MicroLAB Systems

Ultimate DSP Development Solutions

TORNADO-PX5421Q

800 MIPS Quad TMS320C5421 DSP Coprocessor Daughter-Card Module with external AD/DA/DIO option for TORNADO DSP Systems and Controllers

features

- PIOX-16 daughter-card module for *TORNADO* DSP systems and controllers
- 8-core 16-bit fixed point DSP coprocessor with optional AD/DA/DIO/ext facility via eight *TORNADO* SIOX rev.B daughter-card modules
- ultimate solution for multi-channel general purpose DSP and optional data acquisition

details

- four dual-core 16-bit fixed-point TMS320C5421 DSP
- 800 MIPS total DSP performance
- each dual-core TMS320C5421 DSP features 256Kx16 on-chip RAM (128Kx16 is shared as common program RAM area), 6 McBSP ports, 12 DMA channels, 2 timers, HPI port, digital I/O, and on-chip core-to-core communication facility
- modular design with external AD/DA/DIO daughter-card modules
- McBSP-0/1 ports, timer, two external interrupts, and one digital output of each DSP core are available via on-board connectors for optional communication with external SIOX rev.B daughter-card modules via dual-site SIOX mini-extenders
- McBSP-3 ports of each DSP core are used for external core-to-core communication path
- communication between host PIOX-16 interface and on-board DSP via HPI ports and mutual interrupts
- DSP boot via HPI port
- code compatibility with TMS320C54x DSP

I/O expansion

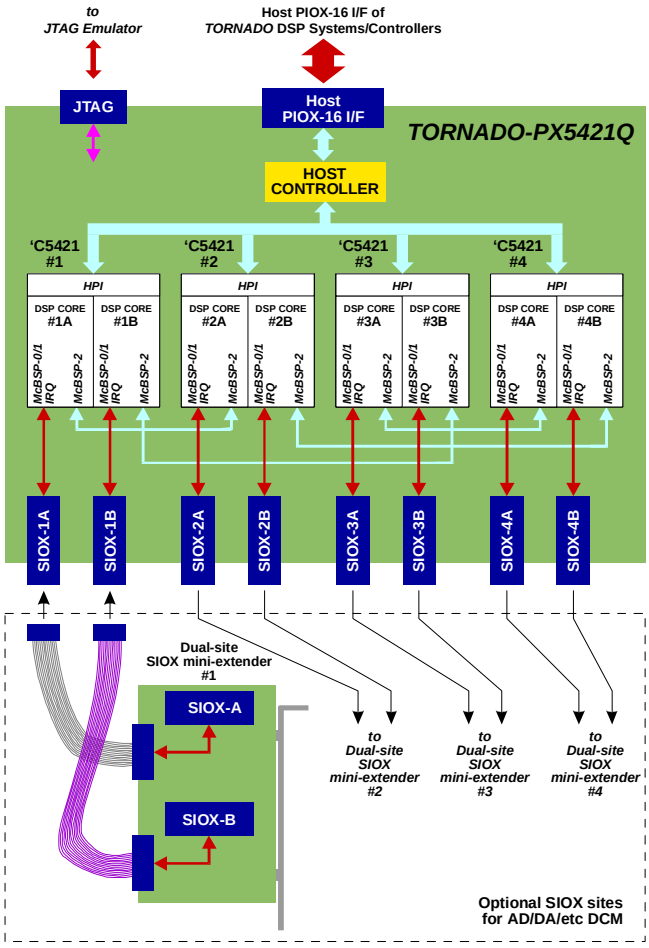
- eight optional external sites for SIOX rev.B daughter-card modules
- a variety of “of-the-shelf” AD/DA/DIO SIOX rev.B daughter-card modules
- application specific SIOX rev.B I/O coprocessor daughter-card modules

‘C54x DSP software development tools

- JTAG port for TI XDS510 or MicroLAB Systems *MIRAGE-510DX* emulators
- TI C5000 Code Composer Studio Compile/Debug tools
- control function library
- industry-standard real-time OS tools
- application specific DSP function libraries

applications

- multi-channel vocoders, fax/modem
- multi-channel VoIP
- muti-chanel cellurar telephony
- multi-channel digital radio
- multi-band radio-monitoring
- multi-channel radio-modems



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Technical Specifications

On-board DSP	4x TMS320VC5421-200 16-bit fixed-point DSP from TI
DSP clock	100 MHz
Maximum total DSP performance	4x 200MIPS
Host I/F	*TORNADO* PIOX-16 16-bit interface with access to DSP on-chip HPI ports, mutual interrupts, access timeout control
Host I/F data access time	40ns typ
AD/DA expansion facility	8x optional external SIOX rev.B sites
SIOX rev.B options	two 100 Mbit/s McBSP ports, timer/IO, digital I/O, two interrupt request inputs, software SIOX reset control, ±12V/±5V power supplies
Dimensions	PIOX-16 plug-in mainboard: 3.75”x3.22” external dual-site SIOX rev.B extender: 4.37”x2.37” with 6” extender cables
power consumption *(without SIOX daughter-card installed)*	+5 V @ 0.9A

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