



The European Institute for the PCB Community

# EIPC SPEeDNEWS

*The Weekly On-Line Newsletter*

*Issue 1 – January 2023*

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## NEWS FROM THE EIPC

Pete Starkey of I-Connect007 gave his customary excellent review of the EIPC Technical Snapshot held at the end of 2022 and this may be found in the following link.

<http://pcb.iconnect007.com/index.php/article/134552/eipc-technical-snapshot-there-is-no-green-without-digital/134555/?skin=pcb>



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### **NEWS FROM GERMANY**

#### **SCHWEIZER reorganises China business**

Schweizer Electronic AG has successfully concluded negotiations to sell around 57% of the shares in its subsidiary Schweizer Electronic (Jiangsu) Co., Ltd. based in Jintan/China ("SEC") to WUS Printed Circuit (Kunshan) Co., Ltd. based in Kunshan/China ("WUS"). WUS currently holds a stake of around 13% in SEC and will hold 70% of the shares in SEC upon closing of the transaction. WUS has been SCHWEIZER's most important strategic partner since 2014 and has held a direct stake in Schweizer Electronic AG since then.

SEC will continue to be an essential part of the SCHWEIZER group strategy despite the change in the shareholding structure. This step enables SCHWEIZER to offer customers high-tech products from China in addition to the German production site, as it did previously and irrespective of the changed shareholding structure in SEC. To this end, we are pursuing an intensive technological cooperation with WUS to manufacture the chip embedding p<sup>2</sup>-Pack and technologically sophisticated printed circuit boards for SCHWEIZER at the Jintan site as planned. This cooperation with WUS has already proven its worth in the field of high-frequency printed circuit boards in the past, where SCHWEIZER already generates almost 30 percent of group sales.

For SCHWEIZER, this reorganization means a transition to a 'Fab Light Concept'. This involves an even stronger focus of the company on developing new high-tech printed circuit boards and embedding technologies, an even better penetration of the mobility market with a focus on Europe and North America, the development of new market

segments and the expansion of the service portfolio.

SCHWEIZER continues to focus on the production site in Schramberg, following the trend towards increased local value creation and supply chain security and also to be able to serve larger, technologically demanding volumes from Europe.

The transaction will significantly strengthen SCHWEIZER's financial solidity and reduce risks by lowering fixed costs significantly. This step is also in line with the changing global political environment. We expect that the intensified strategic and operational cooperation with WUS will leverage valuable synergy potentials in the areas of procurement, financing and administration for the Chinese site, which will further improve the competitiveness of SCHWEIZER technologies. Furthermore, we will pursue close cooperation with WUS in the Asian and Chinese markets in order to benefit from their exceptionally well-established network, especially in the mobility segment. From this, we expect increased visibility and penetration of our p<sup>2</sup>-Pack technology in the dynamically growing e-mobility market in China.

WUS subsequently intends to carry out a capital increase at the Jintan site, which will provide SEC with sufficient funds to ensure further growth investments without restrictions. WUS's share in SEC will increase to approx. 80 % as a result.

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Pictures: [Schweizer Electronic AG](#) | [Flickr](#)

## **About SCHWEIZER**

Schweizer Electronic AG offers the latest, cutting-edge technology and consultancy expertise in the PCB industry. Thanks to its state-of-the-art production facilities in Schramberg, Germany and Jintan, China as well as close partnerships with other technology leaders, SCHWEIZER provides individual PCB & Embedding solutions. SCHWEIZER's innovative PCB technologies are used in the most demanding applications, for example, in the Automotive, Aviation, Industry & Medical and Communications & Computing sectors, and are characterised by their extremely high quality and energy-saving and environmentally-friendly features.

The company was founded by Christoph Schweizer in 1849 and is listed at the Stuttgart and Frankfurt Stock Exchanges (ticker symbol „SCE“, „ISIN DE 000515623“).

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### **ELECTRONICS INDUSTRY NEWS**

**China is losing its place as the center of the world's supply chains. Here are 5 places supply chains are going instead.**

China's COVID-19 policies are pushing companies to diversify supply chains away from the country. They had already begun moving out over geopolitical tensions and tariffs from the Trump era.

India, Vietnam, Thailand, Malaysia, and Bangladesh are stepping up to replace the world's factory.

China has been the factory of the world for the past four decades. The pandemic triggered a reckoning of this status.

