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UP CLOSE

COMPANY: APS Novastar LLC
LOCATION: Huntingdon Valley
CEO: Tim Kardish
TYPE OF COMPANY: Circuit-board assembly equipment maker
2008 REVENUE: Would not disclose.
EMPLOYEES: 50
BIG DEVELOPMENT: Just delivered a system for making mission-critical electronics used in fighter jets to the Kamra Avionics & Radar Factory in Pakistan.

Source: APS Novastar

APS Novastar CEO Timothy Kardish with a selective soldering machine.

APS Novastar on a circuit in Pakistan

PETER KEY
 STAFF WRITER

HUNTINGDON VALLEY — A local company is helping the government of Pakistan battle the Taliban — at least its equipment is.

APS Novastar LLC recently finished training personnel from the Kamra Avionics and Radar Factory how to use one of its systems for assembling printed circuit boards.

KARF, which is part of the Pakistan Aeronautical Complex, will use the equipment to make circuit boards that go into avionics systems for Pakistani fighter jets.

KARF is a typical APS Novastar

customer: It doesn't want to turn out a large number of circuit boards at a high speed; instead, it just wants to be sure that the ones it does turn out work.

APS Novastar customers typically



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A pick and place machine at work. It places small resistors on circuit boards.

assemble from 50 to 500 copies of a particular circuit board, which is considered a short production run.

Some are research labs or companies making prototypes. Others, like KARF, are assembling circuit boards for mission-critical applications.

"They will not compromise on the components," said Tim Kardish, who has been the company's CEO for about a year.

APS Novastar's U.S. customers include most, but not all, of the Fortune 1000 defense contractors, as well as the Los Alamos and Sandia national laboratories, Kardish said. They provide about 60 percent of its revenue, which Kardish wouldn't reveal, with

foreign customers providing the rest.

The company's specialty is a three piece system for assembling circuit boards that use surface mount technology, in which components are mounted completely on top of a board. In through-hole technology, components go completely through the board.

APS Novastar's surface-mount system consists of a stencil printer, which puts solder on circuit boards; a pick and place machine, which puts components on circuit boards; and a reflow oven, which melts solder so it can cool and solidify, bonding the components to the boards.

"We are the last domestic manufacturer of the entire [system]," Kardish said.

Kardish doesn't consider APS Novastar to be an innovator. Instead, he calls it a fast follower that can take existing technology and make it cheaper.

The prime example is the company's robotic pick and place machine, which assembles circuit boards automatically, rather than requiring them to be fed and placed by hand.

APS Novastar introduced it in 2002 for \$45,000 to \$50,000, less than half

the price of the \$100,000 machines then on the market.

It has helped APS Novastar more than double its revenue since 2002.

"At least 75 percent of the time when they buy that, they buy the two other machines, too," said John Malboeuf, APS Novastar's vice president for worldwide sales.

APS Novastar's next big hope is a selective soldering machine, which can make very precise placements of solder on a circuit board without damaging other components already on the board.

The company doesn't produce its own selective soldering machine. The one it plans to launch around the end of the third quarter should sell for less than \$30,000, which Kardish said is 30 percent to 50 percent less than selective soldering machines now on the market.

"The application itself isn't killer, but the price point for the application could be killer," he said.

APS Novastar was founded in 1982 by Adam Shiloh and his sons, Av and P.J., who were identical twins with engineering degrees from Temple University.

It was two companies, with Av Shiloh working for APS and P.J. Shiloh working for Novastar, but in 2006, Coppermine Capital, a private-equity firm based in Waltham, Mass., bought the companies and combined them.

At the time, the companies were experiencing an increase in demand for their equipment brought on by European Union directives that components and solder in electronics sold in Europe be lead free.

Coppermine thought the increase signified a new growth trend for APS Novastar, but once the directive had been met, the company's business leveled off.

Last year, the firm brought in Kardish, who has operations experience in the electronics manufacturing equipment field, to replace a management team that was more deal-oriented.

In the time he has been with APS Novastar, Kardish has streamlined its inventory system, shaking out enough costs that the company has been able to deal with the recession with a relatively minimal lay off of four people that brought its staff to 50.

"We'll be ready and armed for hopefully a better economy with the selective solder product," Kardish said.