TI ADDS FLOATING-POINT DSP TO ROADMAP AND EXTENDS PRICE/PERFORMANCE BY MORE THAN 3X

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TI's lifts TMS320C6711 DSP floating point performance to 1500 MFLOPS still offering package, function and instruction compatibility

HOUSTON (July 19, 2004) - DSP-based system designers can improve system performance while decreasing DSP costs by using the new TMS320C6711 digital signal processor (DSP) announced today from Texas Instruments Incorporated (TI). The C6711 DSP at 250 MHz is targeted at applications seeking high precision and wide dynamic range offering more than three times the megahertz per dollar and 150% more performance over its original predecessor. For more information, see: www.ti.com/c6711dsppr.

The new C6711 DSP provides 1500 Million Floating-Point Operations per Second (MFLOPS) at a suggested price of just $18.00 and performs up to six IEEE compatible floating point operations per cycle. With it, imaging systems can perform real-time manipulation of data for rendering, transmission, compression and enhancement, and the device is ideally suited for biometrics and speech recognition. The DSP also plays a key role in industrial applications such as instrumentation, test and measurement, intelligent sensor interfaces and robotics. Other applications that can benefit from the device's features include medical devices, visual inspection, vibration analysis, radar and sonar as well as

automotive electronics such as adaptive drive controls.

"The development team at Bioscrypt evaluated several processors and chose the Texas Instruments TMS320C6711 DSP for the high performance architecture which we needed to support the requirements of our pattern-based matching algorithm used in fingerprint verification technology," said Israel Ben-Ishai, vice president of engineering, Bioscrypt Inc. (Bioscrypt). "We were impressed with the C6711 device because it offered us the right performance for a great price as well as flexible and high quality development tools."

Power and Flexibility

Fabricated in 0.13-micron CMOS technology with a 1.4V core voltage and 3.3V I/O voltage, the C6711 DSP possesses the operational flexibility of high-speed controllers while approaching the numerical capability of array processors. This processor has 32 general-purpose registers of 32-bit word length and eight highly independent functional units: four floating-/fixed-point ALUs, two fixed-point ALUs and two floating-/fixed-point multipliers. Other features include 8k bytes of L1 program and data cache plus 64k bytes of L2 cache. For I/O, the device supplies an enhanced DMA controller with 16 independent channels, a 32-bit external memory interface, a 16-bit host-port interface and two multi-channel buffered serial ports (McBSPs).

The new C6711 DSP is instruction-set, memory and package compatible with earlier DSP versions simplifying system upgrades. To aid developers in getting new products to market quickly, TI offers a comprehensive and easy way to use the C high-level language programming environment with an optimizing compiler and tools to eliminate most needs for assembly level programming. The C6713 DSP Starter Kit (DSK) is also available which includes DSK-specific tools and algorithms and the comprehensive Code Composer Studio™

integrated development environment, which comes with the DSP/BIOS™ real-time kernel. Further, engineers can access, at no charge, TI's extensive C67x™ DSP Library and Fast C67x DSP Run-Time Support Library.

Pricing and Availability

All of this comes at a competitive price point of 83 MFLOPS/dollar. Housed in a 272-pin ball-grid array package, the TMS320C6711D is available in volume quantities today with pricing of $18.00 (10 KU).

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