

Covid-19 and CAN business

The Sars-CoV-19 virus pandemic has impact on all industries: decreasing business with just a few exceptions on increasing sales for medical equipment, for example. A third of the world population is on lockdown and sometimes supply chains are partly broken.

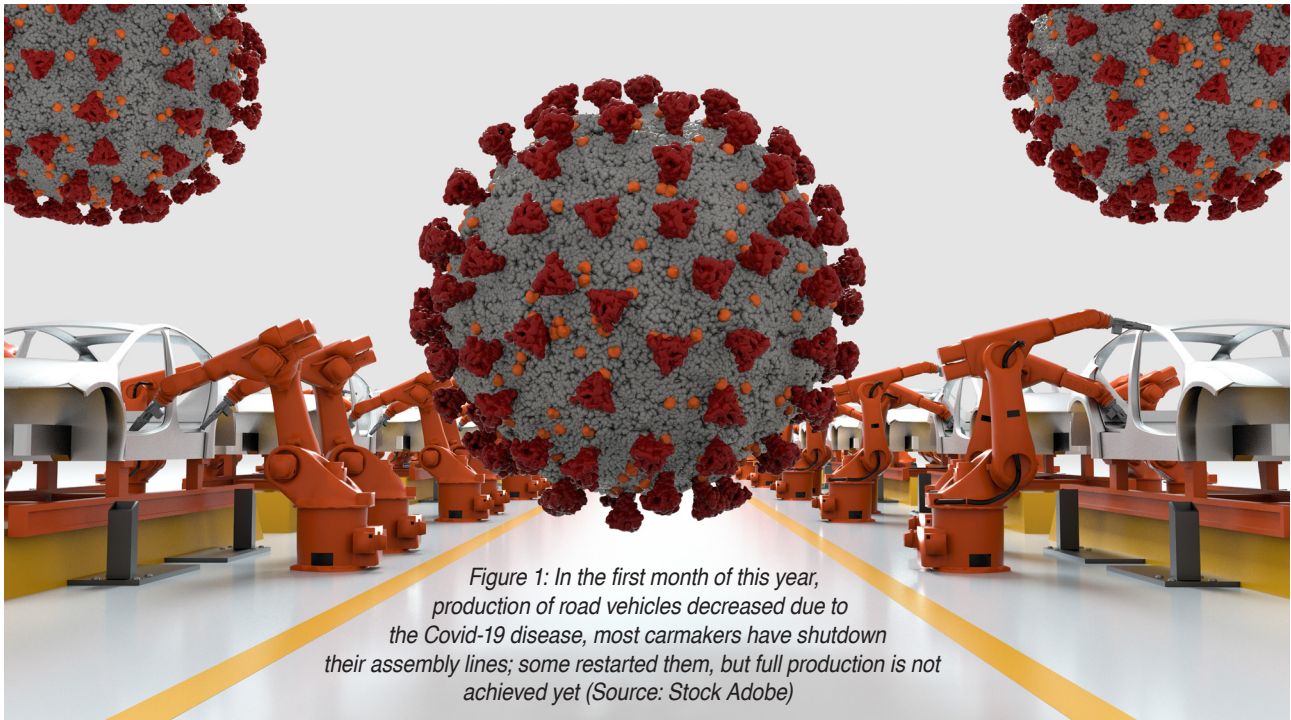


Figure 1: In the first month of this year, production of road vehicles decreased due to the Covid-19 disease, most carmakers have shutdown their assembly lines; some restarted them, but full production is not achieved yet (Source: Stock Adobe)

CAN chip business is down, because the automotive industry has closed many of its factories. Some of them started production again, but carefully and slowly. ACEA, the European association of road-vehicle manufacturers reported already in April a lost production of 1,5 million motor vehicles. This figure includes passenger cars, trucks, vans, buses, and coaches. The number will climb further, if shutdowns are prolonged or more plants are closed. In May, first European carmakers ramped-up production.

CAN chip sales decreases

The automotive industry is by far the largest CAN application domain. Conservative market figures for installed CAN nodes in 2019 are two billions. This year, there will be a significant and dramatic slump in CAN sales figures. On the other hand, for low-volume markets the availability of CAN chips, especially CAN transceivers, should be not a problem.

