



The European Institute for the PCB Community

EIPC SPEeDNEWS

Issue 16— June 2020

NEWS FROM GERMANY

SMTconnect 2020 goes digital

New format with multiple features

The digital edition of the SMTconnect will take place from 28th & 29th July 2020, and will be presented via the online platform Talque. The format opens up new possibilities for exhibitors and visitors to stay in touch and expand their professional network.

Due to the Corona pandemic, the SMTconnect will take place online this year. The event once again guarantees industry-wide exchange using a platform that enables exhibitors and visitors a wide range of functions. After creating a company or visitor profile, visitors and exhibitors are able to contact each other immediately via video call or chat by means of the platform's matchmaking and speed-dating feature.

Besides various networking features, the online format includes the option of publicizing relevant content on product innovations or trends with simple product presentations or topic-based group discussions. "The 'SMTconnect goes digital' offers great opportunities for efficient and sustainable networking. Moreover, it broadens expert dialogue on the future of electronics production," explains Anthula Parashoudi, Vice President SMTconnect, Mesago Messe Frankfurt GmbH.

Furthermore, visitors can experience the unique production line "Future Packaging", organised by Fraunhofer IZM, at the SMTconnect. The production line shows the complete assembly process, including subsequent test procedures. The production line will be depicted as a 3D video including interviews with participants and a discussion, offering valuable insights into electronics production. You can find more information on "SMTconnect goes digital" at www.smtconnect.com



The European Institute for the PCB Community

EIPC SPEeDNEWS

*The Weekly On-Line Newsletter from the European Institute of Printed Circuits.
Issue 16 – June 2020*

ELECTRONIC INDUSTRY NEWS

How COVID-19 Has Impacted the Electronics Supply Chain

The pandemic is a global crisis that no one could have anticipated but everyone could have prepared for. The spread of the lethal illness has hammered companies across the electronics supply chain. But it has also presented itself as a golden opportunity.

The global outbreak of COVID-19, the illness induced by the novel coronavirus, was bound to put stress on the supply chain. Of the industries impacted, electronics ranks among the most important—and potentially the most difficult to put right again. As of June 2, 2020, nearly every country in the world has reported coronavirus cases, with 371,000 deaths out of more than 6 million total confirmed cases.

The electronics supply chain was already in the throes of disruption before the outbreak. The tariff war between the United States and China forced the relocation of some high-profile electronics manufacturers from China to Southeast Asia, including GoPro, Kyocera and Nintendo moving manufacturing to Vietnam, as well as Casio, Daikin and Ricoh shifting operations to Thailand.

This year could have been a year of recovery for the electronics industry. Instead, it is filled with new challenges that threaten to significantly stem the flow of critical electronics and impact the introduction of new products for many months to come. Here's a look at how the sector has been affected and how companies are answering the challenge.

The Impact on Electronics Is an Evolving Situation

IPC is a trade organization dedicated to advocacy, education and support for the electronics industry. The group's 5,400 member companies come from all backgrounds, including electronics designers, assemblers, suppliers, and PCB manufacturers and OEMs. IPC was one of the fastest out of the gate to start supplying up-to-date insights into the evolving COVID-19 situation.

In March, IPC conducted a [survey of its members](#) to better understand the impact of the outbreak on electronics manufacturers. Here are the most significant highlights of what they found:

- Around 69% of respondents said they had received warnings from their suppliers about shipment delays. The average delay in March was three weeks, which has held steady since February.
- However, 15% of respondents said in March that they had been told to expect delays of at least six weeks. In February, no company had yet been quoted a six-week delay.
- Executives are even less optimistic than the average three-week delay indicated by suppliers. Surveyed electronics executives said they expected five-week delays on average.
- Most the companies polled said they “expect” their supply chains and businesses would be “back to normal” by July 2020. About 75% of respondents expect to return to normal operations by October 2020, while 25% said it is too early to make a prediction.
- The most widely impacted sector within electronics manufacturing and distribution is consumer electronics, followed closely by automotive and industrial electronics.
- Most of the respondents (56%) said they expect to report declines in sales through the first quarter of 2020 and 63% said they anticipate flagging sales through the second quarter. Around 62% of company representatives said they were bracing for a sales slump in 2020.