China's rise as the world's factory spanned four decades and ushered in an era of globalization and integrated supply chains.

That facade started to crumble around 2018 after President Donald Trump launched a trade war against the East Asian giant. This, in turn, has prompted investors to reassess their geopolitical risks.

While some investors did move parts of their manufacturing facilities out of China at the time, it was the pandemic — and China's zero-COVID policy — that drove home the importance of not depending on one country for manufacturing needs.

"The geopolitical tensions, in themselves, may not have resulted into this level of realignment of supply chains, but COVID certainly provided that extra vision, extra fillip, the extra fuel to the fire," Ashutosh Sharma, a research director at the market-research firm Forrester, told Insider this month.

And the effects of the trade war linger. President Joe Biden hasn't put the kibosh on the elevated tariffs Trump imposed on China — in fact, in October, he imposed export controls on shipping equipment to Chinese-owned factories making advanced logic chips. This further burdened a strained relationship.

To navigate this complicated web of US-China trade tensions, multinationals are, now more than ever, looking to hedge their business risks.

Here are five countries where China's supply chains are moving to.

**India** is trying to unseat China in higher-end manufacturing, with the iPhone maker Apple and chipmakers eyeing its vast land and young population.

With its vast land and large, young population, India is a logical alternative to China as the world's factory.

India is set to surpass China in 2023 as the most populous country, the UN's Department of Economic and Social Affairs said in a July report.

Apple has already moved some of its iPhone production to the Indian states of Tamil Nadu and Karnataka and is exploring moving its iPad manufacturing to the South Asian nation. JPMorgan analysts expect Apple to move 5% of its iPhone 14 production to India by the end of 2022, they wrote in a September note. They said they believed 1 in 4 iPhones would be made in India by 2025.

"India has a large labor pool, a long history of manufacturing, and government support for boosting industry and exports," Julie Gerdeman, the CEO of Everstream, a platform for supply-chain risk management, told Insider. "Because of this, many are exploring whether Indian manufacturing is a viable alternative to China."

The move is easier said than done.

Indian Prime Minister Narendra Modi has been working on attracting foreign direct investments since he took office in 2014, sending FDI to a record \$83.6 billion in the past fiscal year, according to government data.

But significant hurdles still exist — even though the Indian government is boosting its appeal for foreign investments, it's harder to do business in the country than in China, partly because of bureaucracy and multiple stakeholders that prolong decision-making.

**Vietnam** has been undergoing rapid economic reform since 1986, which has yielded significant returns.

As a communist country, Vietnam — like China — has been undergoing rapid economic reform since 1986.

The reforms have yielded results, propelling Vietnam from “one of the world’s poorest nations to a middle-income economy in one generation,” The World Bank said in a November post.

In 2021, Vietnam attracted over \$31.15 billion in foreign-direct-investment pledges — up more than 9% from the prior year, according to the country’s Ministry of Planning and Investment. About 60% of the investments went into the manufacturing-and-processing sector.

Vietnam’s key strengths are in the manufacturing of apparel, footwear, and electronics and electrical appliances.

Apple has already moved some iPhone manufacturing to Vietnam and is planning to move some of its MacBook production to the Southeast Asian nation.

Other companies that have shifted some of their production lines out of China to Vietnam are Nike, Adidas, and Samsung.

**Thailand’s** FDI rose threefold between 2020 and 2021.

As Southeast Asia’s second-largest economy, Thailand has been moving up the value chain in manufacturing and is a production hub for car parts, vehicles, and electronics, with multinationals such as Sony and Sharp setting up shop there.

Sony said in 2019 it was closing its Beijing smartphone plant to cut costs and relocated some of the production to Thailand. Sharp said in the same year it was moving some of its printer production to Thailand because of the US-China trade war.

It’s not just international firms. Even Chinese companies have relocated parts of their supply chains to Thailand. Companies producing solar panels, such as Shanghai’s JinkoSolar, are moving their production to the island nation to take advantage of lower costs and avoid geopolitical tensions, the South China Morning Post reported in July.

“Setting up manufacturing plants abroad didn’t come from [the pursuit of] opportunities, it is more of a strategy to deal with challenges to gain market access,” Zhuang Yan, the president of Canadian Solar, said at an industry event in July, SCMP reported.

Foreign direct investments rose threefold to 455.3 billion Thai baht, or about \$13.1 million, between 2020 to 2021, the Thailand Board of Investment announced in February.