NXP, the market leading CAN transceiver supplier, explained in an April press release: “While the supply chain disruption experienced post Lunar New Year in China appears to be subsiding, the end market demand trends in

the rest of the world have started to significantly deteriorate. Throughout March, the demand headwinds accelerated in the automotive market where many global auto OEMs (original equipment manufacturers) outside of China have shut production lines, and within the industrial and mobile markets where customer demand trends have resulted in the push-out of orders.”

Infineon, another chipmaker focused on the automotive markets, has withdrawn its forecast for this year. “The more and more pronounced coronavirus pandemic worldwide is causing severe disruptions to global supply chains, end-markets, and economies. Developments around the coronavirus are very dynamic and result in low visibility.” Originally the German company had anticipated to grow revenues by five percent year-over-year (plus or minus two percentage points). “The impact of the coronavirus pandemic can result in a deviation from this expectation and can lead to a noticeable decline in revenue compared to the last fiscal year,” stated the company in a press release. The anticipated reduction in revenue will weigh on Infineon’s profitability in the 2020 fiscal year, as underutilization charges will go up further compared to the original assessment. Nevertheless, Infineon finalized the integration of Cypress. In June 2019, the two companies had signed an agreement under which ▶

Infinion would acquire Cypress. Both companies produce micro-controllers with CAN controllers.

Microchip reported that their production facilities in Philippines and Malaysia are working with just 10 percent to 30 percent of employees, due to the governmental restrictions in these countries. The supply chain partners, have not had any major disruptions, informed the U.S. chipmaker. "While a few shipments have missed our original committed shipment dates, by and large more than 95 percent of our shipments have met our original commitment dates," stated Microchip. "We are engaging with clients and continue to accept orders."

Other CAN semiconductor manufacturers face similar problems due to the Covid-19 pandemic. Renesas (Japan) runs its Malaysian facilities at a limited capacity, because of the governmental restrictions. The Chinese production is since end of March under normal operation.

ST Microelectronics, another market-leading supplier for MCUs (micro-control units) with CAN connectivity, reported that the revenues came in about five percent below the mid-point of our outlook when entering the quarter. CEO Jean-Marc Chery said: "The Covid-19 outbreak and subsequent containment measures by governments around the world brought challenges in our manufacturing operations and, especially in the last few days of the quarter, logistics." He added: "Our second quarter outlook is taking into account the declining demand environment, especially in Automotive, as well as the ongoing operational and logistics challenges due to current governmental regulations. We anticipate that all of our manufacturing sites will be operational. Some of them will run at reduced capacity, with unsaturation charges currently estimated to be about 400 basis points."

Development engineers are in home office

Most development engineers are working from home. This is also true for CiA (CAN in Automation) member companies. CiA has re-scheduled all meetings as online events. This means, we are communicating from home office to home office with all the challenges including kids, limited space, and sometimes not optimal technical equipment. Additionally, some companies have put employees in short-time work or have sent them in forced vacations. Short-time work in Germany means reduced salary.

Most of the CiA member companies are operating as usual. Renesas explained in a statement: "We are following guidelines from the government and local authorities and implementing best practices to keep our operations running effectively. There are no plans to shut down headquarters and offices including design centers located within Japan. Employees based in the affected prefectures will continue to work from home."

Smaller CiA members such as Kvaser (Sweden) informed their customers, that the development team is working from home. "Conscious that more of our customers will be tackling CAN development remotely, our support and field application engineers have put together a few suggestions to help keeping your CAN projects moving ahead." The Swedish company provides an online guide to use the ▶

CAN Newsletter Online: Coronavirus



Coronavirus
Utilizing service robots to prevent the spread of Covid-19

The Boxer-8110AI fanless embedded box PC from Aaeon is deployed to power automated service robots, helping to reduce person-to-person contact during the corona pandemic. It uses two embedded CAN networks.

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Disinfection robot
Fighting against the coronavirus using CAN

The robots by UVD robots (Denmark) are deployed in hospitals to disinfect rooms and equipment such as patient beds. They use embedded CAN networks.

