The European Institute for the PCB Community

EIPC SPEeDNEWS

The Weekly On-Line Newsletter from the European Institute of Printed Circuits.
Issue 14 – April 2021

NEWS FROM GERMANY

Schweizer Electronic AG confirms consolidated figures for the 2020 financial year and outlook for 2021

- **Preliminary figures for the 2020 financial year confirmed**
- **Revenue above expectations following significant recovery in the fourth quarter**
- **EBITDA in line with expectations**
- **Forecast for 2021 with sales increase of more than 20 percent**

Schramberg, 23 April 2021 – Today SCHWEIZER published the full report for the 2020 financial year and confirms the preliminary figures. The SCHWEIZER Group achieved consolidated sales of EUR 98.3 million in the 2020 financial year, exceeding the projected sales of between EUR 87 and 93 million. Earnings before interest, taxes and depreciation (EBITDA) of EUR -9.5 million (previous year: EUR +0.1 million) with an EBITDA ratio of -9.7 percent were in line with the expectations for 2020 that had been specified in July 2020.

Marc Bunz, Chief Financial Officer of Schweizer Electronic AG, comments: "In view of the challenges posed by the COVID-19 pandemic and the transformation process of our most important customer group – the European automotive industry – and the current expansion of our new high-tech plant in Jintan (China), we achieved a lot in the 2020 financial year. Of course, we are not satisfied with a decline in total annual sales of -18.6 percent and an EBITDA ratio of -9.7 percent. However, we are well prepared for the future due to the successful implementation of restructuring measures in Schramberg and the expansion of capacity thanks to our plant in China."

Development of sales

With sales of EUR 29.3 million in the fourth quarter of 2020, the development of sales has recovered significantly in comparison to the previous quarters of the year. Particularly characteristic of this positive development is the increased demand from automotive customers with a 73.5 percent share of turnover from September onwards. The share of sales in the non-automotive sector developed also positively, rising to 26.5 percent (2019: 23.8 percent).

Operating margin and operating result

Gross profit on sales amounted to EUR +0.4 million (previous year: EUR +12.6 million). The gross margin fell from +10.5 percent in the previous year to +0.4 percent. The main reasons for the decline were, on the one hand, the production costs of EUR 15.8 million for the newly built plant in Jintan (China), which were included in the cost of sales for the first time, and the negative gross earnings contribution generated by the new plant as a result of the ramp-up phase. On the other hand, the main reason for the lower gross profit is the decline in business volume due to the coronavirus pandemic.
Special expenses from the restructuring and a bad debt loss of EUR 2.9 million and the start-up losses of the new

plant in Jintan (China) of EUR 8.3 million impacted upon EBITDA (earnings before interest, taxes and depreciation) in 2020. EBITDA amounted to EUR -9.5 million in 2020 (2019: EUR +0.1 million), which corresponds to an EBITDA ratio of -9.7 percent (previous year: +0.1 percent). Adjusted for these factors affecting earnings, EBITDA amounted to EUR +1.7 million.

Outlook

For 2021, the Executive Board expects a significant recovery of sales figures, whereby the dynamics of SCHWEIZER's recovery will largely depend on two factors, in addition to the further development of the coronavirus pandemic:
First and foremost is the continued positive development of the new plant in Jintan (China) and the technology qualifications and important certifications planned for 2021. The further development of the new plant in China will enable SCHWEIZER to become more international and broaden its customer base.
The second important factor for the development of the company will be the stability of supply chains in the global context. A sustained shortage of components can lead to a limitation in both customer demand and supplier offers.
Based on forecasts for the development of the global economy, the PCB market and SCHWEIZER's new structure of a German-Chinese PCB group, the Executive Board expects sales growth of between 20 and 30 percent in 2021 and an improvement in the EBITDA ratio to 0 to -6 percent in terms of sales.

The full annual financial report for the 2020 financial year is available at www.schweizer.ag / Investor Relations / Annual Report or
https://schweizer.ag/en/investors-media/financial-reports/download-reports.