**Bangladesh** is already a beneficiary of the supply-chain shift away from China. It now wants a bigger slice of the pie.

Even before the COVID-19 lockdowns crippled China's manufacturing sector, Bangladesh was a rising star in the garment-manufacturing sector.

Bangladesh's rise was primarily due to rising labor costs in China predating Trump's presidency.

The cost difference is large — the average monthly salary of a worker in Bangladesh is \$120, or less than one-fifth of the \$670 a factory worker takes home in the southern-China manufacturing hub of Guangzhou, Mostafiz Uddin, the owner of the Bangladeshi apparel manufacturer Denim Expert, told Insider.

"Moreover, rising material costs are pushing apparel companies to look for alternative destinations like Bangladesh where production prices are comparatively low," Uddin said.

Despite a high-profile building collapse that killed at least 1,132 people in April 2013 and dented Bangladesh's work-safety reputation, its garment-manufacturing industry is a key pillar of its economy, accounting for nearly 85% of shipments, or over \$42 billion of the country's exports, in 2021. The country is also the world's second-largest garments exporter, after China.

Bangladesh is now working to attract investments beyond the garment sector into others, including pharmaceuticals and agriculture processing. Malaysia has for years been eyeing opportunities emerging from companies shifting away from China.

**Malaysia** has been eyeing opportunities from the manufacturing shift out of China for the past few years.

It has made some headway with the efforts, as it has attracted at least 32 projects that have relocated from China to Malaysia, the Malaysian Investment Development Authority said in July 2020. The authority didn't provide details of the projects or of the companies that moved.

But even before the pandemic, tech investments into Malaysia had been rising because of lower labor costs and US-China trade tensions. Major deals over the past few years included a 1.5 billion Malaysian ringgit, or \$339 million, investment by the US chip giant Micron over five years

starting in 2018. Jabil, a US company that makes iPhone covers, has also expanded its operations in Malaysia.

“We knew quite a number that have expressed their intention to shift from China and we have engaged them. The only thing is timing,” Azman Mahmud, then the CEO of the Malaysian Investment Development Authority, told The Malaysian Reserve in 2020.

Malaysia’s FDI inflows hit a five-year high of \$48.1 billion in 2021, with manufacturing of electronics and vehicles being the main contributor, according to official government information

***Dec 26, 2022***

***Huileng Tan***

***Business Insider***



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## NEWS FROM THE UK

### **UK Manufacturing decline gathers pace amid subdued demand**

UK manufacturing contraction worsened in December as output, new orders, and employment declined at faster rates due to subdued demand conditions both domestically and internationally impacted by price pressures and increased market volatility, final results of the purchasing managers' survey by S&P Global showed Tuesday.

The S&P Global/Chartered Institute of Procurement & Supply manufacturing Purchasing Managers' Index fell to a 31-month low of 45.3 in December from 46.5 in November. The index has remained below the neutral 50.0 mark for five successive months. Nonetheless, the score was above the flash estimate of 44.7.

Among components, output, new orders, employment and stocks of purchases all fell at accelerated rates, while vendor delivery time, which is an indicator of supply chain stress, lengthened to the least marked extent since January 2020.

Production at UK factories fell for the sixth successive month in December, linked to declining intakes of new work and disruption caused by stretched supply chains and material shortages.

As a result of weaker domestic and overseas demand, economic uncertainty, client destocking, and order deferrals, the number of new projects received declined.

Considering the export market, manufacturers reported lower demand from China, the US, mainland Europe and Ireland.

The fall in exports was mainly caused by weak global economic conditions along with shipping delays and higher costs amid Brexit-related issues, leading some EU clients to source products elsewhere.

Manufacturing employment fell for the third successive month and the rate of loss was the steepest since October 2020. During the month, excess capacity became more evident, with backlogs of work falling at the second-fastest rate in over a decade.

On the price front, the survey showed that the rates of increase in both output prices and input costs eased further. Average cost prices grew for the thirty-seventh consecutive month, albeit at the slowest pace since November 2020.

The overall increase in input costs largely reflects higher prices for chemicals, electronics, energy, food products, packaging, paper, plastics, and timber. In line with the easing in cost inflation, the rate of increase in selling prices dipped to a near two-year low.

“However, as this is mainly just the result of weakened demand reducing supply imbalances, it is unlikely to provide much real respite for manufacturers and their operating margins as they head into what looks like being a difficult 2023,” Rob Dobson, director at S&P Global Market Intelligence, said.



