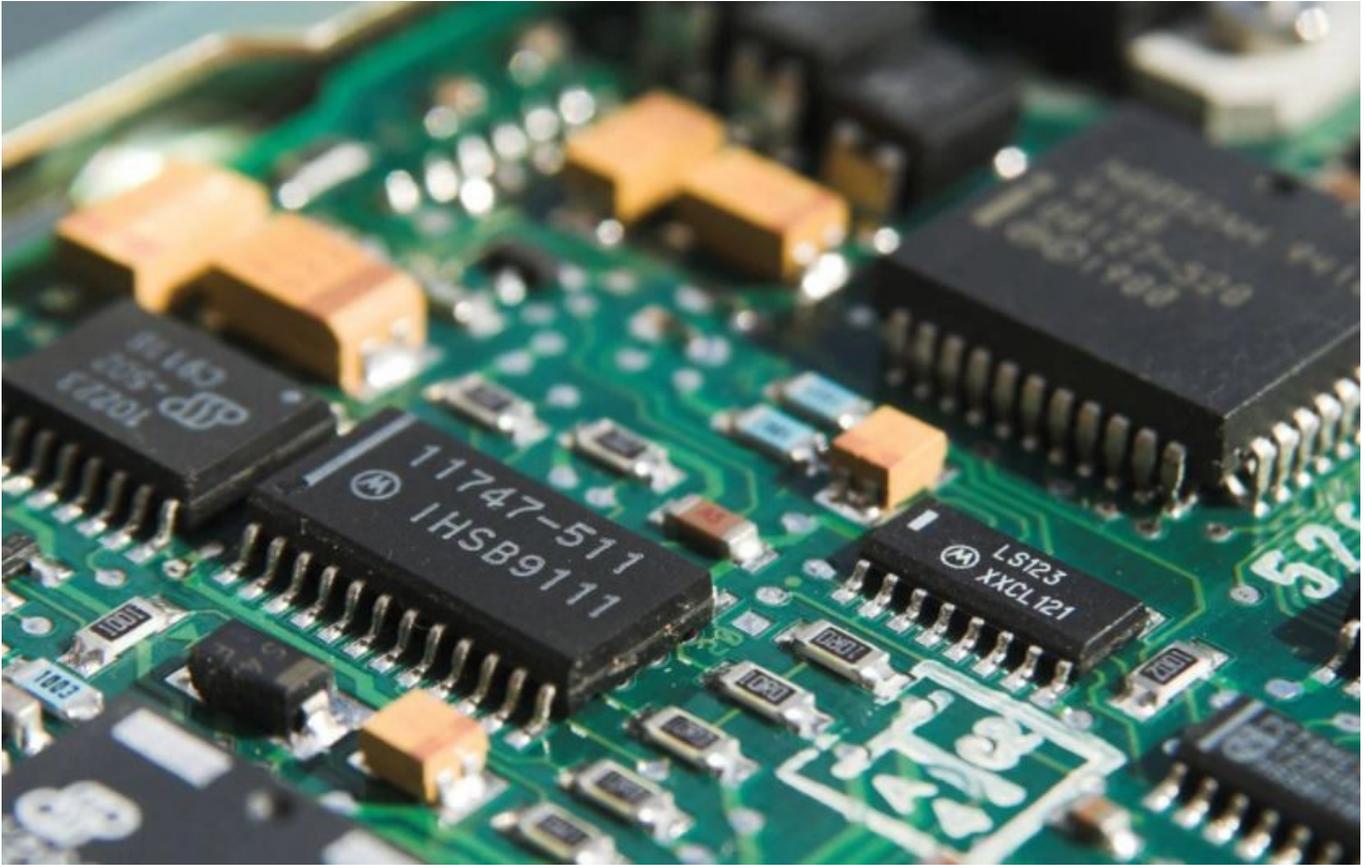


Local tech firms brace for persistent chip crunch until 2023

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MORE than a year of disruptions in production and a surge in demand for electronics have made for an unprecedented year for semiconductor companies, which have been ramping up their output since the second half of 2020.

