same thing is likely to happen with solid state batteries."

Other issues still need to be addressed, as well. So far, there has been no economic incentive to effectively recycle these batteries, and there is no model in place to share energy across a grid. So even if solid state Li-ion batteries are commercialized, the challenge is moving around that energy across a grid and compensating the generators of that stored electricity in a reasonable manner.

Nevertheless, progress is essential in order to start reversing the trajectory and velocity of climate change. Batteries are a key component in that chain, and this is where the biggest breakthroughs need to occur. So far, however, this is moving painfully slowly.

Advancing contactless payments: Infineon and Fingerprint Cards join forces to drive mass deployment of biometric cards

Biometric payment cards with integrated fingerprint sensor make contactless payments more convenient, more secure and hygienic. The contactless card remains in the hands of the cardholder throughout the entire payment transaction, while eliminating the need for PIN entries or signatures to authorize even high-value payments. Infineon Technologies AG and Fingerprint Cards AB have joined forces to enable mass deployment of this emerging solution.

The world leaders for security controller in contactless payment and for fingerprint sensors incl. their related software aim to provide card makers with biometric semiconductor solutions which make integration particularly cost-efficient and scalable. The fingerprint information is stored on the card's embedded secure element and not shared with any third party, thus protecting the user's credentials.

"Authorizing payments without handing over the card is a huge step forward in terms of user experience, data security and hygiene. We selected Fingerprints as they are the leading biometric silicon and technology provider with market proven performance. Jointly, we want to to drive the industrialization of biometric payment cards from a niche into mass market rollout," said Bjoern Scharfen, Head of the Payment and Transport Ticketing product line at Infineon. "Combining Fingerprints' leading biometric technology with our expertise in chip security, energy efficiency and contactless performance, we will develop a system solution that is easy to integrate and gives our customers a head start in an emerging growth market."

“Collaboration is key in the payment ecosystem, in which Infineon is a leading player. Together we will produce an optimized solution that will make it easier for card manufacturers to integrate biometrics into future generations of contactless payment cards, ultimately putting these cards into the hands of consumers around the world to enable a worry-free payment experience,” says Michel Roig, SVP Business Line Payments & Access at Fingerprints.

Fingerprints’ sensor modules, combined with Infineon’s 40 nm high-performance and energy-efficient security controllers based on the 32-bit ARM® SecurCore® SC300™, fully support the requirements of biometric payment cards. They enable:

- Secured matching of the fingerprint image within the security controller where the private data is securely stored
- Excellent contactless performance despite the increased power required
- Convenient and reliable enrollment of sensitive biometric data in the card

Almost every second payment card with a chip worldwide has an Infineon security controller at its core Infineon also supplied chip solutions for major biometric card projects and pilots in 2020. For further information about Infineon’s payment security controllers, please go to **www.infineon.com/payment**

Further information about Fingerprints’ solutions for payment device manufacturers is available at **https://www.fingerprints.com/solutions/payments/device-manufacturers/**

About Fingerprints

Fingerprint Cards AB (Fingerprints) – the world’s leading biometrics company, with its roots in Sweden. We believe in a secure and seamless universe, where you are the key to everything. Our solutions are found in hundreds of millions of devices and applications, and are used billions of times every day, providing safe and convenient identification and authentication with a human touch. For more information visit our website, read our blog, and follow us on Twitter. Fingerprints is listed on Nasdaq Stockholm (FING B).

News from WECC members

WECC World Electronic Circuits Council

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NEWS FROM THE IPC

IPC APEX EXPO 2021 Rescheduled for March 6-11

In-person event to include virtual exhibition options

BANNOCKBURN, Ill., USA, September 14, 2020 – With health and safety top of mind for all IPC APEX EXPO exhibitors, attendees, staff and business partners, IPC has made the critical decision to move IPC APEX EXPO 2021 to March due to ongoing concerns with COVID-19. Originally scheduled for January 23-28, 2021, IPC APEX EXPO will be held March 6-11, 2021 at the San Diego Convention Center in San Diego, Calif. This will be an in-person event with options for virtual exhibition.

"We didn't consider the decision to move APEX EXPO to March, lightly," said John Mitchell, IPC president and CEO. "When events staff became aware of open dates in March at the convention center, we reached out to exhibitors and prospective attendees and asked for their input. Feedback from those we surveyed indicated a strong desire for a rescheduled in-person event as opposed to a virtual one."

Mitchell added, "IPC will implement several infection control and prevention guidelines for IPC APEX EXPO 2021, including social distancing protocols, face mask requirements and daily temperature checks and other screening measures. We will ensure our plans follow the recommendations of public health experts and standards set by the federal, state and local governments. And, as safety guidelines and measures evolve, we will communicate these details as soon as they become available."

In addition to IPC's safety protocols, the San Diego Convention Center (SDCC) will implement a program of stringent processes for cleaning, disinfection, and infectious disease prevention under its Global BAC STAR™ facility accreditation. For more information, visit https://visitsandiego.com/safe-meetings.

Registration will open early-October. Additional event details including networking opportunities, schedule, travel, and more is available at www.IPCAPEXEXPO.org.

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International Diary

2020

IPCA Expo
23-25 September
India

3rd EIPC Webinar -Business Outlook for Global Electronics Industry with Emphasis on Europe- Walt Custer
2 October

TPCA Exhibition
21-23 October
Taipei, Taiwan

Electronica 2020 VIRTUAL
10-13 November
München, Germany

KPCA
24-26 November
Incheon, Korea

ECWC15, WECC World Electronics Circuits Council
Webinar
30 November-2 December

HKPCA Exhibition
2-4 December
Hong Kong, China

2021

IPC APEX EXPO
March
San Diego, USA

EIPC @ SMTconnect
4-6 May
Nuremberg, Germany