As the coronavirus started spreading throughout China in early 2020, the country curtailed both manufacturing output and travel, meaning factories were effectively shut down for several weeks. As a result, China’s Manufacturing Purchasing Manager’s Index—[a measurement of the health](#) of the manufacturing sector based on new orders, output, employment, delivery times and other factors—fell to its lowest level since the index was rolled out in 2004.

One discrepancy to point out— between estimates of shipping delays and the “actual” delays anticipated by electronics executives— comes down to two major factors, both of which are impacted by the fallout from the novel coronavirus.

These are manufacturing capacity and utilization. Brief periods of low utilization of existing manufacturing capacity and infrastructure can cause short-term financial hardship. However, if the disruption clears quickly, companies can bring their output back up over time to pre-disruption benchmarks.

COVID-19 has caused a significant and protracted drop in manufacturing utilization, however. Travel bans and facility closures kept workers out of their factories before and since the Chinese New Year on January 25, 2020.

And even the companies that resumed production did so in a limited capacity due to the scarcity of labor. For a long time, China’s manufacturing utilization remained far below pre-coronavirus figures because of ongoing labor shortages and skeleton crews.

Deloitte has identified several less-immediately-obvious impacts brought by COVID-19 as well. It is not just the day-to-day operations of a supply chain that are being affected. It is also the overall “velocity” of the value chain. Board and systems manufacturers have

become a noticeable bottleneck as the pandemic continues, meaning there may be stock available but that it could have no way to reach its destination due to the lockdown.

It is not just electronics parts and finished products that are affected, but also [products that are critical to their manufacture](#), such as steel baskets for cleaning and curing printed circuit boards. Every link in the electronics manufacturing value and supply chain is feeling the effects of limited travel for personnel and product.

According to Deloitte, coronavirus is creating less immediate but potentially much longer-term [disruptions to the value chain](#). Design decisions, new product launches, and time-to-market are all being impacted due to reduced internal meetings and lost opportunities to collaborate closely with outside business partners.

How Are Electronics Manufacturers Coping?

Without a vaccine available, the only viable method for “flattening the curve” and stopping the spread of COVID-19 is aggressive restrictions on social gatherings and travel and the closure of all but the most essential industrial sites. Sony Electronics, Dell Computers, Square, VMware and others have had to [withdraw their 2021 forecasts](#) due to the ongoing uncertainty presented by COVID-19.

In Sony’s case, the company had been focused on geographically distributing its most important facilities long before COVID-19 started to upend business around the world. And even that was far from enough.

The Japanese company not only had to [shut down manufacturing plants in China](#) and Malaysia—creating an unstable-at-best flow of parts and resources from Asia—but also a manufacturing plant in the UK. That closure lasted until late April.

Most of the respondents to the IPC survey (55%) indicated they were actively seeking alternative sources for components and materials, while about 54% said they were restricting business travel. Another 30% of the IPC members said they were encouraging or mandating telecommuting to help keep their workforce healthy and maintain forward momentum.

Deloitte outlines some of the other steps that companies can take to restart their operations. They divide these into three main categories:

- **Tactical actions:** Rolling out travel restrictions and work-from-home policies hurts in the short term, but it helps to safeguard employees and raises the chances that they are healthy once the outbreak wanes. Tactical actions also include expanding paid-time-off hours and understanding the risks of allowing visitors into offices and production plants.
- **Operational actions:** When factory closures are not mandatory, reducing output or shutting down a location may be the most logical thing a company can do. Electronics manufacturers and suppliers may need to push out product launches and

discuss new schedules with customers. They may also have to find alternative sources for materials and parts, potentially looking to nations that have been quicker to contain the outbreak.

