As vendors discontinue capital-equipment lines, who will pick up the slack?

Rick Nelson - March 02, 2009

It’s no secret that the bleak economic outlook is taking a toll on suppliers of capital equipment to the semiconductor and electronics industries. As suppliers drop certain capital-equipment lines in response to low order rates, the question arises, what will fill the need for such equipment when the economy rebounds—turnkey systems from traditional competitors who remain in the market, or customized systems built from off-the-shelf components?

A recent capital-equipment casualty is Keithley Instruments’ S600 Series semiconductor parametric-test product line, which Keithley announced last week it is discontinuing. “The financial crisis that has precipitated the global economic recession has analysts now projecting capital equipment spending for semiconductor production applications down 25 to 40% in 2009 after contracting roughly 25% in 2008,” Joseph P Keithley, the company’s chairman, said in a statement, adding that device companies have pushed out new 300-mm fabs to 2010 and beyond from dates given earlier and that foundries do not expect device demand to return to 2008 levels before 2012.

And three weeks ago, Agilent Technologies announced it was leaving the automated optical and x-ray inspection businesses, citing many AOI competitors and customers’ unwillingness to pay the high price of AXI equipment.

Ironically, Keithley’s departure from the parametric test market leaves one major traditional player—Agilent, which is discontinuing its imaging product lines in part to focus on its core electronics-measurement business. And Agilent is voicing its continued support for parametric test in a letter going out to customers this week. In part, the letter says, “Despite the current tough business conditions amid the worldwide economic crisis, Agilent Technologies is committed to provide products and solutions for the parametric test system business. We consider this business to be an important component of our broad portfolio of parametric measurement solutions that include single SMU instruments, semiconductor parameter/device analyzers, semiconductor reliability solutions, and fully automated parametric test systems products such as the 4070 and 4080 series.”

As for who will pick up the slack for x-ray equipment should demand arise, one traditional competitor offering both electrical test and inspection products—Teradyne—declined to comment. Teradyne sold its optical inspection business to Landrex in 2004 but continues to offer AXI equipment.

One point worth noting is that when markets do rebound, the products that emerge to fill the niches once served by discontinued equipment may no longer resemble the expensive turnkey systems of old. Asked to comment on the Keithley announcement, Scott Savage, semiconductor market-development manager at National Instruments, touted the advantages of PXI. “As turnkey ATE systems continue to become obsoleted during the downturn, more and more customers are looking...”
for off-the-shelf tools that can be customized to fit their needs,” he said, adding, “Part of the value of PXI is the extremely large selection of modules on the market (>1500) that can either be incorporated into existing systems to augment capabilities or used as the building blocks for new test systems. Modules of specific benefit to parametric-test applications include high-precision multimeters, source-measure units, and high-density switches. Using this off-the-shelf technology, engineers are increasing the flexibility of their test systems as well as greatly reducing the cost of test.”