Key figures SCHWEIZER Group

in EUR million	**2020**	**2019**
Order book	109.2	126.7
Revenues	98.3	120.7
EBITDA	-9.5	0.1
EBITDA ratio (%)	-9.7	0.1
EBIT	-18.5	-6.5
EBIT ratio (%)	-18.8	-5.4
Annual result	-17.9	-5.6
Equity ratio (%)	17.4	24.1

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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ELECTRONIC INDUSTRY NEWS

PC component shortage to start easing in 2Q22, says Foxconn chairman

Ninelu Tu, Taipei; Joseph Tsai, DIGITIMES
Wednesday 21 April 2021

Shortages of PC components should start easing in the second quarter of 2022, according to Young-Way Liu, chairman for Foxconn Electronics (Hon Hai).

Liu also pointed out that the delivery schedules for some raw materials that require long processing time have already extended to 52 weeks.

Although increasing component demand does not necessarily mean rising sales at the end channel, Liu believes it represents clients' concerns over the short supply of components and raw materials.

Since the upstream supply chain is currently filled with short-term orders, actual end-market demand may not be truly represented until the present scrambling for supply subsides, Liu said.

Factors such as the US-China trade tensions, sanctions on Huawei, pandemic-inflicted supply chain disruptions, the rise of the stay-at-home economy and the taking off of 5G have all played a part in affecting the IT market, Liu added.

Although overbooking by clients could be a major factor leading to the current component shortages, Liu believes this is not the case with the automotive semiconductor industry, as the electrics vehicle (EV) market has continued enjoying surging growths.

Foxconn will push to obtain more patents for its "3+3" strategy, which targets six major sectors: electric vehicles (EV), digital healthcare, robots, AI, semiconductor and new-generation communication technologies.

> The company so far has obtained around 300 patents for EVs and is set to demonstrate some of its key technologies and products related to EV batteries at an event in October, Liu added.

DESIGNLINES
EELIFE

The Chip Shortage: Moore Than Potatoes

By Don Scansen

"I think this is the first time in my 41-year career in the semiconductor industry that people are waking up to the fact that the electronic systems industry just doesn't exist without semiconductors. Those of us in this industry for any length of time always knew this, but the governments and general public are just now realizing this fact."
— Bill McLean, president of IC Insights, in Semiconductor Engineering

With so many unanticipated events in the last year, perhaps none is more surprising than the rise of the integrated circuit in the consciousness of regular folks beyond our own technology circles of influence. But of course, this much appreciated situation is the outcome of other less desirable events.

Panic Purchasing
A well-worn news story of the early pandemic was the panic-driven shortage of toilet paper on store shelves. It was either before the seriousness of Covid-19 was known (these were the days before the naming of the virus or its disease had been settled) or it was an opportunity for some potty-humor comic relief to the devastation underway in China, Italy and New York.


(Image source: stileex.xyz)

The trigger of this panic was demand rather than supply, but the economic balance was rapidly and dramatically tipped.
The bright side of this was that the concept of the supply chain entered the everyday vernacular to be shortly followed by a broad appreciation of the previously little known integrated circuit.

Public Education
The chip shortage is now mainstream news and something people on the street have actually heard of. Why? The automotive industry, of course. Everybody's heard of cars. People looked to new cars since most opportunities for travel have become local creating unanticipated demand. Car makers have suffered the most from the chip shortages, or at least we have heard the most about them.

The general public became acutely aware of the supply chain and the interconnection of vendors and delivery schedules when car makers announced that production would be slowed due to a shortage of integrated circuits. There is an even brighter side to the story as we see the microelectronics industry on the evening news and in the minds of the great unwashed masses who for the first time were made aware that chips were not only something you eat in your car but a part of the car itself. (I guess depending on how often your vehicle gets cleaned, some may have already known another version of this.)
Governments from the big three auto producing countries — Germany, Japan, and the US — have played a major role in raising the profile of the chip shortage generally.

With a supply issue for something so near to their hearts (and other anatomy), the understanding of the general public was broadened. They were now open to the realization that complex systems like smartphones, televisions, or automobiles depend on the assembly of myriad smaller components from many manufacturers in a global system.

A Perfect Storm
A pause in orders and the rapid snapback in demand for at-home technologies of all sorts got that big snowball started down the mountain.

February snow and ice in Texas compounded the problem shutting down several big semiconductor foundries. Infineon, NXP, and Samsung all lost several weeks of production from the initial power outages followed by restart procedures.
The order of the expression is usually reversed, but the fire was next. The blaze at the Renesas Naka fab in Japan will have a lasting impact on chip supplies, hitting the automotive sector the hardest.

