

Chip foundry has trouble meeting 28nm demand

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(Phys.org) -- The next big things in mobile devices are being hammered by the next big headache for device makers—the chips at the foundation of their supply chain. High demand for devices is trickling down to the fact that chip factories cannot keep up with demand. Especially rattling nerves has been news that Taiwan Semiconductor Manufacturing Company (TSMC) continues to report 28nm chip supply issues, which are expected to continue until the end of the year. Speaking at the annual general meeting, the TSMC chief said chip supplies will not be able to satisfy market demand until 2013.

TSMC is the world's largest contract [chip](#) maker, producing SoCs for chip vendor Qualcomm, Nvidia, and others. TSMC is also regarded as the world's largest foundry and technological leader in 28nm chip production, but its 28nm yields are not high enough to satisfy demand.

“Demand of 28-nanometer has surpassed our customers and our expectations, resulting in supply shortage. I think the worst of the supply shortage is behind us. We expect that we will be close to catching up in the fourth quarter this year. And we expect to have completely caught up with demand by the first quarter next year. And we will not fall behind again,” Morris Chang, CEO, told investors in April during a conference call.

Chang blamed the shortage on the fact that demand of 28-nanometer surpassed both his customers and the company's own expectations. “This supply shortage problem is not caused by new problems but by

underestimates by both our customers and us, of the capacity and ramp-up speed required this year.”

Qualcomm, a TSMC customer. must not only seek understanding but solutions for its business. (Qualcomm designs chips and blueprints are handed over to TSMC.) In March there was talk of how Qualcomm, unhappy about TSMC’s supply issues, was moving some of its business to GlobalFoundries and UMC. Qualcomm had warned in April that it will have trouble meeting demand for some of its advance cellphone chips for the rest of the year due to manufacturing constraints. However, earlier this month, Qualcomm said it expects advanced 28-nanometer chip supply to be under control towards the year-end. The Reuters report said that now [Qualcomm](#) was working with not only TSMC, but also “other foundries” to increase supply of the chips.

Likewise, there are stories that other customers may be shopping around for competing foundries to address demand.

Samsung has moved to get around the problem by investing in its own chip manufacturing line for mobile processors planned for completion by the end of next year. The company will spend \$1.9 billion to build the plant to meet demand for chips powering [mobile devices](#), according to Samsung. This is Samsung’s way of keeping control over the supply chain.

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