

Freescale Semiconductor to scale Ultra-Wideband solutions to 1 gigabyte data transfer rate

June 7 2004

Aggressive roadmap reveals breadth/depth of Direct Sequence-Ultra-Wideband solutions for consumer electronic (CE) applications

AMSTERDAM, Netherlands – June 7, 2004 – Freescale Semiconductor, Inc., a wholly-owned subsidiary of Motorola, Inc. and leading provider of Ultra-Wideband (UWB) solutions, has detailed its current and next-generation UWB product family roadmap at the Wireless Connectivity (WiCon) World Expo in Amsterdam. Over the next year*, Freescale plans to deliver three advanced UWB product families, including the industry's first 1 Gbps UWB solution, to address the wide variety of performance and functionality required by numerous UWB applications.

Adding to the existing XtremeSpectrum™ chipset, which achieves over 110 Mbps, Freescale revealed that its planned UWB product families will be engineered to deliver 220 Mbps, 480 Mbps and 1 Gbps data transfer rates. Consistent with its current UWB offerings, the planned UWB families will be engineered to support peer-to-peer as well as ad hoc networking for truly mobile wireless connectivity. To address the demand for a low power, cost-effective UWB solution for handheld applications such as mobile phones, media players, digital cameras and camcorders, Freescale's planned UWB product families will also be designed to integrate sophisticated power management tools to help extend battery life, a critical requirement for mobile applications.

“Over the past two years, we have been working closely with UWB customers to understand their needs and requirements for high data rate wireless connectivity,” said Martin Rofheart, director of UWB Operations at Freescale. “As we plan commercial shipments of our current UWB solution, it’s clear that a variety of speeds—from 100 Mbps up to 1 Gbps—as well as a variety of power requirements and ranges are needed to serve the broad range of emerging handheld, mobile and in-room video and audio applications. We believe, based on customer input, the product families detailed today will best serve CE vendors worldwide over the next three years.”

Commenting on Freescale’s roadmap and its significance to Motorola, John Barr, Business Development Director of Motorola’s UWB Early Stage Acceleration Program, stated, “As a leader in handset and set-top products, Motorola is focused on identifying and implementing the best performance/lowest cost solutions for our consumer and mobile electronics products. The DS-UWB silicon we have used from Freescale clearly demonstrates the superior performance, low power consumption and cost benefits this low complexity approach provides. These benefits, in combination with its regulatory compliance, make DS-UWB the ideal choice for Motorola consumer electronics products and will enable new, high data rate applications to be conceived and developed by vendors such as Motorola.”

The planned product families, which are to be designed to comply with the Federal Communications Commission's current Ultra-Wideband Report & Order, are scheduled to include driver support for multiple operating systems. The mini-PCI and SDIO module form factor are expected to enable integration into the smallest consumer electronics, while providing a variety of interfaces including PCI, mini-PCI, PCI-Express and USB2, and IEEE 1394. The Freescale Media Access Control (MAC) chip is compliant with the IEEE 802.15.3 MAC protocol, while the Freescale PHY, which is based on the 802.15.3a DS-

UWB proposal, provides data transfer rates ranging from 110 Mbps to 1Gbps. This support helps CE vendors to ensure interoperability among their product lines.

To date, Ultra-Wideband has been touted for consumer electronics products such as digital displays, DVD players, digital video recorders and set-top boxes, as well as handheld applications such as camcorders and digital cameras. New, high data rate applications are expected to emerge over the next three years and beyond that will further drive the need for products exceeding 1 Gbps data rates. For example, new media players that allow storage of multiple MPEG-4 movies will require 1 Gbps UWB solutions to upload/download the entire movie in just a few seconds. Portable hard drives are another emerging application, where users will want to use their hard drive at both the home and office. While transferring data from the portable hard drive to the host computer, a data rate of 1 Gbps is needed in order to keep other applications running during the continuous data transfers.

Product Availability

- The Freescale XtremeSpectrum UWB chipset with over 110 Mbps data rate has been sampling to customers worldwide and is expected to be commercially available Q3 2004.
- Freescale's third generation, two-chip UWB solution, with data rates greater than 220 Mbps is expected to begin sampling Q4 2004.
- Freescale 480 Mbps and 1 Gbps UWB families are expected to begin sampling over the next year.

About Ultra-Wideband Technology

Ultra-Wideband is a wireless technology that transmits an extremely low power signal over a wide swath of radio spectrum. Unlike conventional radio systems that operate within a relatively narrow bandwidth, i.e.

Bluetooth™ wireless technology, IEEE® 802.11b, IEEE 802.11a. Ultra-Wideband operates across a wide range of frequency spectrum by transmitting a series of very narrow and low power pulses. The combination of broader spectrum, lower power and pulsed data means that Ultra-Wideband causes less interference than conventional narrowband radio solutions, and delivers wire-like performance in an indoor wireless environment. This makes Ultra-Wideband technology ideal for consumer electronics applications that are increasingly multimedia-rich in content.

About Freescale Semiconductor

Freescale Semiconductor, Inc., (www.Freescale.com) a subsidiary of Motorola, Inc., has a 50-year history in microelectronics. Freescale Semiconductor produces semiconductors for the automotive, consumer, industrial, networking and wireless markets worldwide. Based in Austin, Texas, Freescale Semiconductor has design, manufacturing or sales operations in more than 25 countries. Freescale Semiconductor's 2003 sales were \$4.9 billion (USD).

Freescale™ and the Freescale logo are trademarks of Freescale Semiconductor Inc. All other product or service names are the property of their respective owners. © Freescale Semiconductor Inc. 2004.

* Except for historical information, all of the expectations and assumptions, contained in the foregoing are forward-looking statements involving risk and uncertainties. Important factors that could cause actual results to differ materially from such forward-looking statements, include, but are not limited to, the competitive environment for our products, changes of rates of all related services, and legislation that may affect the industry. For additional information regarding these and other risks associated with Company's business refer to the Company's reports with the Securities and Exchange Commission.

The original press release can be found [here](#).

Citation: Freescale Semiconductor to scale Ultra-Wideband solutions to 1 gigabyte data transfer rate (2004, June 7) retrieved 26 April 2024 from <https://phys.org/news/2004-06-freescale-semiconductor-scale-ultra-wideband-solutions.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.