Nikkei Asia provided a detailed analysis of the leadtimes. The Nikkei analysis indicates five times longer leadtimes for many components critical to system electronics companies. Power management and microcontrollers are two of the longest supply time extensions with sourcing now expected to take up to one full year.

The largest wafer consumers like Apple and Qualcomm will use their leverage to keep impacts to a minimum. Just a few crumbs are left after the big dogs are done.

Governments have pushed TSMC to channel more wafer production to the automotive equipment suppliers. There just isn't anything left beyond a few of the largest wafer consumers. Small and medium entities are in a dicey situation.

For system integration companies, procurement is becoming a bloodsport. As the biggest chip companies largely monopolize the wafer output, so the largest system companies like Apple and Samsung suck up the packaged chips. Smaller players are left out in the cold and many will simply not survive this shortage.

Cash Flow
They say money can't buy happiness, but it will build more fabs.
The Biden administration is pushing for $37 billion to expand production capacity. It's a perfect time for a little gravy as US automakers' pain is quickly recognized by legislators from car and truck plant jurisdictions. Centralized semiconductor production in Taiwan creates concern. To complete the trifecta, there are lots of votes to be tallied for politicians looking to be the face of re-shoring manufacturing to the US.
Even before the political photo ops (and well before any funds are deployed), big companies have already committed big bucks to new wafer fabs and expansions.


TSMC Fab 18 under construction in Tainan (source: DACIN Construction Co., Ltd.)

Intel announced $20 billion for two new plants in Arizona. TSMC raised its 2021 capital budget to $30 billion — almost double the 2020 plan. Samsung appears ready to invest another $17 billion in a new Texas fab.
The supply chain shock is now reaching back to the foundries with spending projections going through the roof.
Samsung is already the largest semiconductor company by capital expenditure, but this is largely due to them being the leading memory manufacturer. Although memory expansion is also taking place to address demand, the investments listed above are just for advanced logic nodes used for systems-on-chip and various cutting-edge processors.
Additional wafer capacity is on the way. But when? None of the newly announced investments will translate into new production for at least a few more years. Unless demand subsides, the chip shortage could extend through 2022.
Alas, system manufacturers will not get any short term gratification. But survivors of the chip famine will be reaping benefits once the new production comes on line.

What goes up

From the reports of 2020, fast forward to the present. Now CNN is reporting reduced buying. Considering the volume each roll of TP requires, most people have very limited storage space, and hoarders might put off buying for a while. Will toilet paper demand tank? And the semiconductor business? A chip demand correction seems inevitable? Will there be overcapacity?

According to Nikkei Asia, TSMC Chairman Mark Liu suggested that clients are double booking to firm up inventories. Besides magnifying the difficulties for smaller players, the correction from overbooking will likely be more dramatic than a simple overcapacity issue.

Wafers and chips require less space than toilet paper, so it could be easier to stock up now for those who can. How rapidly that demand subsides will be watched closely. Given our recent history, pessimism might be the natural state for many of us. Still, the timing of extra wafer capacity might not warrant a lot of optimism.

News from WECC members

WECC World Electronic Circuits Council

Issue 14 – April 2021

NEWS FROM THE IPC

North American PCB Industry Sales Up 4.7 Percent in March

IPC Releases PCB Industry Results for March 2021

BANNOCKBURN, Ill., USA, April 22, 2021 — IPC — Association Connecting Electronics Industries® announced today the March 2021 findings from its North American Printed Circuit Board (PCB) Statistical Program. The book-to-bill ratio stands at 1.22.

Total North American PCB shipments in March 2021 were up 4.7 percent compared to the same month last year. Compared to the preceding month, March shipments rose 30.9 percent.

PCB bookings in March increased 13.6 percent year-over-year. Bookings in March increased 17.6 percent from the previous month.

"March was a strong month for the PCB industry. Record shipments and strong bookings pushed the book-to-bill to near all-time highs," said Shawn DuBravac, IPC's chief economist. "Only May 2000, with a book-to-bill of 1.23 was higher."

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.

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About IPC

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International Diary

2021

8th EIPC Technical Snapshot Webinar
Registrations via www.eipc.org
May 19

9th EIPC Technical Snapshot Webinar
Registrations via www.eipc.org
June 16