



The European Institute for the PCB Community

EIPC SPEeDNEWS

*The Weekly On-Line Newsletter from the European Institute of Printed Circuits.
Issue 6 – February 2021*

NEWS FROM FED

9th Fed Conference | September 16 and 17, 2021 | Bamberg

Call for papers

Please submit your lecture as a meaningful abstract with a topic block and title by March 26, 2021. The lecture length should not exceed 35 minutes. These are the topics for 2021:-

Please use this online form to submit your presentation. Please look at our terms and conditions for speakers, which you must agree to at the end of the form.

Speaker conditions ...

Your talk (35 minutes) Title of the talk *

Main topic *

Sustainability and environmental protection

Construction and connection technology

PCB and assembly design

Management and working environments

Supply chain management

Assembly production

Lecture abstract (summary of the lecture content) (max. 2000 characters) *

PAUL Award: competition for your young talent

Whether trainees, working students or schoolchildren: every young person between the ages of 15 and 25 who is enthusiastic about technology can take part in the PAUL Award 2022. We are looking for smart projects in the areas of smart energy or energy harvesting. The application deadline for submitting a project idea is September 1, 2021. The award will take place for the second time. It is named after Paul Eisler, inventor of the printed circuit board. The winner will receive 3,000 euros at the award ceremony in Berlin in summer 2022.

We are also looking for sponsors. Information on the sponsorship packages and their added value can be found [here](#). A flyer on the project is available [here](#).

February 24th, 2021 - Online - FED

RG Stuttgart: Lecture on "UL - Solder Limits"

On February 24th at 4 pm, the Stuttgart regional group will present you the 12th part of the online lecture series "short & crisp". On the subject of "UL - Solder Limits - current status, what's next?"

reports speaker Jürgen Deutschmann, AT&S AG. In the lecture, the elaboration of possible multiple solder limits and the feed to UL will show how association work can work.

The FED has not only taken up the topic of UL Multiple Solder Limits, but has also worked proactively with participants from various areas of the electronics industry to define multiple solder limits for the UL 796 standard and to establish them at UL. Deutschmann reports on the initial situation, the approach to the topic, the background to these recommendations and the implementation.



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NEWS FROM GERMANY

Ventec's German Facility Receives AS9100-D (DIN EN 9100) Quality Certification

The Ventec International Group facility in Kirchheimbolanden, Germany, is now certified according to AS9100 Revision D (DIN EN 9100), the quality-management standard for the aviation, space, and defence (ASD) industries.



The success of the audit, by certifying body DEKRA, attests to the high standards consistent throughout the Ventec organization. The Group's locations in China and the UK are also certified to AS9100 Revision D, while US locations were certified to ISO 9001 in 2020, giving OEMs and PCB fabricators access to a highly accredited supply chain for high-reliability laminates and prepregs.

Frank Lorentz, General Manager of Ventec's wholly owned subsidiary Ventec Central Europe GmbH, commented, "I would like to thank Matthias Rupp and the entire team in Kirchheimbolanden who have worked relentlessly to show that our systems fulfil the strict requirements of DIN EN 9100 (AS9100). We are particularly proud to be one of only a few companies in Germany to have achieved this certification in the past year, which provides the highest assurance of consistently exceptional service for our customers in ASD as well as automotive, industrial, and consumer sectors."

Ventec's German facility supports the company's complete product portfolio of high-quality products that includes high-performance polyimides, high-reliability FR4 products, the tec-speed range of high-speed/low-loss materials, and tec-thermal IMS materials. The site provides prepreg and laminate handling facilities including a dedicated laminate cutting room and temperature- and humidity-controlled ISO 7 (Class 10000) clean-room for epoxy prepreg cutting and packing.

Supplemented by the company's main manufacturing sites, which are certified to the IATF 16949 automotive standard as well as AS9100 Revision D, the certification of Ventec's German facility further strengthens the global network and boosts the value proposition for customers in all sectors.

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.venteclamimates.com and/or by downloading the Ventec APP.



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NEWS FROM THE NETHERLANDS



ONLINE AUCTION OF PCB PRODUCTION MACHINERY DUE TO STOCK CLEARANCE



Ending
Monday 1 March



Viewing date
Wednesday 24 February



Location
Geleen, NL



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HARDINGSOVEN**

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NEWS FROM THE UK



MICROTECH 2021 25th March
HETEROGENEOUS INTEGRATION – PACKAGING FUTURE MICROSYSTEMS

IMAPS-UK Annual MicroTech 2021 Online Conference focuses on Heterogeneous Integration - The Future of Microsystem Packaging.

