Datang Mobile Selects Multicore Processors from Freescale Semiconductor to Power 3G Base Stations

SHANGHAI -- (BUSINESS WIRE) -- Datang Mobile Communications Equipment Co., Ltd. (Datang Mobile), has selected Freescale Semiconductor's dual-core QorIQ P2020 processor, six-core MSC8156 DSP and MD7IC2050N RF Power component for a popular line of TD-SCDMA base stations.

According to research firm Companiesandmarkets.com, China is the world's largest mobile market, with around 700 million subscribers creating increased demand for faster wireless speeds. Total Chinese market handset sales are expected to grow at a CAGR of 10 percent to 404 million units in 2014, as mobile penetration reaches 114 percent.

To serve this market, Datang Mobile is addressing demand for high performance, energy efficient wireless base stations with world class silicon from Freescale.

Datang Mobile's TD-SCDMA base stations are highly advanced products designed for optimal performance and value. Freescale's MSC8156 DSP and QorIQ P2020 processors deliver the flexibility, integration and affordability required to power highly advanced base stations supporting next-generation wireless standards.

"This design win underscores our ongoing traction in China and demonstrates the breadth and depth of our multicore processors, DSPs and RF Power technologies," said Scott Aylor, director and general manager of DSP Products for Freescale's Networking & Multimedia Group. "Freescale is pleased to collaborate with Datang to help take wireless base station solutions to new levels of performance and energy efficiency."

Freescale's QorIQ P2020 communications processor is a signature member of Freescale's QorIQ product line. The P2020 device integrates two e500 Power Architecture® cores, a rich set of high-speed I/O interconnects, security acceleration engine technology and a DDR2/3 memory controller on a 45-nm process technology low power platform. Dual cores at 1.2 GHz deliver the cost advantages and energy efficiency needed to manage the large amount of control plane and data plane traffic present within networking linecard and baseband channel card equipment.

Based on 45-nm process technology, the MSC8156 DSP delivers flexibility, integration and affordability while answering demand from wireless base station OEMs for ultra-high computational performance for baseband applications. The MSC8156 DSP is an ideal choice for applications such as wireless base stations supporting a variety of standards, including TDD-LTE, FDD-LTE, TD-SCDMA, WiMAX and 3G-HSPA. With its six DSP cores, the device offers a total of 48 GMACs (Giga

Multiply and Accumulate) per second of DSP core performance with a rich set of high speed interfaces and DDR2/3 memory controllers.

Its embedded MAPLE-B baseband accelerator offers up to 280 Msps of FFT throughput, up to 175 Msps DFT, 200 Mbps at six iterations of Turbo decoding for 3G-LTE and 100 Mbps of Viterbi decoding with tail-biting and multi-iterations.

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