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### NEWS FROM VIETNAM

**Printed circuit board manufacturers are increasingly investing in Vietnam for the expansion of global suppliers such as Foxconn, Qisda, and Luxshare**

By Oanh Nguyen  
Vietnam Investment Review

Taiwan Printed Circuit Board Techvest (TPT), which is one of the leading suppliers of consumer electronics product in the world, is completing procedures for the construction of a printed circuit board (PCB) factory in Thanh Liem Industrial Zone (IZ) in northern Ha Nam province after receiving a registration certificate from the provincial authority in November. PCBs are the base component of many electronic items like motherboards and graphics cards.

Nguyen Thi Hong Chuyen, deputy general director of Capella Land JSC, the investor of Thanh Liem IZ, told VIR that TPT's project will cover an area of about 84,000 sq.m and have total investment of \$30 million. The company eventually plans to increase capital to \$60 million. Construction is expected to start in the first quarter of 2023.

“Via working sessions with foreign partners and business trips aboard, I see that many manufacturers have intentions to invest in Vietnam for the expansion of large partners such as Foxconn, Luxshare, and Wistron,” said Chuyen.

“The priority criteria for their investment is the complete transport infrastructure, potential of labour force as well as the professional and open investment environment. They want to locate their facilities near global suppliers for convenience in the delivery of goods. After negotiating, TPT has

decided to invest in Thanh Liem IZ of Ha Nam because the province is a hub for both Wistron and Qisda.”

Long-term, second phase construction is aimed to start before the end of 2025 to start official operation in mid-2026. The factory will manufacture at a capacity of over 800,000 products per year. TPT’s partners are currently LG, Foxconn, Samsung, Compal, Wistron, and Qisda.

In May, Qisda CEO Peter Chen said that the group would accelerate plans to expand production capacity in Vietnam, adding that the purpose of the move was to reduce dependence on the production market. The group developed a \$400-million factory in Hanoi in just six months, and Qisda took nearly 20 satellite firms to the province to manufacture products to export to the EU and the United States. Accordingly, it will shift one-third of its capacity from China to Vietnam over the next 2-3 years.

Along with Qisda, other tech groups such as Luxshare ITC and Foxconn are eager to expand their operation in Vietnam, with projects worth hundreds of millions of dollars.

Vietnam is also on the shortlist of many Taiwanese-based PCB suppliers considering relocating manufacturing to Southeast Asia, according to newswire Digitimes. Other Taiwan-based companies accelerating relocation projects include Taiflex Scientific, Elite Materials, Iteq, Flexium Interconnect, and Chin Poon Industrial.

A JPMorgan analysis forecasts that the current figure of 95 per cent of Apple products made in China will drop to about 75 per cent by 2025. Instead, the tech giant plans to move its production chain to Vietnam and India. JPMorgan estimates that Apple will relocate 20 per cent of iPad, 5 per cent of MacBook, 20 per cent of Apple Watch, and 65 per cent of AirPods production to Vietnam by the middle of the century.

Meanwhile, Vector Fabrication Inc. from the United States is preparing to start construction of a \$60 million factory for micro-electro-mechanical systems and PCBs in Danang Hi-Tech Park. Covering 40,000 sq.m, the factory’s first phase will come into operation in early 2025.

Vector has more than 15 years of experience in PCB manufacturing for consumer electronics, medical, telecommunications, automotive, and aerospace industries. It also currently operates a factory in the southern province of Binh Duong, which provide products for Apple, Logitech, Maxim Integrated, and others.



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## NEWS FROM THE IPC

### **Industry Demand Holding Up Despite Deteriorating Economic Outlook, High Costs Continue to Create Challenging Conditions for Electronics Manufacturers**

*IPC issues December Global Sentiment of the Electronics Supply Chain Report*

IPC's [December Global Sentiment of the Electronics Supply Chain Report](#), indicates that over the next six months, manufacturers expect to see continued increase in both labour and material costs. Ease of recruitment and profit margins are likely to remain challenging.

