

GaN Systems could seek partnerships for sub-assembly strategy, CEO says

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GaN Systems, an Ottawa, Canada-based gallium nitride power systems company, could seek partnerships or capital to expand into making sub-assemblies, said Jim Witham, CEO.

Witham declined to disclose financials, but noted the company is the market leader in shipments of gallium nitride transistors, according to an industry report, with an overall market size of USD 10bn. The transistors are used in several markets, and the company has targeted five applications: consumer device chargers, data centers, renewable energy, factory motors and electric vehicles, he said.

Gallium nitride systems have advantages over silicon systems, including higher efficiency, smaller size, greater power capacity and faster charging, and can decrease product costs by as much as 20%, according to the company website.

Electronic products often require hundreds or thousands of individual parts, and companies, such as GaN Systems can design and engineer packages of some of these parts in power modules or sub-assemblies, he explained. Cell phones used to have 1,000 parts, but over time, companies adopted the sub-assembly strategy, which meant that manufacturers had to put together fewer separate pieces to make a phone. Because gallium nitride-based power devices have begun to gain traction over silicon-based devices in the last few years, and there is room in the market for GaN Systems to move into sub-assemblies, he said.

This strategy would require investment and engineering work, and a small company like GaN Systems will benefit from partnerships with larger companies, Witham said. It already has a co-branding and R&D partnership with Japanese semiconductor company **ROHM**, and plans to explore sub-assemblies with that company, he said. This type of structure could work with other companies as well, and GaN Systems has already presented reference designs in collaboration with several companies, he said.

Witham acknowledged that GaN Systems could be an attractive acquisition target for one of the incumbent silicon electronics companies. He predicted that much of the silicon market will transition toward gallium nitride: "It's clear that the market is moving over - every power electronics player will have to have a gallium nitride strategy," he said. Competitors in gallium nitride transistors include **Panasonic**, as

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well as privately held California-based companies **Efficient Power Conversion** and KKR-backed **Transphorm**, he said.

Regarding an exit strategy, he noted that the size of the market means GaN Systems could generate “IPO-type” revenue numbers, but he declined to comment on milestones or timing. “My job is to grow revenue and get the next-generation systems out there,” he added.

ROHM’s partnership with GaN Systems, which was announced in June 2018, is one example of an incumbent electronics company moving into the space, he noted.

GaN raised VC capital in its early days but its last funding round in 2017 targeted strategic investors. It secured investments from **BMW** as well as China’s **Delta Group Electronics**, the CEO said.

GaN doesn’t need additional funding, but would consider taking on a new strategic investor, if one of the companies it is working with was interested in providing capital, and it could need capital to take advantage of a “bigger opportunity,” he said. That opportunity could be the sub-assembly strategy, or bringing out a whole new product line, for example, he said.

The company has raised USD 20m, according to *Crunchbase*. In addition to BMW i Ventures and Delta Group Electronics, investors have included **Rockport Capital, Cycle Capital, BDC Capital Corporation, Chrysalix Venture Capital**, and **Tsing Capital**.

GaN was founded in 2008 and launched its first product in 2014. The two founders retired in 2016.

By Hana Askren

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