While steps are being taken to resolve the global chip shortage, the end is not yet in sight. Local technology firms The Edge spoke to are bracing for the shortage to persist over the next two years.

The chip crisis stems from a confluence of factors. The numerous lockdowns as a result of the Covid-19 pandemic has disrupted the operations of semiconductor firms, resulting in less supply. Other factors contributing to the shortage include the accelerated digital transformation and technology adoption around the world.

The ongoing US-China trade war; the fire that broke out at the Renesas Electronics Corp-owned chip plant in Japan; Taiwan — one of the most important links in the world's tech supply chain — being hit by the worst drought in half a century; and a harsh winter storm ravaging computer-chip facilities in Texas have only exacerbated the imbalance. Renesas accounts for 30% of the global market for microcontroller units used in cars; two-thirds of the chips produced at the facility are for the automotive industry.

The pandemic and resulting supply chip shortages have created a perfect storm that threatens not just the semiconductor industry but also others — from automotive to consumer electronics and household appliances.

According to an analysis by Goldman Sachs, the semiconductor shortage has affected as many as 169 industries in the US in some way, which could lead to prices of goods rising as much as 1% to 3%.

Malaysia is one of key players in the global semiconductor supply chain and is the US' largest semiconductor trading partner. Today, about 7% of total global semiconductor trade flows through Malaysia, which also accounts for 13% of global chip assembly testing and packaging.

The US, which dominates global semiconductor industry sales with almost 50% market share, has been importing more semiconductors directly from Malaysia than from any other country. US trade with Malaysia accounts for 24% of all American semiconductor global trade.

So, how has the chip shortage impacted the Malaysian semiconductor and semiconductor-related companies? Are they

seeing more business opportunities or market challenges?



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ViTrox Corp Bhd co-founder, executive director and executive vice-president Steven Siaw Kok Tong sees the tight supply and shortage situation persisting through 2022, before improving with better demand and supply forecasting and management.

“It will take time for the industry and supply to catch up with the demand due to the complexity in the semiconductor chip-making process. Furthermore, the rapid acceleration of major semiconductor application trends in digitalisation, artificial intelligence, fifth generation (5G technology) and automotive electronics is compounding this scenario,” he tells The Edge.

However, Siaw, who is ranked by Forbes as Malaysia’s 49th richest man this year with a fortune of US\$325 million, believes that the worst is over given that all the black swan events have occurred, while mitigating strategies are already in place to overcome these challenges.

“Moving forward, the crisis may worsen in the event the Covid-19 pandemic situation takes a negative turn due to the emergence of new or unknown variants that are more infectious and detrimental. This may result in unplanned capacity reduction due to operations disruptions, shutdowns or a reduced workforce,” he warns.

More boon than bane for local tech players

Closer to home, what is the impact of the chip shortage on Malaysian companies and local businesses? What should they do to mitigate the effects?

While the shortage has impacted various industries, including video cards, video game consoles, consumer electronic products and home appliances, the automotive industry seems to be the worst hit.

Siaw says the global chip shortage has led to an unprecedented surge in semiconductor equipment demand across all processes, which in a way has been a boon for ViTrox.

“We are fortunate to be offering solutions in the right industry, more so during this period of uncertainties and uneven economic recovery caused by the pandemic. However, we also experience occasional bottlenecks with our supply chain and materials due to the same factor,” he adds.

Siaw stresses that ViTrox needs to constantly employ mitigating strategies by rescheduling its equipment delivery priorities with customers and establishing alternative supply sources to capture and secure incoming business opportunities.

The Semiconductor Industry Association has highlighted that semiconductors are essential components of the technologies that control and enable critical infrastructure and life-critical equipment, such as healthcare and medical devices, water systems and the energy grid, transportation and communication networks, and the financial system.

Semiconductors also underpin the information technology systems that enable remote working and access to services across every domain, including medicine, finance, education, government and food distribution. Therefore, semiconductor and related supply chains are necessary to support the greater range of services that will be digitised in order to keep the global economy productive and to accelerate the economic recovery.

