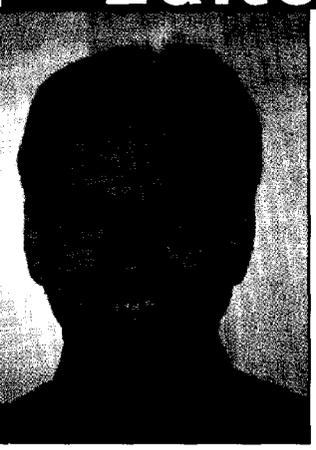
Editorial



Mid-tier IC makers outsource silicon; focus on compounds

The slowdown in the telecoms market has lasted longer than anyone anticipated, and still shows signs of spreading further from the USA to Europe and Asia. But even if demand for telecoms equipment is stagnant, there are at least signs that inventories are returning to normal levels, in particular for wireless handsets (see news, page 6 and feature article, page 32).

Nokia's sales for Q2/2001 were still up slightly on a year ago, while for Q3/2001 it hopes for a slight increase again (reflected in the fortunes of its main RF IC and - increasingly - module supplier RF Micro Devices - see page 7). Although both Motorola and Ericsson experienced a further slump in sales in Q2, both said that this was due to reduced average selling price and that they had, in fact, re-gained market share. Motorola, in particular, is expecting a recovery in demand - boosted by its lead in new 2.5G GPRS handsets - in Q3/2001.

But while the cell-phone industry has been undergoing a slowdown, in Q2/2001 the PC market in Western Europe fell in unit sales for the first time ever, says Dataquest. Together with the slowdown in SRAM memory chips in cell phones, the silicon industry has been undergoing its most severe downturn ever, with some companies losing 60% in revenue in Q2/2001. Dataquest forecasts a 26% drop in total semiconductor revenues for 2001 (exceeding the previous record drop of 17% in 1985). IC Insights forecasts that worldwide sales of electronic system will decline for the first time ever (by 4%, worse than 1998's record lowest-growth of 1%).

Many chip companies are therefore urgently trying to cut costs. Since much mainstream CMOS silicon manufacturing is high-volume and low-profit-margin, some (particularly the mid-tier chip companies) are reducing the proportion of such manufacturing by outsourcing to foundries.

However, there is a tendency to retain "specialist" manufacturing (including SiGe and GaAs) either because this is for more profitable high-speed communications ICs for high-end systems or because there are fewer foundries for such specialist manufacturing (and their own process technology and increasingly complex and customized designs form a higher-value differentiator).

For example, Conexant is outsourcing silicon to foundries while focusing its fabs on higher-performance, higher-value SiGe and GaAs ICs for communications applications (see Issue 6, page 7); Alcatel has launched its own SiGe process as part of a "dual-fab" approach of making "speciality" high-end BiCMOS and SiGe-based chips itself while outsourcing silicon ADSL chip-sets to Asian foundries (see Issue 6, page 11). Likewise, NEC is retracting from high-volume, low-margin silicon DRAM manufacture and forming a separate compound semiconductor business (see this Issue, page 6).

So, while GaAs and SiGe foundries may play as major a role as silicon foundries in future, in the short-term mid-tier chip companies are increasingly focusing on high-end compound-based manufacturing.

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