- **Managerial actions:** Managers should consider creating “war rooms” to monitor the situation in real-time since it continues to evolve. Executives must also need to perform risk assessments, draw up procedures for hiring and plans for managing their workforce to quickly bring operations back to where they were before the outbreak.

In the end, it is not possible to anticipate an event like this and hammer out a perfect plan. The most important takeaway for electronics companies is to honestly address the risks of geographical concentration. Such a model constitutes a “single point of failure,” like the back-to-back earthquake and tsunami which hit Japan in 2011. At the time, [around 60% of critical parts](#) in the global automotive marketplace were produced there.

That event caused some companies to reevaluate the short-term benefits of geographical concentration against the long-term benefit of more flexible supply chains. COVID-19 represents a reckoning for companies that have not learned this lesson yet—and an opportunity for those that did.

A Year of Recovery

Every company in the global electronics supply chain hoped, and had many reasons to believe, that this would be a year of recovery after last year’s downturn. Trade tensions and new tariffs between China and the United States have caused uncertainty, closures, and lost profits. Many hoped that 2020 would bring a rebound. But COVID-19 had different plans for the global electronics trade.

As the sector fights to return to normal throughout 2020, this downturn can also be seen as an opportunity. Some lessons only need to be learned once — and one is the value of geographical diversity. Every country on earth is feeling the effects of coronavirus, but not necessarily to the same degree. Globalization is a controversial subject, but it appears now that the companies with the strongest sense of global citizenship and commitment to diverse value and supply chains could be the first to find their footing again.

***Megan R. Nichols**
ELECTRONIC DESIGN
JUN 02, 2020*



The European Institute for the PCB Community

EIPC SPEeDNEWS

The Weekly On-Line Newsletter
Issue 16 - June 2020

NEWS FROM THE UK



Free Online "Fundamentals of Electronics Packaging" Tutorial Reminder
"New Product Introduction for Micro-Electronics"
Friday 12 June 2020: 13:00 - 13:30
Allan Proudfoot, ALP Consulting

This tutorial will cover the following aspects of the New Product Introduction (NPI) **process for** electronic products **covering** product definition, design philosophy, verification/validation **and** the challenges of working with partners.

*Registration is **free** for this event, but limited to 100 places*

For any other details or information please contact:
IMAPS-UK Secretariat
125 High Street Chesterton
Cambridge CB4 1NL UK
Tel: +44 0131 2029004
e-mail: Office@imaps.org.uk

[Register Here](#)

Ventec High-CTI Substrate Drives Increased Vehicle Electrification

04 June 2020 – The increasingly complex typical vehicle electrical infrastructure, with many electronic control units (ECUs) positioned in harsh underhood environments where high humidity, -temperatures and atmospheric contaminants are expected, demands high reliability and durable materials for highest safety. Ventec International Group Co., Ltd. (6672 TT) has developed a high-CTI substrate (VT-441C) that offers an environmentally friendly, high-performance copper clad laminate that creates a stable and reliable platform on which to build ECU circuitry.

Increased electrification of vehicles is a trend now firmly entrenched, enabling more features, greater economy, superior reliability. ECU's are positioned in harsh and distributed throughout the vehicle managing functions from critical safety systems such as airbag or ABS controllers to engine management and comfort features such as electric windows and electric seats. Reliability and thermal management is a must, so paying attention to the properties of materials at the substrate level is the first step towards achieving the most stringent performance targets.

The solution begins with high-performance substrate materials such as Ventec's VT-441C high-CTI substrate that ensures reliability in the presence of high applied voltages in harsh and humid environments. With a Grade 0 (>600) Comparative Tracking Index (CTI) and a glass transition temperature (Tg) of 155°C, the versatile halogen-free material is the perfect choice for use in extreme high-temperature/humidity applications.

VT-441C is available in sheet or panel form with core thicknesses of 0.004" (0.10mm) to 0.200" (5mm).

