J.Gold Associates LLC, 6 Valentine Road, Northborough, MA 01532, USA
www.jgoldassociates.com +1-508-393-5294

Intel – To Infineon and Beyond!

Intel announced it is acquiring Infineon's wireless business unit for $1.4B. We believe this is a good acquisition for Intel as it will enable them to better compete in the fast growing smartphone, Internet device and embedded markets. Having this technology in-house is critical to Atom's long term success.

Intel is ramping up quickly in the growth market of Internet connected device (e.g., smartphones, netbooks, tablets, embedded appliances). Indeed, Intel rightly understands that these markets have the potential to greatly surpass the volumes of the higher end PC and server based devices it currently ships. However, unlike the PC market where it dominates, Intel has had a more difficult time getting traction with its Atom processors, which over the past 2 years have done much to catch up to the substantial technological lead of ARM-based solutions. With a new generation of Atom coming shortly, Intel will offer power efficiency and processing power that can compete with the dominant ARM-based processors currently powering the vast majority of smartphones and similar connected devices, and increasingly targeting netbooks and tablets as well.

However, unlike Qualcomm, who makes one of the leading ARM-based chip solutions with its SnapDragon platform, Intel does not control the cellular 3G/4G RF/wireless modem component of the complete solution necessary to allow connectivity with these devices. Indeed, it formed a partnership with Nokia some time ago to get some of this needed intellectual property, but Nokia recently decided to leave the wireless modem business altogether, selling off its assets to Renasys. That left Intel with some IP, but little else of a concrete nature. Ironically, Intel had mobile phone wireless connectivity assets but decided to sell them off to Marvell several years ago, along with its ARM-based processor IP (XScale). But with an increasing need to power its Atom-based solution, particularly those based on SOC designs, with a variety of 3G/4G technologies, Intel finds itself needing the ability to design in newer wireless technologies, particularly LTE, to compliment its existing capabilities in WiFi and WiMax. The consequence of this compelling need is Intel's desire to acquire known working technology and expertise from Infineon – an expertise it would have taken Intel several years to perfect on its own. In light of the investment it would have had to make in developing LTE and other 4G wireless capability from scratch, the acquisition cost of the Infineon wireless unit represents a bargain. Intel will be able to accelerate its WiMax/LTE time to market significantly through this acquisition.

Intel gets more than IP with this acquisition. It gets a large number of wirelessly-dedicated employees (3400 total Infineon employees) that are running working Fabs producing chips currently being sold to the likes of Apple, Nokia, Samsung and RIM. Intel believes that the current silicon processes used in the Infineon chips can be repurposed to fit within Intel's processes, to enable a complete one-chip integration. Much like WiFi and graphics before it, Intel rightly understands that a completely integrated chip which includes the ability to connect to all types of wireless options will be very attractive to designers and OEMs. This is indeed the approach Qualcomm has taken. This acquisition now puts Intel on a par with Qualcomm, and ahead of other ARM-based rivals NVidia, TI, Freescale and Samsung.

We believe that just like WiFi and graphics are transitioning to on-chip capability, within 3 years we expect most 4G technology to be on-chip and tightly integrated with the processor chip set as well. Not only does this acquisition provide the ability for Intel to meet this time line, but it also provides very strong supplier relationships with a large number of OEMs currently buying from Infineon. Intel now has the ability to "upsell" these customers if it can prove its next generation processor/wireless combination chips are indeed better than currently used technology. Infineon also brings Intel much more visibility into the wireless market, as it is living and breathing this marketplace daily, even to the extent that is has ARM expertise that Intel should be able to leverage. And we should not underestimate the need for Infineon's wireless assets and solutions in the embedded space where SOCs utilized in M2M and similar embedded solutions represent a major growth opportunity for Intel (potentially as much as 20%-25% of its business).

Bottom Line: We do not expect this to be Intel's final acquisition in wireless (or other areas for that matter). There are still a number of technologies it doesn't control (e.g., LBS, sensors). But this acquisition has accelerated Intel's time to 4G by at least 2 years, and provided them with a market opportunity it could not have achieved on its own by bringing it relationships in the market it did not have. Overall, we believe this acquisition is a real positive for Intel and will help to bring it, first, in parity with ARM-based solutions, and if done right, to eventually offer a compelling competitive advantage. And while this is a particular "poke in the eye" at Qualcomm, it should be a warning call to others in the ARM ecosystem that Intel is serious. Now, Intel must show it can execute.

Jack Gold is the founder and principal analyst at J.Gold Associates, an information technology analyst firm based in Northborough, Mass., covering the many aspects of business and consumer computing and emerging technologies.

For more in-depth comments or analysis on this or other subjects, feel free to contact us.

Jack E. Gold

jack.gold@jgoldassociates.com
www.jgoldassociates.com
508-393-5294