

# New product development is key to EMS revenue growth in Canada

*Some OEM buyers involved in outsourcing decisions are looking to EMS providers in Canada to help bring new products to market*

Electronics manufacturing services (EMS) providers in Canada say while many OEMs choose to manufacture in Canada to sell products into the Canadian market, many are also turning to them to develop new products that will be sold globally.

In addition to state-of-the-art manufacturing facilities, many EMS providers in Canada also have design centers or programs to support OEMs' new product introduction efforts. The idea is to offer OEM customers greater value by assisting in the design of new products, building prototypes and then helping the OEM transition a new product into volume manufacturing.

For instance, global EMS provider Flex, which is based in Singapore, has two design centers in Canada, one in Ottawa and another Markham, Ontario. Its "Sketch to Scale" program provides assistance to OEMs with design concept, advanced design engineering and new product introduction capabilities.

Smaller EMS providers also offer NPI and design help to OEMs developing products in Canada. For instance, Vexos is a global EMS provider with manufacturing in the U.S., Mexico, China and Canada where it builds equipment for Canadian-based OEMs.

"Our business in Canada certainly has been growing," said Wayne Hawkins, senior vice president and general manager for Vexos' Markham manufacturing facility.

"We had strong growth over the last few years," he said. "Last year revenue increased by about 10 per cent. It has been a very good environment over the last couple of years."

He said Vexos builds printed circuit board assemblies as well as entire systems and we "do full test for the end application to make sure quality requirements are met." Connectivity and RF products and industrial equipment "would be the majority of what we do in Markham," said Hawkins. It also builds medical and security products.

He added that Vexos is seeing "a lot of new business opportunities because of the growth of Internet of Things" as more industrial products are being connected to the Internet.

OEM customers also want Vexos to help them develop new products.

"We are located close to design centers of our customers where quick turn NPI service" is needed to help customers launch new products, he said. There is a lot of new product development in the Toronto

area as well as Kitchener and Ottawa.

## Building prototypes

He said Vexos works with OEMs building prototype products and then helps "them ramp up production to get their products to market." The EMS provider assists OEMs in transitioning their new products from small production to volume production at its "sister location in Shenzhen, China to reap the benefits of lower-cost manufacturing if a customer needs to kick something to higher volumes to get cost efficiencies," said Hawkins.

Another EMS provider that helps its customers develop new products in Canada is Sanmina, which is based in San Jose, Calif., but has facilities in Canada, including a design center in Ottawa. The center specializes in developing RF, optical and microelectronic products for customers. The engineering team at the center develops RF and optical products for telecommunications, industrial, medical, clean energy and defense and aerospace OEM.

Many of Sanmina's customers want to leverage the EMS provider's expertise in RF and optical technology and its new product development know-how when they design a new product.



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*Jeremy Stewart, director business development for Sanmina's operations in Ottawa.*

Many of Sanmina's OEM customers in Canada are technology focused companies. "We help them with design and new product introduction and then potentially assist them transferring those newly developed products to other lower cost locations that Sanmina has," said Stewart.

"Canada is a significant region for Sanmina," said Jeremy Stewart, director business development for Sanmina's operations in Ottawa. "Across the globe we have many large multinational customers that control the supply-chain out of Canada or have operations here in Canada," he said. But some customers like to develop their products in Canada because of the high degree of high-tech expertise in the country, especially in Ottawa.

"People call Ottawa the Silicon Valley of the North because it is a significant technology hub," said Stewart. "There is a lot of research and development taking place in Ottawa as well as Toronto and in Montreal to some degree," said Stewart,

### Leveraging expertise

Many, although not all, of Sanmina's customers want to take advantage of that expertise. Customers that Sanmina services in Canada fall into three categories, said Stewart. "The EMS provider has OEM customers that are headquartered in Canada and manufacture in Canada or globally," said Stewart. Other customers are multinational OEMs and want to develop high-technology new products and introduce them to the market quickly.

"We're very active with them on new product introduction to help them launch their products," he said. The third category is OEM customers that "want us to manufacture their products and leverage our RF/optical, microelectronics design and manufacturing capabilities that we have here which is

a real differentiator for us in Ottawa," said Stewart.

While telecommunications is the largest industry Sanmina services, "we also support industrial customers here which is broad customer vertical for us," said Stewart. Sanmina also supports medical and defense and aerospace OEMs with its RF, microwave and radar expertise and manufacturing capabilities.

Those OEMs leverage Sanmina's technical capabilities with RF and optical technologies in different ways. In some cases, customers "collaborate with our engineers" on new products, said Stewart. In other cases, Sanmina develops products for them in its labs and "and literally turn around prototypes in a couple days."

He said Sanmina is starting to see an opportunity in the automotive industry because of its optical and RF capabilities as automotive OEMs develop self-driving vehicles.

"We're involved in design and new product development for multiple lidar systems on the automotive side," said Stewart. Lidar is a technology that measures distance to another vehicle or pedestrian by illuminating the car or person with a pulsed laser light and measuring the reflected pulses with a sensor. Autonomous vehicles in the future will use lidar for obstacle detection and collision avoidance to navigate safely on the road through the use of rotating laser beams.

### Seeking design support

Internet of Things and industrial customers are also seeking design support. "In our industrial segment, there is a connectivity evolution occurring with industrial products tying into IoT," said Hawkins.

In addition, there are new

customers with "niche products that are IoT applications," he said. "A lot of them are new ventures involving new emerging companies and a higher risk. It could be a great opportunity or a they could die quickly," but some of the new IoT products will be part of Vexo's future growth, said Hawkins.

There are also opportunities with traditional segments he said. "We are seeing more growth potential around security products," said Hawkins.

There are new products involving security access controls and cyber security for the defense industry and businesses. Such products will be opportunities for EMS providers that have high-level optical capabilities and manufacturing expertise with fine-pitch technology and flexible printed circuit board assemblies.

While helping OEM customers design and develop new products may be important to EMS revenue growth long-term, some EMS companies say recently imposed tariffs on Chinese goods imported to the U.S. may spur some short-term sales growth for some Canadian EMS providers.

Hawkins said Vexos is getting more quotes from U.S. companies inquiring about manufacturing in Canada since tariffs of Chinese goods went into effect in the U.S.

"U.S. companies are looking at a 25 per cent tariff of products coming from China," he noted. "Some U.S. companies are asking 'what are the 'opportunities and options to avoid that?'," said Hawkins. "Certainly, leveraging a Canadian EMS site to build products and ship them into the U.S. and avoid some tariffs" is an option, he said.

He noted that Canadian

labor costs are lower than in the U.S. "There are some cost reduction opportunities utilizing Canadian EMS providers, maybe not to the extent of China or Mexico but you're getting the benefit of a highly skilled workforce, engineering, and serviceability," said Hawkins.



**Wayne Hawkins**, senior vice president and general manager for **Vexos**.



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