



Small Business Strategies

Chip test equipment maker Microprobe doubles revenue

Premium content from Silicon Valley / San Jose Business Journal by Jon Xavier, Researcher/Reporter

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It's not often that a hardware company sees 140 percent revenue growth in three years. It's especially rare for an established company. But that's just what happened at Microprobe Inc., a 38-year-old manufacturer of semiconductor test equipment that is on track to do \$85 million in revenue this year, up from just \$35 million in 2009.

Behind that success is a dramatic shift in the chip market, which is driving huge demand for semiconductor test equipment Microprobe is particularly well-positioned to provide.

So what's changed?

Cell phones, for one, but also tablets, televisions, cars, and a growing list of devices that now contain computer chips. The fact that chipmakers can't depend on their products ending up in just one device — the PC — means they've had to develop processors that are smaller, lower-power, and more advanced to deal with the multitude of possible uses.

“What used to live in your desktop PC 10 years ago is dwarfed by the little thing in your cell phone,” said Mike Slessor, CEO of Microprobe. “The power that the semiconductor industry can pack into a tiny chip continues to double each year. There's a bunch of places in the supply chain that have enabled that, and we can rightfully, if somewhat immodestly, say that we sit in a very important place in enabling that too.”

Microprobe focuses on one very specific niche in the semiconductor industry, the probe card. Probe cards are used to test each chip before it's installed in a device. They consist of needles that make contact with every circuit on the chip and run an electrical current through it to ensure that there aren't any faults. As chips have gotten smaller to meet the needs of an emerging class of mobile devices, these circuits have become more tightly packed. This has in turn driven a change in the way probe cards are made — a probe card for a modern mobile chip has as many as 5,000 needles packed into a square less than an inch wide, with each one thinner than a human hair. Since every chip is built a little different, each new semiconductor design has to have a probe card custom made to fit it.

The technological chops necessary to produce something so complex have turned the probe card industry on its head, said Risto Puhakka, president of the semiconductor market research firm VLSI Research. Before, it was dominated by a large number of very small vendors, essentially mom-and-pop shops building the cards by hand for a few customers with which they had very close relationships. Those types of vendors don't have the sophistication to produce these high-end probe cards, so as mobile chips become ascendent, more and more market share is moving to larger vendors like Microprobe he said. Even then, the market is not very large. There are about 40 probe card manufacturers worldwide, of which Microprobe is the fourth largest. Its customers include 20 of the 25 largest semiconductor companies, and four of the top five.

Puhakka said that Microprobe could very well find itself the dominant supplier in this market, if the trend keeps up.

“There is a fair number of probe card suppliers in the world, but when you go to the very high end of probe cards, the very high end of testing, it gets down to very few companies. Not many people have the capabilities, the technology, the cost points, and the global support to deliver to that market,” he said. “It’s not a given that it will happen, but Microprobe has all the makings of a very, very large supplier.”

What’s perhaps most impressive about that transformation is that it’s the first time that Slessor has been in a position to manage something like it — despite 10 years in various management positions at KLA-Tencor Corp., this is Slessor’s first time in the executive’s chair.

Semiconductor pioneer David Lam, who founded Lam Research Corp. and has been mentoring Slessor in his capacity as a member of Microprobe’s board, said he’s been very impressed with how quickly he’s learned and the clarity of his vision in moving the company forward.

“I was very impressed with Mike. In fact, I told him, ‘Mike, you’re doing so well, why do you need me?’ But he was very genuine and honest about wanting advice and mentorship. We clicked right away in that first conversation,” said Lam. “If anything, he’s been even stronger than I expected. Very capable, and not just technically. Because at a certain point your technical background just becomes background for you to understand the problems in your industry. After that, it’s about vision, and Mike has that.”

Microprobe Inc.

Headquarters: San Jose

CEO: Mike Slessor

Revenue: \$85 million

Founded: 1973

Employees: 350

Web: www.microprobe.com

Phone: 408.457.3900