

## Chipmakers Look To Mergers To Fight Slow Growth

By **Fola Akinnibi**

*Law360, New York (November 16, 2016, 10:40 AM EST)* -- Semiconductors are found in every type of electronic device, from singing birthday cards and smartphones to military satellites, and with growth slowing as the industry matures, companies in the sector have turned to consolidation as a solution.

These chips are integral to electronics, and their sales since the mid-1980s have increased nearly 13-fold, as society becomes more technologically driven, peaking in 2014 at \$335.8 billion, according to data from World Semiconductor Trade Statistics. Historically, the biggest drivers of these sales have been the rise of personal computers and mobile devices. However, those devices have begun to saturate the market, leaving less room for growth, according to Myson Robles-Bruce, a principal analyst at IHS Markit.

And right now, the realm of new things that use chips is stagnant.

“There’s not anything that rises to the level of the kind of driver that PCs were before and that wireless was after that,” Robles-Bruce said. “The industry as a whole is going through this period of unprecedented stability. There’s nothing exciting happening.”

Consolidation is the easiest way to combat that slow growth and gear up for the future as companies wait for the next major driver for the industry, likely the technology that will replace mobile devices, Robles-Bruce added.

Companies are now waiting for the next major driver for the industry, the one that will replace mobile devices, and while they wait consolidation is the easiest way to combat the slow growth and gear up for the future, Robles-Bruce added.

Some, according to Mayer Brown LLP partner Jennifer Carlson, are wagering on the Internet of Things — which refers to the connectivity of everyday devices like thermostats, lights and coffee machines, among others — as the next major driver.

“[Companies] are trying to anticipate the next thing,” Carlson said. “I think we’ve seen a lot of consolidation where companies that aren’t in the Internet of Things are trying to pick up that product and bank on it being the future.”

Qualcomm is one of those companies betting on the Internet of Things. Last month, it agreed to

buy NXP Semiconductors for \$110 per share in cash, valuing the company at \$37.7 billion, and making it the largest semiconductor deal on record.

The company touted the deal as a move that allows it to extend its expertise in areas outside of its mobile specialty — mainly the automotive and Internet of Things spaces. Robles-Bruce says companies are looking at those two sectors, along with 5G wireless communications, as the future, but there has not been a significant shift yet.

In addition to chasing growth through acquiring new technologies, these companies have also looked at cost savings and efficiencies for growth, Carlson says.

Earlier this month, Dutch chipmaking equipment manufacturer ASML Holding NV took a €1 billion (\$1.07 billion) stake in a Carl Zeiss AG subsidiary that is one of its key suppliers, providing much-needed investment for the development of a new circuit printing system that would allow semiconductor makers to produce higher-performance chips at a lower cost.

It came about five months after the Dutch company bought Taiwanese semiconductor inspection equipment manufacturer Hermes Microvision Inc. for NT\$100 billion (\$3.1 billion), in a deal aimed at improving the two companies' offerings to clients by combining their complementary measurement technologies.

Making a huge number of tiny chips does lend itself to lower manufacturing costs in a certain sense, according to Dan Hutcheson, CEO of VLSI Research Inc., a semiconductor industry research firm. However, thanks to the upfront costs and expenses needed for innovations, the overall cost of production has actually risen, he says.

When the first chips were made, they had five or six transistors and they were painted on using a brush. Today, a chip used to power some Apple Inc. consumer devices has more than 2 billion transistors on it, and in order to produce this sort of chip, a company needs to spend tens of millions of dollars, Hutcheson says.

"That's why they're saying they want to [share] the cost," Hutcheson said. "If you have two companies designing the same thing, if they merge you only have to design it once. So you cut the initial costs."

Trying to keep up with customers also lends itself to this sort of activity, Robles-Bruce says. Many major technologies companies, which are the customers and end users for semiconductors, have combined over the past few years. The merger activity in the wider sector means that these suppliers have to make sure that they have the scale and resources to service their customers.

The industry will continue to see this sort of merger activity as the chips get more and more advanced, Hutcheson says. As more and more capabilities are integrated onto single chips, companies will look to make them in-house at the same time, rather than in pieces.

"In the end everything gets integrated into a single chip," Hutcheson said. "We have this term, system on chip, and that's exactly what we're doing — the systems are getting more complex."

--Editing by Rebecca Flanagan.

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