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Coronavirus
Online in-house seminars by CiA

In the times of the novel coronavirus, face-to-face meetings are not recommended. This is why CAN in Automation (CiA) has withdrawn its scheduled seminars and other training events. As an alternative option, online in-house seminars are offered.

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Disinfection robot
Fighting against the Sars-CoV-2 virus

Within one week engineers by Siemens and Aucma (China) made a normal mobile robot able to disinfect rooms and equipment against the novel coronavirus.

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Covid-19
Corona pandemic and CAN

The new virus goes around the world. CAN is not the right medicine against it, but CAN networks are used in medical equipment helping indirectly in the fight against the Covid-19 disease.

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CAN in Automation
Conference delayed and general assembly postponed

The CAN in Automation (CiA) management has decided to postpone the iCC 2020. No new date has been scheduled yet. Additionally, the CiA general assembly is delayed.

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Embedded World 2020
Covid-19 influenced trade fair

The trade show in Nuremberg (Germany) is an early indicator of the annual trends in embedded electronics. This year, the coronavirus, also known as Sars-CoV-2/Covid-19 influenced the Embedded World 2020.

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Figure 2: In most cases, the supply-chains for CAN-based devices are not broken, however sometimes single components can cause headaches in the purchase departments (Source: Stock Adobe)

Virtual CAN Driver software coming with the CAN interface boards.

Another topic is licensing: “Aside from ensuring a secure, stable, and fast home connection, a challenge to remote working is the software license you use. Products with multi-user access or maintenance plans often require a license to use software at home. Whilst some companies provide low-cost or free home-access if you make a direct request, others have 30-day free software trials that could get you over the initial ‘hump,’” explained Kvaser on its website.

Elmo (Israel), a motion control supplier supporting CANopen and CiA 402, continues to operate under the constraints of the new coronavirus. “We are very strict about authority’s rules and instructions of hygiene, keeping distance between one employee to another, limiting employees’ presence in the working areas, and ramping up remote work from home.” The production is working around the clock with less employees in each shift. “It is not efficient production-wise, but it allows us to keep manufacturing in a safe environment,” stated the company. “We have experienced a few ‘minor’ obstacles in our supply chain, but they have been resolved by our purchasing department.”

Dunkermotoren, a German drive supplier, prioritizes deliveries related to Covid-19 treatment and analysis. Some of their customers provide intensive care unit beds as well as other medical and laboratory equipment. By default, most of their drives are equipped with CANopen interfaces implementing the CiA 402 profile.

Business trips have been cancelled as far as possible. Maxon (Switzerland), another CiA member providing compact CANopen drives, has decided to cancel or to postpone all trips that are not absolutely necessary. This also includes planned trips to and from customers as well as trips to and from suppliers. The biggest challenge for the company is the supply of materials. “The gaps in the supply chain are increasing and the situation is expected to deteriorate further. Through a short time working program at our headquarters in Switzerland and a global cost savings program we will

ensure operational reliability over the coming months. “Until further notice we will continue production five days a week,” promised the Swiss company.

Faulhaber (Germany) also manufacturing CANopen drives stated that currently the material supply is guaranteed: “At the production sites, it is a daily challenge for employees to organize themselves, especially due to the restrictions in public life. We also notice this in the availability of production capacities.” Nevertheless, the company managed to maintain the delivery situation so far. The sales representatives worldwide are still available to answer questions about order processing and status. Most of them work from home offices and can be reached by e-mail and telephone. “We are currently experiencing strong growth in incoming orders for medical technology products, especially drive systems for respirators, automatic sample analysis and laboratory systems, and infrared cameras for temperature control,” reported the CiA member company. “Of course we would like to make our contribution to the medical care to limit and resolve the coronavirus pandemic. For this reason, our production sites continue to work hard to fulfill all customer orders, while maintaining the maximum possible protective measures.”

Online event stage

Most of the fairs and exhibitions have been cancelled or postponed. Some companies offer virtual stands and conferences on their websites on dedicated dates. In order not to lose the overview, CAN in Automation will provide an online event stage. On this “stage”, which is just a simple list of online events with CAN topics, you can guide yourself to relevant topics appropriate for your project timing. CiA will also go online with its CiA technology days, updating engineers on current CAN developments. The first two events took already place. The list of online events is available on [CAN Newsletter Online](#).

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