

TI, The Mathworks Collaborate on DSP Development

Advancing the capabilities of DSP software development, Texas Instruments Inc. and The MathWorks announced two new software tools that simplify development and speed time-to-market for DSP-based systems. The new MATLAB Link for Code Composer Studio (CCStudio) Development Tools and the new Embedded Target for the C6000 DSP platform both put more powerful problem-solving capabilities in the hands of DSP developers for faster system integration. The MATLAB Link for CCStudio offers significant enhancement of software verification and testing for TI's TMS320 family of DSPs, and the Embedded Target for C6000 provides a revolutionary new way of developing DSP code for the TI TMS320C6000 family. *The Mathworks*, Natick, Mass., (508) 647-7000, www.themathworks.com

Carrier-Class Conference Software Runs on TMS320C54x

A carrier-class conferencing software algorithm for the TMS320C54x DSP generation processor and aimed at PBX, switching, and gateway equipment incorporates the ability to detect voice activity. As a result, it prevents the accumulation



of noise. In addition, the software's automatic level control compensates for differing attenuation characteristics. Versions for TMS320C54x and TMS320C54x DSP generations are planned for release in October. The current version sells for \$12,000. *Adaptive Digital Technologies, Inc.*, Conshohocken, Penna.; (610) 825-0182, www.adt-inc.com

To Keep Down Costs, PCI Board Delegates DSP Tasks

The MSP-H8 Media Gateway, a full-length PCI board with up to eight high-performance analog trunk interfaces, is intended for use in digital media enterprise servers. The board cuts cost by using its host for media processing, eliminating the need for on-board DSPs. It includes a 14-bit



linear codec for each line and features low-distortion characteristics. The MSP-H8 is available with optional OpenMedia media processing software, a comprehensive multistream software package for developing an open, portable environment. Starting price for the MSP-H8 is \$295. Line interfaces sell for \$48 each. *Commetrex Corporation*, Roswell, Ga.; (770) 449-7775 ext. 420, www.commetrex.com

Real-Time D/A Board Packs a TMS320C6711

The DT9841, a scalable, real-time, USB-based data-acquisition module, harnesses a TMS320C6711 floating point DSP and an efficient hardware architecture for performing simultaneous analog input, analog output, and signal processing functions. Key features include 2 MB of flash memory, eight analog inputs, two analog outputs, 24-bit sigma-delta A/D and D/A converters capable of processing 100 kS/s, and a 50-MB/s LVDS communication port. The DT9841 module conforms to USB 2.0 and sells for \$3,995. *Data Translation, Inc.*, Marlboro, Mass.; (800) 525-8528, www.datatranslation.com

Equalization Software Ports Easily to Different DSPs

High-performance equalization software called EDGE, an addition to

the GSM/GPRS/EDGE protocol suite, is object oriented and was developed in fixed-point ANSI-C to ease porting to different DSP architectures. The software



exceeds ETSI performance requirements for fading and co-channel and adjacent channel environments. Optimized for popular DSPs, EDGE can operate as a complete physical layer within the DelCORE Universal Framework for wireless applications. Object code prices starts at \$50,000. *Delphi Communication Systems, Inc.* Maynard, Mass.; (978) 897-5650, www.delcomsys.com

PCI-based DSP Board Tailored for Data Acquisition and More

Conejo, a high-performance DSP board for PCI-based data acquisition, playback, and coprocessing, simultaneously drives four 14-bit analog I/O channels at 10-MHz. Part of the Matador series, the board engages a 150-MHz TMS320C6711



DSP generation floating-point processor; accepts four 16-bit analog inputs at 10 MHz; and features a 32- and 64-bit, 3V and 5V 33-MHz PCI interface. Conejo exchanges user and hardware data through two 32-bit I/O ports and a bidirectional 16-bit, 33-MHz FIFO port. Full tool sets are available for the board to help speed application development. The Conejo board lists for \$3,495. *Innovative Integration Inc.*, Simi Valley, Calif.; (805) 520-3300, www.innovative-dsp.com