Participate in presentations from leading industry players, including the following topics:

Advanced IC Assembly
Power and Optics Packaging
Wafer Level Processing
Transfer Moulding

Future Interconnects and Adhesives
Diversity and Inclusivity in the Microelectronics Industry

[Register Here for MicroTech 2021](#)

For Any other details or information please contact:

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ELECTRONIC INDUSTRY NEWS

Chipmakers Halt Production in Texas after Power cuts

By [Alan Patterson](#)

TAIPEI — Samsung, NXP and Infineon have stopped operations at chip fabs in Texas after a surprise cold wave caused power outages in the US state that is a major energy supplier.

The chipmakers halted production in the city of Austin around Feb. 16 after notification of power cuts by Austin Energy. There's no word from the companies on when production will resume or how big the impact will be on output.

Austin power providers are prioritizing service to residential areas and for critical health, safety and human services, NXP said in a press statement. As a result, power has been suspended to Austin chipmakers, including NXP at its two Austin facilities, the company added. "With prior notice, appropriate measures have safely been taken for the facilities and wafers in production," the [Austin American-Statesman](#) newspaper cited Samsung spokeswoman Michele Glaze as saying.

The impact on output of silicon wafers and precision production equipment may have been minimized by an orderly shutdown, Semiconductor Advisors President Robert Maire told EE Times in an email.

"If they had a couple of hours' warning, they likely could have gotten most of the wafers out of the tools and done a 'soft' shutdown in which the tools power down in

an organized fashion. This would lead to minimal loss of wafers and minimal tool downtime.”

Even in this best case, it could take a week or two for the fabs to come back online, according to Maire. The problem may be worse if the power is off for a longer period as the fabs and production tools would get cold. In addition, the air inside fabs must be highly controlled for humidity and filtered for dust, which doesn’t happen with the power off, he said.

Addendum — Infineon responded after this article was first published:

“We have been informed by local authorities that power for our plant in Austin would be turned off,” Infineon said in an emailed response to EE Times. “This gave us a few hours to prepare for the disruption, and we were able to put the factory into a safe state and to protect our employees and production inventory. For our critical safety systems, we have been using emergency generators.”

In a capital-intensive chip facility costing billions of dollars, companies need to maintain round-the-clock operations to maximize profit. It’s not a simple task with so much precision equipment that’s sensitive to environmental conditions.

“At a leading-edge fab, tools run 24/7, so getting them up to temperature and calibrated takes a lot of time, most especially with lithography tools,” Maire said. If the lenses in an EUV (extreme ultraviolet) or DUV (deep ultraviolet) tool go out of controlled temperature for any length of time, it will take a very long time to get them back to temperature and stabilized and calibrated.”

Total combined capacity in Austin from the three chipmakers is about 115,000 wafers per month in 300mm wafer equivalent terms, VLSIresearch analyst Andrea Lati told EE Times. Total capacity in the US should be around 1.2 million wafers per month, so Austin should account for between 9% to 10% of the total US capacity, she said.

Worsening chip shortages

The halt in output from Austin will worsen global chip shortages that are already slowing production of everything from cars to smartphones. In 2020, the coronavirus pandemic impacted demand for automobiles, and [carmakers cut chip orders in the third quarter](#). Orders rebounded starting in the fourth quarter last year, and shortages emerged in mature nodes such as 40nm and 55nm.

“The bottom line is that it’s a huge mess,” Maire said. Samsung will probably bear a significant impact because Austin is where the company’s only US production is located. The company may need to reconsider a [plan to build a new \\$10 billion fab in Texas](#), IC Insights vice president Brian Matas told EE Times.

“What has happened to the Texas power system during this cold snap will be a major issue with Samsung as it considers Austin as a potential location to invest \$10 billion

for a new fab. It, and other potential fab operators, must be debating and asking hard questions to state leaders about ERCOT, the organization of power companies in the Lone Star State that manages/controls the power grid. Not having a backup source and not being able to buy reliable power from neighboring states when the local grid fails is a clear deal breaker.”