Among other data, survey results show:

- Demand remains solid, but closes the year on a lighter note: The Orders Index began the year at 123, strongly in expansionary territory, but closes the year at 107. This is solidly in expansionary territory but down for a second consecutive month and the lowest reading this year.
- Supply chain constraints have improved notably since the start of the year: The Inventories Available to Customers (IAC) Index has improved throughout the year. It began the year in contractionary territory but ends the year at 105 suggesting available inventories are growing.
- Costs remain elevated: The Materials Costs Index dropped one-point last month, to an all-time low, but the index remains high, suggesting cost pressures continue.

For the report, IPC surveyed hundreds of companies from around the world, including a wide range of company sizes representing the full electronics manufacturing value chain. [View full report](#).

For more information on IPC's industry intelligence program including new reports, visit: [www.ipc.org/advocacy/industry-intelligence](http://www.ipc.org/advocacy/industry-intelligence).

## **North American EMS Industry Down 0.6 Percent in November**

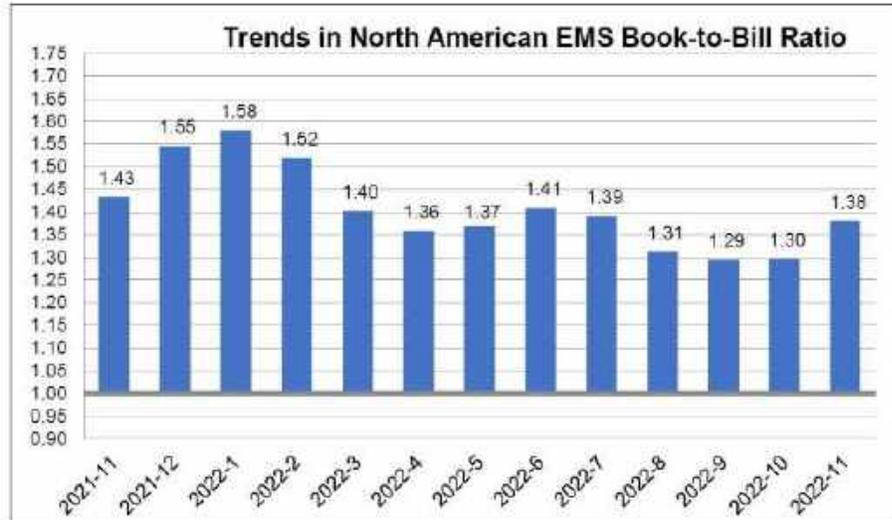
IPC releases EMS industry results for November 2022

[IPC](#) announced today the November 2022 findings from its North American Electronics Manufacturing Services (EMS) Statistical Program. The book-to-bill ratio stands at 1.38.

Total North American EMS shipments in November 2022 were down 0.6 percent compared to the same month last year. Compared to the preceding month, October shipments decreased 8.8 percent.

EMS bookings in October decreased 9.1 percent year-over-year and decreased 6.6 percent from the previous month.

“The industry recorded a decline in orders for the second consecutive month, but shipments were also subdued, keeping the book-to-bill elevated,” said Shawn DuBravac, IPC’s chief economist. “Shipments are roughly 15 percent below what we would expect given recent order volume, likely a sign of continued supply chain challenges.”



### Detailed Data Available

Companies that participate in IPC's North American EMS Statistical Program have access to detailed findings on EMS sales growth by type of production and company size tier, order growth and backlogs by company size tier, vertical market growth, the EMS book-to-bill ratio, 3-month and 12-month sales outlooks, 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 EMS industry statistics are based on data provided by a representative sample of assembly equipment manufacturers selling in the USA and Canada. IPC publishes the EMS book-to-bill ratio by the end of each month.



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## International Diary

### 2023

#### **EIPC Winter Conference**

Visit Bugey Nuclear Power Plant

9 & 10 February

Lyon, France

#### **21<sup>st</sup> EIPC Technical Snapshot Webinar**

Registrations via [www.eipc.org](http://www.eipc.org)

April

#### **EIPC @ SMTconnect**

9-11 May

Nuremberg, Germany

#### **EIPC Summer Conference**

15 & 16 June

#### **22<sup>nd</sup> EIPC Technical Snapshot Webinar**

Registrations via [www.eipc.org](http://www.eipc.org)

September

#### **23<sup>rd</sup> EIPC Technical Snapshot Webinar**

Registrations via [www.eipc.org](http://www.eipc.org)

October

#### **EIPC @ Productronica 2023**

14-17 November

München, Germany

#### **24<sup>th</sup> EIPC Technical Snapshot Webinar**

Registrations via [www.eipc.org](http://www.eipc.org)

December