

Summary

The PCI-DSP-6713-MFIO is a high performance and flexible DSP + I/O board for servo control and data acquisition. Real-time control in low cost PCI based systems. The designed is based around the Texas Instruments floating-point Digital Signal Processor TMS- 320C6713. Ideally suited for ultra high-speed, wide dynamic range signals and signal processing. Supported by a local I/O bus , there is virtually an unlimited customization of the input-output peripherals as well as hardware-accelerated signal processing, the PCI-DSP-6713-MFIO adds high-speed, low latency IO and deterministic control to low cost PC systems. This is a perfect solution for a wide array of advanced real-time control applications such as digital servo controls, military SONAR - RADAR, aerospace communication systems, test systems, adaptive control, vibration, semiconductor testing, and other high-speed acquisition & controls systems

The TMS320C67x DSP generation is supported by the TI eXpressDSP™ set of industry development tools, including a highly optimizing C/C++ Compiler, the Code Composer Studio™ Integrated Development Environment (IDE), JTAG-based emulation and real-time debugging, and the DSP/BIOS™ kernel.



PCI BASED TMS 320C6713 DSP



PCI-6713-DSP

Board Specifications:

PCI Bus Interface via PLX 9056 33/66Mhz

High Performance Floating-Point Digital Signal Processor (DSP): C6713B

TMS320C6713B with a system clock up to 300MHZ.

Up to 32Mbytes of SDRAM

4Mbytes of Dual-Ported SRAM between PLX and TMS320C6713B

4.0 Mbit flash memory for bootstrap program

USB 2.0 CY68001 controller

RS232C controller

Add-on connector for A/D, D/A and I/O plug-in module

User programable Cyclone FPGA w/ 48 I/O pins

Extended Temperature Devices Available

DSP Specifications:

TMS320C67x™ DSP Core

300 Mhz

Advanced Very Long Instruction Word (VLIW)

Eight Independent Functional Units: Two ALUs (Fixed-Point) Four ALUs (Floating- and Fixed-Point) Two Multipliers (Floating- and Fixed-Point) Load-Store Architecture

With 32 32-Bit General-Purpose Registers Instruction Packing Reduces Code Size

All Instructions Conditional Instruction Set Features Native Instructions for IEEE 754

Single- and Double-Precision Byte-Addressable (8-, 16-, 32-Bit Data) 8-Bit Overflow Protection Saturation; Bit-Field Extract, Set, Clear; Bit-Counting;

Glueless Interface to SRAM, EPROM, Flash, SBSRAM, and SDRAM

512M-Byte Total Addressable External Memory Space

Enhanced Direct-Memory-Access (EDMA) Controller

(16 Independent Channels) 16-Bit Host-Port Interface (HPI)

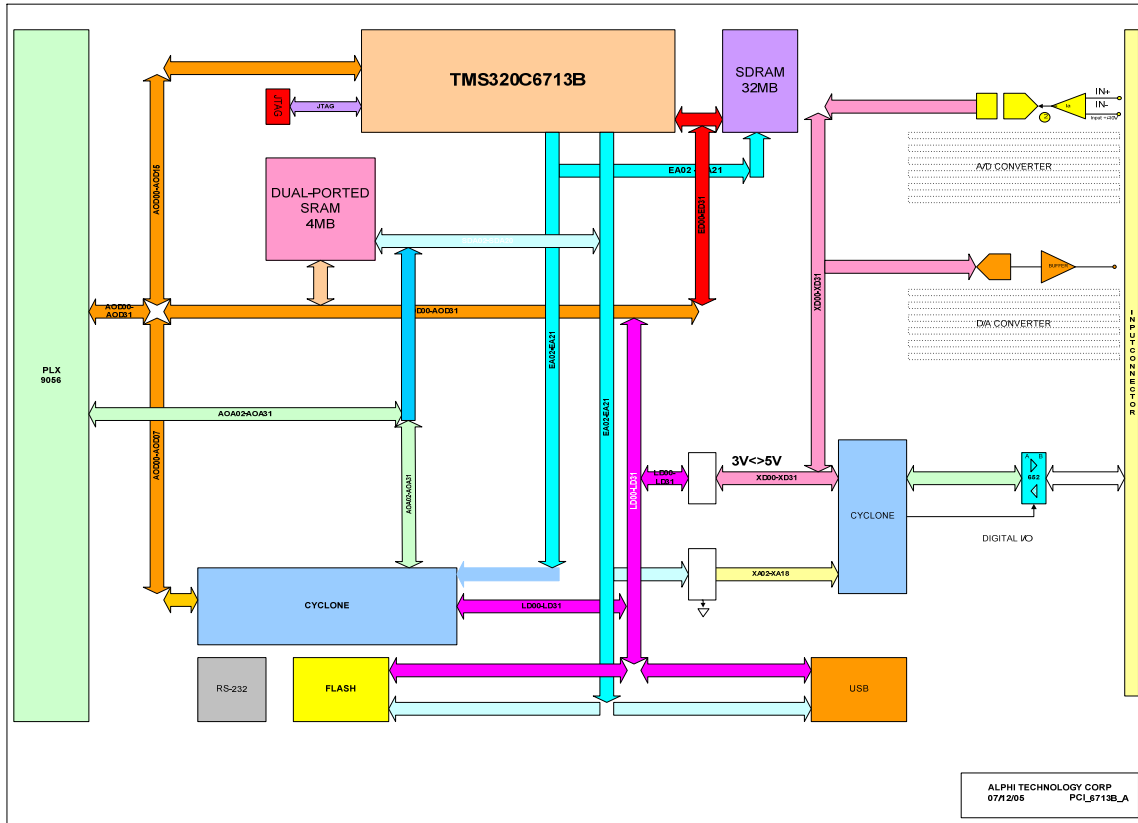
Two Multichannel Audio Serial Ports (McASPs)

Operating: Environmental

- Operating temperature
Commercial: 0 to +55 °C
Optional: -25°C to +80°C
- Non-operating: -40°C to 85 °C
- Airflow requirement: tbd CFM
- Humidity: 5 to 90% (non-cond.)
- Altitude: 0 to 10'000 ft

Mechanical: Environmental

- Size: Full PCI bus
- Power: tbd
- Front panel I/O
- Vibration: 0.5G RMS
20-2000 Hz rand
- Shock: 20 G, 11 ms, ½ sine
- Weight: .5 kilo
- MTBF: >tbd



Ordering Information	
PCI-6713-DSP-1	225 MHz
PCI-6713-DSP-2	300 MHz

Alphi Technology Corporation
 6202 South Maple Ave, Suite 120
 Tempe, Arizona 85283, USA
 Tel: (480) 838 2428
 Fax: (480) 838 4477

For ordering information: sales@alphitech.com Please visit our web site at www.alphitech.com

Products mentioned are trademarks or registered trademarks of their respective holders. Alphi Technology believes this information is accurate as of its publication date and is not responsible for any inadvertent errors. The information contained herein is subject to change without notice. Copyright © 2005 Alphi Technology Corp. document number: 718-0-001-4100 rev.p