ERCOT, the Electric Reliability Council of Texas, manages the flow of electricity on the Texas power grid to more than 25 million customers, representing 90% of the state’s electric load.

On Feb. 16, shortages caused the price of electricity in Texas to exceed \$9,000 for 1 megawatt-hour (MWh) of power, while the week before, the lowest price was less than \$30.

Texas Governor Greg Abbott declared the reform of the ERCOT a top priority for the state legislature this session, and he wants to investigate ERCOT to determine what caused the problems and find long-term solutions.

Car chips

Infineon and NXP are key suppliers of automotive silicon, and they were struggling with chip shortages before the power outage, according to Matas.

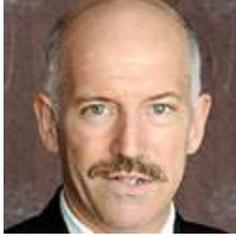
“The closure of fabs in Austin will almost certainly put additional upward pressures on automotive IC ASPs, which already have increased, and are expected to further increase this year. Carmakers and automotive system OEMs aren’t going to like it, but they will likely face even greater price pressure and longer lead times for automotive ICs — at least near term. Unfortunately, there isn’t much they can do to change the situation.”

In the past, even brief fab disruptions have resulted in long-term shortages and price hikes, which certainly is not good news in the midst of the ongoing global chip shortages, according to Matas.

In the meantime, Austin has a lot to worry about, including people who are suffering freezing temperatures inside their homes.

The Austin city government has declared a [state of disaster](#) that it expects to last no longer than Feb. 21. Austin has become a US hub for semiconductor manufacturers and an ecosystem of materials and production tool suppliers.

Samsung completed its 300mm “S2” fab in Austin in 2011 for about \$9 billion to produce low-power logic at the 45nm node. NXP’s two 200mm Austin facilities, acquired from Freescale Semiconductor, were built by Motorola during the 1990s. Infineon’s 200mm “Fab25” in Austin was acquired from Cypress Semiconductor.



Alan Patterson

Alan has worked as an electronics journalist in Asia for most of his career. In addition to EE Times, he has been a reporter and an editor for Bloomberg News and Dow Jones Newswires. He has lived for more than 30 years in Hong Kong and Taipei and has covered tech companies in the greater China region during that time.

New Solutions for Common Supply Chain Challenges

Luke Smith – EPS News

The supply chain industry, for better or for worse, has been largely defined by its recent challenges and the ability of businesses to handle those challenges. From pandemic to vendor disruptions, managing a modern supply chain comes with its fair share of obstacles.

Fortunately, however, [strengthening your supply chain to withstand changes](#) and challenges is possible with new tech and innovative thinking. With artificial intelligence and a host of networked smart devices, supply chains can implement greater visibility while increasing the efficiency of all processes.

Overcoming common supply chain challenges doesn't have to be difficult. Here's how innovation can help.

The challenges

Disruptions have come to the supply chain sector one after another. From the existing problem of minimizing shipping costs and emissions to the emergence of the pandemic, supply chain management has meant fighting a series of obstacles.

The risks of ineffectively managing these challenges are clear when you consider the realities of the global market. India, for example, is the world's leading provider of generic pharmaceuticals. Yet, India gets [70% of its raw materials from China](#). As you can imagine, the pandemic created supply chain disruptions that require quick thinking and innovative solutions.

Facing challenges like the following, tech is a vital aspect of modern supply chains:

Cost-effective, sustainable shipping.

Supply chains [account for more than 80% of greenhouse gas emissions](#). Eliminating these emissions can reduce costs and improve efficiency, but doing so requires everything from renewable energy sources to improved parts and vehicles. [Twenty percent of industrial energy](#) is spent fighting friction alone. Streamlined designs and procedures could change that.

Managing vendors.

Supply chains represent often vast webs of vendors, suppliers, managers, drivers, and more. Communication across this network requires transparency and flow, elements that are often lacking in supply chain processes. [Overcoming vendor management challenges](#) means finding solutions through clear and accessible communication platforms, framed with data-driven insights.

Overcoming Covid-19.

The pandemic continues to cause massive problems across supply chains, from shutdowns to labor shortages. Vaccine rollout has begun, but new tech and policies will still be needed to manage this and future public health crises.

