Cellphone Core Chip Trends: Market Analysis of Baseband, Application Processor, RF and Power Management Chips

Description: This extensive market study covers the core integrated circuits that enable cellphones. In this study, the authors don't just track basebands and application processors, but also track and forecast RF transceivers, power amplifiers, and power management units. Together, these chips comprise the core chips of all cellphones. The report provides 2010 vendor market shares for all of these core cellphone chip types and forecasts units, ASPs and revenues for all of them through 2015.

Of course, the buzz is now about fourth-generation cellular, in the form of LTE (Long Term Evolution). The authors highlight the currently-available LTE chips and their “sockets” at mid-2011.

To forecast baseband processors separately from application processors would be folly, since the two increasingly occupy the same die (or the same package). Stand-alone basebands currently account for barely half of that market, but will see that share diminish as technology and price pressures push for more integrated solutions.

The digital baseband processor market is now segmented into three categories:

- Stand-alone digital baseband processors (SA DBB)
- Integrated communication processors (Com DBB: application processors + baseband)
- Integrated ultra-low-cost (ULC DBB) baseband with RF transceiver on the same die

This study explores the dynamics of each of these baseband types and profiles the chip providers and market shares for each of them.

In a similar vein, application processors are characterized in three different types:

- Stand-alone Application Processors (SA-Processor)
- Integrated communication processors (Com-Processor)
- Video Co-Processors as adjuncts to basic RISC engines

This study explores the dynamics of each of these application processor types and profiles the chip providers and market shares for each of them.

The RF transceiver is a key component of mobile handsets, as it is the actual radio transmitter and receiver - once separate devices, but now available as a single device - and increasingly being integrated onto the baseband chip (at least for 2.5G solutions). The complexity of new radio components for advanced handsets has pushed the leading suppliers into two camps, those that specialize in power amplifiers bundled with transceivers as an optimized solution, and those that offer ultra-compact, multi-band transceivers and matching basebands fabricated with the latest CMOS technology.

Cellular handsets and other mobile devices require efficient power management unit (PMU) devices as companions to all processors, whether baseband or application processors, to ensure optimal system operation and long battery life. Because power management technology requires mixed-signal capability, analog baseband (ABB) and audio codecs are often integrated on the same die.

The authors believe that there is no other core cellphone chip market study available that has the breadth or depth of coverage of this one. You are invited to scan the table of contents to get an idea of the full extent of this valuable study and all of the components and companies covered.

With this valuable resource, you will be better equipped to understand the market and new business opportunities, to know your potential customers and to be better informed about your competitors. The market metrics provided are aimed at providing you with dependable information for your company’s next business plans.

As with all of Forward Concepts' reports, your satisfaction is guaranteed!
AUTHOR

Carter L. Horney, a recognized authority on microprocessor and DSP implementation in telecommunications, is the author of this study. Mr. Horney is an independent consultant and Forward Concepts Associate specializing in semiconductor product strategy and market planning. He was formerly Division Planner for Rockwell International's Digital Communications Division and earlier Strategic Marketing manager for Rockwell's Semiconductor Products Division. Mr. Horney was responsible for the product planning, which led Rockwell (now Conexant Systems) to dominate the worldwide FAX and dial modem chip market. He was appointed a Rockwell Engineering Fellow and received many commendations for outstanding achievement in Computer Architecture, Engineering, Technical Marketing, Product Planning and Customer Relations. Mr. Horney has a B.S. in Mathematics and Physics and an M.S. in Mathematics from Western Illinois University.

EDITOR

Will Strauss, President of Forward Concepts, is an internationally-recognized authority on markets driven by DSP Technology (and wireless is the largest DSP market), and was a significant contributor to this study.

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   7. RDA Microelectronics (Quad GSM & TD-SCDMA 1800)
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F. LTE PA Supplier Profiles
   1. Anadigics (FDD 1, 2, 7, 8, 20, 3/4/9/10, 5/6/18/19, 12/17,13/14; TDD 38, 40)
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