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



The European Institute for the PCB Community

EIPC SPEeDNEWS

*The Weekly On-Line Newsletter from the European Institute of Printed Circuits.
Issue 16 – June 2020*

NEWS FROM THE USA

HDP User Group Announces Free Automotive Electronics Webinar

Cave Creek, Arizona May 19, 2020 - High-Density Packaging (HDP) User Group is pleased to announce it is hosting a webinar that will provide its members and others in the electronic industry the latest information on standard requirements and developments in automotive electronics.

"Automotive Electronics is one of the fastest-growing segments of advanced electronics technology. We have planned an informational session that will cover the latest developments in automotive standards and automotive electronic packaging", said Marshall Andrews, Executive Director of HDP User Group.

The Webinar will be held on June 25, 2020, at 8 AM USA Central Time.

Agenda 8:00 AM – 11:00 AM US Central Time

Welcome – Larry Marcanti, HDP

Opening of the Webinar by the Moderator Jan Vardeman, President, and Founder of Techsearch International, a leading consulting company in the field of advanced semiconductor packaging technology.

**Mobility Trends and Their Impact on The Automotive Supply Chain
ZVEI – DR Stefan.Gutschling**

**Power PCB requirements for Automotive Applications
Ventec Laminates – Alun Morgan**

**Automotive Packaging Trends – Challenges & Solutions
Infineon – Thorsten Meyer**

The regulatory landscape for vehicle electronics and primary evaluation tools for PCB reliability demands in the new e-mobility market.

UL – Art Creidler

Considerations in Automotive PCB manufacture
TTM – Raj Kumar

Round Table & Questions

The Webinar is in the English language. Please register for webinar log-in and call details by emailing your contact info (name, Company Info, Email) to one the following people.

kima77@hdpug.org

martinc@hdpug.org

larrym@hdpug.org

About HDP User Group

HDP User Group (www.hdpug.org) is a global research and development organization based in Cave Creek Arizona, which is dedicated to “reducing the costs and risks for the Electronics Manufacturing industry when using advanced electronic packaging and assembly.” This international industry-led group organizes and conducts R&D programs to address the technical issues facing the industry, including design, printed circuit board manufacturing, electronics assembly, and environmental compliance. HDP User Group maintains additional offices in Austin, Texas, and Singapore.

For more information, visit HDP User Group on the Internet at www.hdpug.org or contact Darryl Reiner at darrylr@hdpug.org, phone number +1 480-951-1963



Issue 16 – June 2020

NEWS FROM THE IPC

IPC to Help Grow Electrical Wire Processing Technology Expo, Contracted to Manage Event Beginning in 2021

To help add new benefits, attract more attendees, increase exhibitor participation and cultivate a higher level of training, education and engagement seminars for guests and participants, IPC has been selected to manage the Electrical Wire Processing Technology Expo (EWPTe) in Milwaukee for the years 2021 to 2025.

EWPTe, held annually at the Wisconsin Center, is one of the leading shows for the electrical wire and cable processing industries. The past few years have drawn an expanded roster of exhibitors and visitors and the 2019 event saw close to 3,000 attendees from 40 states and 25 countries and nearly 200 exhibiting companies. Major automotive manufacturers such as Ford, Fiat Chrysler, and General Motors, plus notable international companies including Boeing, General Electric, Briggs & Stratton, and Harley-Davidson sent representatives to the two-day show to see the latest trends, technologies, and products shaping the future.

In addition to IPC providing logistical and marketing support, including exhibit and sponsorship sales, event promotion, exhibitor and attendee registration, hotel room contracting and additional general event administration, IPC will also develop a technical conference component to the event as well as host our summer committee meetings, IPC SummerCom in conjunction with the event.

“IPC’s affiliation with the Wiring Harness Manufacturer’s Association (WHMA), the only trade association exclusively representing the cable and wire harness manufacturing industry, will help grow EWPTe as a globally recognized tradeshow. IPC and WHMA look forward to working with Wisconsin Center staff and the EWPTe Advisory Committee to

produce a world-class event for the wire processing industry,” said David Bergman, WHMA executive director and IPC vice president of standards and technology.

