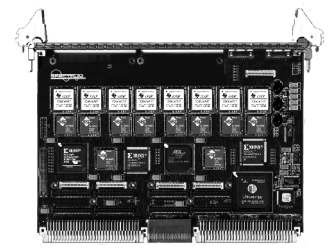**Preliminary Information**

Mosport-VME
Octal TMS320C6202 or TMS320C6203 VME Board

NEW ◀VME▶

Mosport-VME, an octal TMS320C6202 or TMS320C6203 product, is a standard VME64 board. It features eight 250/300 MHz, 2000/2400 MIPS 'C6202/C6203 fixed-point DSP processors from Texas Instruments. Mosport-VME combines all the necessary hardware and software tools, including Spectrum's Accelera™ integrated development environment to begin multi-DSP development.

TI's 'C6202/C6203 DSPs are based on the high-performance, advanced VelociTI™ very-long-instruction-word (VLIW) architecture ensuring code compatibility with existing 'C6000 DSPs. Each DSP is equipped with two banks of 4Mx32 synchronous SDRAM, for a total of 256 MB on-board DRAM.

Hardware Features
Mosport-VME is based on Spectrum's unique *quic*Comm architecture. Integral to *quic*Comm is Spectrum's exclusive Solano™ ASIC, which provides the DSP with four full-duplex links, 200 MB/s in each direction, for a total of 1600 MB/s per DSP. Each DSP is combined with a Solano ASIC, that provides *quic*Comm~LINKS which can be routed to other DSPs, to the *quic*Comm-Enhanced PMC, to the VME P0 connectors, to the front panel and to the PCI local bus. Using rerouting connectors on the PMC sites, each Solano can be routed to different on-board DSPs. Four Solano connections are routed to the front panel enabling inter-board and inter-chassis DSP networks to communicate with each other at a very high data throughput.

A PCI local bus interface provides access to the 'C6202/C6203 expansion bus (X-Bus) shared between the eight DSP devices. This bus provides PCI access to DSP memory and peripherals and is the path by which the processors are booted. One of the DSPs is equipped with 4 MB of FLASH EPROM to enable booting of the board for embedded applications. In addition, the expansion bus provides the DSP with access to the PCI local bus using expansion bus DMA cycles. The interface to the PCI local bus provides direct bus mastering from each of the eight DSPs. The PCI local bus is also connected to a pair of Solano ASICs and interfaced to the routing connectors. This enables full-duplex Solano data transfers between the PCI local bus and the on-board DSPs.

I/O Support
PMC - Mosport-VME is equipped with two *quic*Comm-Enhanced 64-bit single-width PMC sites. Each PMC site has four full-duplex *quic*Comm~LINKS each providing 400 MB/s of I/O bandwidth, for a total of 1600 MB/s per PMC.

The PMC can directly interface to each DSP Unit's Solano ASIC, providing a 400 MB/s interface to each DSP. The PMC sites are also fully IEEE 1386.1 compliant, providing a data rate of up to 264 MB/s directly onto the PCI local bus and providing support for a wide range of Spectrum and third party I/O modules including both analog and digital I/O.

DSP~LINK3™ - A DSP~LINK3 connector provides off-board access to over 150 IndustryPack® I/O modules which support a wide variety of analog and digital I/O standards.

Front Panel - Four of the DSPs are connected via the Solano ASIC interface to Front Panel connectors enabling high-speed inter-board communications.

Software
Accelera™ - Graphical, Component-based Development Environment
Accelera™ is a scalable, parallel processing software development environment designed specifically to allow application developers to move their code from a host-based simulation environment to a DSP-based environment in the shortest amount of time.

Software Development Kit (SDK) - Spectrum's SDK allows the developer to efficiently control and communicate with the Mosport-VME platform while being abstracted from the details of the hardware. Supported host O/S includes: WinNT®, VxWorks® and Solaris™

Debug and Compile Tools - Spectrum builds on TI's proven software tool-set to provide system-level, multi-processing tools and configuration utilities that enable application developers to work at a system level. Through an advanced tool-set and a significant base of pre-tested third party algorithms and host tool plug-ins, TI offers reusable DSP software including Code Composer Studio™ which comes complete with:
- *Code Composer Studio™ IDE*
- *DSP/BIOS with RTDX*
- *VLIW C Compiler, Assembly Optimizer and linker tools*
- *Instruction set architecture simulator*

▶ *Eight 250/300 MHz TMS320C6202/ C6203 processors*

▶ *Peak performance of 16,000/ 19,200 MIPS*

▶ *8M/4Mx32 words of local SDRAM per DSP for a total of 256 / 128 MB of DRAM*

▶ *quicComm architecture provides 200 MB/s full-duplex link between processors (400 MB total)*

▶ *Comprehensive software including:*

▶ *Accelera™ -advanced software development environment*

▶ *Texas Instruments' Code Composer Studio™*

▶ *WinNT®, VxWorks®, and Solaris™ host library and drivers*

▶ *Flexible I/O:*

▶ *2 quicComm-Enhanced 64-bit PMC sites each with 4 full quicComm~LINKS for a total of 1600 MB/s per PMC*

▶ *DSP~LINK3™ provides access to over 150 IndustryPack® and Spectrum I/O modules*

▶ *64-bit PCI local bus provides access to the VME host, PMC sites, PCI to Solano bridge, and expansion port interface*

▶ *Debug capability via on-board TBC or via a JTAG emulator*

▶ *Comprehensive documentation*

▶ *Internet technical support*

▶ *Online technical training workshops*

Ask about Spectrum's comprehensive, practical, on-line technical training workshops