Ethernet JTAG Emulator Speeds Software Downloads

An Ethernet-based JTAG emulator, the Predator-560 works with the latest TMS DSP family of processors and features Real-Time Data Exchange capabilities (part of Texas Instruments' XDS560 emulation technology) to speed data downloads. When connected to an Ethernet hub, the emulator serves



multiple users, who can each be in different physical locations from the target hardware. Compatible with XDS510 emulator, the Predator-560 offers Advanced Event Triggering for nonintrusive debugging and event sequencing. The Predator-560 sells for \$5,336. *Kane Computing Ltd.*, Northwich, U.K.; +44-01606-351006, www.kanecomputing.com

DSP Boards Come in CompactPCI and PMC Form Factors

The Condor CompactPCI DSP board is powered by 12 TMS320C6203 DSP generation processors clocked at 400 MHz to achieve up to 28,000 MIPS. The board includes 192 MB of SDRAM and 64 MB of flash memory. A



Motorola Altivec G4 (MPC7400) handles host processing, while an MPC8260 PowerQUICC II CPM manages communication connectivity using 10/100Base-T Ethernet and RS-232 protocols. Another board, this one a PMC platform called The Seagull, carries four TMS320C6415C DSP generation processors clocked at

600 MHz. Each DSP connects to an FPGA which serves as an input control mechanism and coprocessor via a 133-MHz, 16-bit bus. A 32-bit, 33-MHz PCI bus transfers data to and from the PMC connector.

Prices for Condor start at \$7,300; and for Seagull, \$4,200. *Mango DSP Ltd.*, Jerusalem; +972-2-532-8706, www.mangodsp.com

5-GLOPS DSP Card Fits PC/104 Footprint

Suited to systems where space is at a premium, the SigC67xx-PC/104 DSP card takes a modular approach to packing up to 5-GFLOPS of processing into one PC/104 footprint. Specifically, the card accepts modules having TMS320C67x DSP generation processors as well as those with 16-bit analog I/Os. The card carries a quad T1/E1 interface, 10/100-Mbps Ethernet port, four-channel RS-42x interface, dual UART, and boot flash memory. Prices for the SigC67xx-PC/104 start at \$1,145. *Signallogic, Inc.*, Dallas, Texas; (214) 343-0069, www.signallogic.com

Board Quiets Telecom Noise in Real-Time

The Denoiser board uses a TMS320C5409 DSP processor and real-time signal processing software to improve the speech quality in telecom systems; intercoms; and telephone devices, including answering machines. Executing a proprietary algorithm, the small, low-cost board boosts voice quality by removing noise.

The board works as either a standalone device or can be integrated into a third-party product. It sells for \$55 each in quantities of 1,000. *Speech Technology Center*, St. Petersburg, Russia; +7-812-325-8848, www.speechpro.com

Voice Processing Boards Address Network Convergence

The PVRB672 carrier-grade packet voice resource board and the PVRM672 module, both members of the ComStruct family of building blocks, are designed to drive the convergence of voice and telecom networks.

The PVRB672 is a CompactPCI blade that adds physical PSTN, IP, and ATM connectors, including PICMG 2.16 connectivity, to media gateway functionality. The companion PVRM672 is a PT3MC-compatible module that serves as a media gateway carrying a network processor and DSP array. Another ComStruct product, the PTMC Wireless Transcoder, aims to help OEM's accelerate deployment of voice processing technology across 3G wireless gateways and transcoders by delivering up to 300 channels of AMR and over 220 channels of EVRC. OEM-quantity prices are less than \$10 each per port for the PVRB672 and PVRM672 and about \$12 per port for the Wireless Transcoder. *Motorola Computer Group*, Tempe, Ariz.; (800) 759-1107 www.motorola.com/telecom

Module Marries 64-bit DSP and Million-Gate FPGA

The SMT361 module carries a 400-MHz TMS320C6414 64-bit DSP, 32 MB of memory, and a million-gate XC2V1000 Virtex-II FPGA. The first in a series of more than 60 modules and five carrier boards harnessing the TMS320C64xx-generation DSP, the unit has two digital bus interfaces for I/O or inter-DSP communication. The SMT361, which is compatible with the Code Composer Studio development environment, starts at \$1,895. *Sundance Digital Signal Processing Inc.*, Reno, Nev.; (775) 827-3103, www.sundance.com

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