These [challenges](#) make for a complicated landscape for any supply chain. Luckily, innovative solutions are here to help.

Innovating new solutions

Just as the modern era of supply chain management has been defined by its challenges, it has also been revitalized by innovations in tech and processes. From AI to the Internet of Things (IoT), these tools are making a difference:

Internet of Things (IoT) devices.

IoT consists of a range of networked devices that generate data through sensory and monitoring equipment. These devices can offer everything from insights into driver behavior to improved inventory tracking. In the wake of COVID-19, IoT represents [a shift in supply chain management](#) that is all about data-driven insights. The implications of these insights are limitless.

Artificial intelligence.

AI is one of the key technologies powering data analytics and insights. By harnessing raw data collected and assembled through smart devices and IoT, supply chain software keeps every aspect of the chain visible and usable. Whether AI is assisting in predictive maintenance insights for fleet vehicles or providing better routing and freight management information, [this tech offers simple ways to increase delivery efficiency](#).

Localizing for success.

The pandemic has emphasized the importance of flexible supply chains and localized sources. Tech can assist in managing these sources through transparency and available data,

then supply chain managers can redirect routes and inventory to more efficiently accumulate raw materials and transport goods. In fact, [40% of surveyed decision-makers](#) plan to near-shore and increase local supplier bases.

These are just a few of the modern innovations driving supply chain efficiency. With the right implementation, tech alongside flexible sourcing procedures will help build better supply chains for the future.

Right now, supply chain companies can get ahead of their challenges by exploring these innovations and encouraging out-of-the-box solutions in their own practices. Data-driven software platforms will be an invaluable part of this process. As the supply chain landscape shifts, keep these tips in mind for more effective solutions.

Russian 3D jet engine for drones may hit market this year

A Russian 3D-printed gas-turbine aircraft engine designated MGTD-20 readies commercialization later this year or in 2022 after it was successfully tested in flight last summer in the mid-Volga region of Tatarstan.

In Russia's first-ever such effort, this 22 kilogram*force propulsion unit is a collaborative product of the federal Advanced Research Fund (of which the closest analog in the U.S., for example, is DARPA), the Moscow-based All-Russian Scientific Research Institute of Aviation Materials (VIAM in Russian), and the Simonov Aircraft Design Bureau headquartered in Kazan, in Tatarstan.

With a wingspan of three metres, the aircraft's take-off weight is 40kg and its payload is up to 10kg. During its test flight, the drone completed its flight plan in the autopilot mode, reaching all the areas it had been programmed to reach at an altitude of 170m and a maximum cruise speed of 154km/h, and landed problem free. The new engine operated at a maximum rotational speed of 101,600RPM.

World Economic Round Up

The global economy, helped in part by improved outlooks in the US and Japan, will recover from a 3.5 percent fall in Gross Domestic Product (GDP) in 2020 with growth of 5.5 percent in 2021, up 0.3 percentage points compared with October's forecast. In an update to its flagship world economic outlook, the Washington DC-based IMF said the upgrade in global growth, while modest, reflected an increase in government spending to offset the worst effects of the pandemic and vaccination programmes that were being rolled out across richer nations. The latest economic news by country to include USA, Europe, UK, Japan, China, Asia Pacific and India can be found each month in our Semiconductor Monthly

Thanks to Future Horizons

CEOs Urge President Biden to Fund Chips, Executive Order Expected

By [Nitin Dahad](#)

As CEOs of the leading chip companies signed a [letter to US President Biden](#) urging him to prioritize funding for semiconductor manufacturing and research, the White House press secretary Jen Psaki said late last week in a press briefing that industry should expect an executive order to be signed within weeks.

The Semiconductor Industry Association (SIA) board of directors, CEOs and senior executives at leading chip companies sent a letter to President Biden urging him to include substantial funding for semiconductor manufacturing and research in the administration's economic recovery and infrastructure plan. SIA represents 98 percent of the U.S. semiconductor industry by revenue.

The context laid out in the letter said the share of global semiconductor manufacturing capacity in the U.S. had decreased from 37 percent in 1990 to 12 percent today. "This decline is largely due to substantial subsidies offered by the governments of our global competitors, which have placed the U.S. at a competitive disadvantage in attracting new fab construction. In addition, federal investment in semiconductor research has been flat, while other governments have invested substantially in research initiatives to strengthen their own semiconductor capabilities."