“IPC has a proven track record in tradeshow management. IPC’s annual flagship event, IPC APEX EXPO, is the largest event in North America for electronics manufacturing and draws attendees and exhibitors from around the world. We believe their expertise will help grow EWPTTE as a globally recognized tradeshow,” said Marty Brooks, president and CEO of Wisconsin Center District.

The next Electrical Wire Processing Technology Expo will be held May 12-13, 2021 at the Wisconsin Center in downtown Milwaukee. For more information on the Expo, contact Alicia Balonek, IPC senior director, tradeshow and events, at AliciaBalonek@ipc.org.

North American PCB Industry Sales up 3.7 Percent in March
IPC Releases PCB Industry Results for March 2020

[IPC — Association Connecting Electronics Industries®](#) announced today the March 2020 findings from its North American Printed Circuit Board (PCB) Statistical Program. The book-to-bill ratio stands at 1.15.

Total North American PCB shipments in March 2020 were up 3.7 percent compared to the same month last year. Compared to the preceding month, March shipments rose 31.6 percent.

PCB bookings in March increased 10.1 percent year-over-year. Bookings in March increased 8.7 percent from the previous month.

“COVID-19 related disruptions in the global supply chain continue to drive North American PCB orders and shipments. March 2020 saw a near historic month-over-month rise in shipments as North American PCB manufacturers worked to deliver crucial components for equipment like ventilators into the medical supply chain,” said Shawn DuBravac, IPC’s chief economist. “March sales and orders are the highest the industry has seen since April 2017 and April 2020 shipments are poised to reach levels not seen since 2006.”

Detailed Data Available

Companies that participate in IPC’s North American PCB Statistical Program have access to detailed findings on rigid PCB and flexible circuit sales and orders, including separate rigid and flex book-to-bill ratios, growth trends by product types and company size tiers, demand for prototypes, sales growth to military and medical markets, and other timely data.

Interpreting the Data

The book-to-bill ratios are calculated by dividing the value of orders booked over the past three months by the value of sales billed during the same period from companies in IPC’s survey sample. A ratio of more than 1.00 suggests that current demand is ahead of supply, which is a positive indicator for sales growth over the next three to twelve months. A ratio of less than 1.00 indicates the reverse.

Year-on-year and year-to-date growth rates provide the most meaningful view of industry growth. Month-to-month comparisons should be made with caution as they reflect seasonal effects and short-term volatility. Because bookings tend to be more volatile than shipments, changes in the book-to-bill ratios from month to month might not be significant unless a trend of more than three consecutive months is apparent. It is also important to consider changes in both bookings and shipments to understand what is driving changes in the book-to-bill ratio.

IPC's monthly PCB industry statistics are based on data provided by a representative sample of both rigid PCB and flexible circuit manufacturers selling in the USA and Canada. IPC publishes the PCB book-to-bill ratio by the end of each month.



The European Institute for the PCB Community

EIPC SPEeDNEWS

Issue 16 – June 2020

International Diary

2020

EIPC Webinar with Walt Custer

Business Outlook for Global Electronics Industry

Fully booked!

9 June

EIPC Webinar with Walt Custer

Business Outlook for Global Electronics Industry

Fully booked!

23 June

KPCA

21-23 July

Incheon, Korea

EIPC @ Evertiq Expo

3 September

Tampere, Finland

FED Conference

17-18 September

Augsburg, Germany

IPCA Expo

23-25 September

India

TPCA Exhibition

21-23 October

Taipei, Taiwan

EIPC @ Electronica 2020

10-13 November

München, Germany

ECWC15, WECC World Electronics Circuits Council

30 November-2 December

Shenzhen, China

HKPCA Exhibition

2-4 December

Hong Kong, China

2021

EIPC @ SMTconnect

4-6 May

Nuremberg, Germany