The SIA letter urges President Biden to prioritize semiconductor investment to reassert U.S. technological leadership and fulfill the goals of the Biden administration's "Build Back Better" plan. The CEO signatories on the letter are from AMD, Analog Devices, Cree, GlobalFoundries, Intel, Lattice Semiconductor, Marvell Semiconductor, Maxim, Micron Technology, ON Semiconductor, Qorvo, Qualcomm, Silicon Labs, Skyworks, Texas Instruments, Western Digital, Xilinx and the SIA. In addition, senior executives from Broadcom, IBM and Nvidia also added their signatures.

"Semiconductors power essential technological advancements across healthcare, communications, clean energy, computing, transportation, and countless other sectors, and chip-enabled technologies have helped keep us productive and connected during the pandemic," said John Neuffer, SIA president and CEO. "By investing boldly in domestic semiconductor manufacturing incentives and research initiatives, President Biden and Congress can reinvigorate the U.S. economy and job creation, strengthen national security and semiconductor supply chains, and ensure the U.S. remains the leader in the game-changing technologies of today and tomorrow."

By enacting the CHIPS for America Act in the FY 2021 National Defense Authorization Act (NDAA), Congress recognized the critical role the U.S. semiconductor industry plays in America's future. Now, SIA calls on the administration and Congress to fully fund the provisions authorized by the NDAA to make them a reality.

The White House response

In the White House press briefing on Thursday, press secretary Jen Psaki said, "The administration is currently identifying potential choke points in the supply chain and actively working alongside key stakeholders in industry and with our trading partners to do more now. At the same time, we are looking down the road. The longstanding issue with short

supply of semiconductors was — which was the question yesterday — is one of the central motivations for the executive order the President will sign in the coming weeks to undertake a comprehensive review of supply chains for critical goods. The review will be focused on identifying the immediate actions we can take, from improving the physical production of those items in the U.S., to working with allies to develop a coordinated response to the weaknesses and bottlenecks that are hurting American workers.”

Asked how seriously the White House was taking the issue and whether the review would take months, she responded, “Well, I said he’s going to sign an executive order soon, so he certainly is taking — we’re only three weeks in. He’s taking pretty quick action. But as is true with many policies, we want to take a comprehensive look at the most effective steps that we can take as an administration, across agencies that will have a role to play, to address what has been a longstanding challenge, which is the shortage.”



Nitin Dahad

Nitin Dahad is a correspondent for EE Times, EE Times Europe and also Editor-in-Chief of embedded.com. With 35 years in the electronics industry, he's had many different roles: from engineer to journalist, and from entrepreneur to startup mentor and government advisor. He was part of the startup team that launched 32-bit microprocessor company ARC International in the US in the late 1990s and took it public, and co-founder of The Chilli, which influenced much of the tech startup scene in the early 2000s. He's also worked with many of the big names - including National Semiconductor, GEC Plessey Semiconductors, Dialog Semiconductor and Marconi Instruments.



Issue 6 – February 2021

NEWS FROM THE IPC

NEW VISION. NEW FOCUS. NEW CONTENT.

We've got the best technical program in years, complete with brand new, forward-focused content.

For a limited time you can take a FREE sneak peek of one presentation from the Manufacturing Technology Center (MTC) Session: Factory of the Future Advancements. In this presentation, Barry Maybank and Naim Kapadia of MTC discuss their vision and journey enabling smart factory for electronics manufacturing for low-volume, high-mix environment using legacy equipment by implementing IPC-CFX. Barry and Naim share why MTC chose this path and what they see as the future for IPC-CFX as part of their goals and vision for their smart factory initiatives.

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- Experience the largest electronics industry collection of top suppliers, new product demos, and extreme innovation
- Make connections in educational sessions, chat with exhibitors and network virtually

Plan ahead! Save these dates for IPC APEX EXPO!

January 25 – 27, 2022 | San Diego Convention Center

January 24 – 26, 2023 | San Diego Convention Center

April 23 – 25, 2024 | Anaheim Convention Center

March 18 – 20, 2025 | Anaheim Convention Center

March 17-19, 2026 | Anaheim Convention Center



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International Diary

2021

IPC APEX EXPO goes virtual

March

6th EIPC Technical Snapshot Webinar

Registrations via www.eipc.org

March 17