

## Summary

The PCle-4PACK-64 module provides a high performance flexible I/O scheme, that supports industry standard Industry Packs™. For application requiring low cost, high density I/O or unique combinations, the PCle-4PACK is the ideal solution. The local C31 DSP can be used to simply move data to and from the PCI bus or provide pre processing functions such as local PID controls, FFT's, digital filtering, etc. Custom application software can be downloaded to the DSP via the PCI bus. A very low cost, non-intelligent version is also available, PCI-SIP.

The PCle-4PACK-64 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 design is based around the Texas Instruments floating-point Digital Signal Processor TMS-320C31. Supported by 4 Industry Pack site for I/O. There is an unlimited customization of the input-output: servo controls, military SONAR - RADAR, aerospace communication systems, test systems, adaptive control, vibration, semiconductor testing.

The C31 DSP is supported by TI eXpress-DSP™ set of industry development tools, including a highly optimizing C/C++ Compiler, Code Composer Studio™ JTAG based emulation, real-time debugging, and the DSP/BIOS™ kernel.

### Available Drivers :

- Labview / Matlab
- Linux
- Window XP



## INTELLIGENT PClePRESS QUAD INDUSTRY PACK CARRIER TMS 320C31 DSP



PCle-4PACK-64

### Board Features:

PCle Bus Interface via PLX 9056  
 High Performance Floating-Point DSP  
 Up to 64MHz system clock.  
 512K bytes of zero wait state SRAM  
 4.0 Mbit flash memory for bootstrap program  
 4 Mbytes of Dual Ported SRAM

### DSP Specifications:

C31 DSP @ 64 Mhz  
 32-Bit High-Performance CPU  
 16-/32-Bit Integer and 32-/40-Bit Floating-Point Operations  
 32-Bit Instruction Word, 24-Bit Addresses  
 Two 1K x 32-Bit Single-Cycle Dual-Access  
 On-Chip RAM Blocks™

### PCI Bus:

PCI Bus Interface 5  
 PLX 9056 32-bit, PCI r2.2 compliant

### Debug Port:

JTAG emulator port  
 RS-232 console port

### DSP Serial Port:

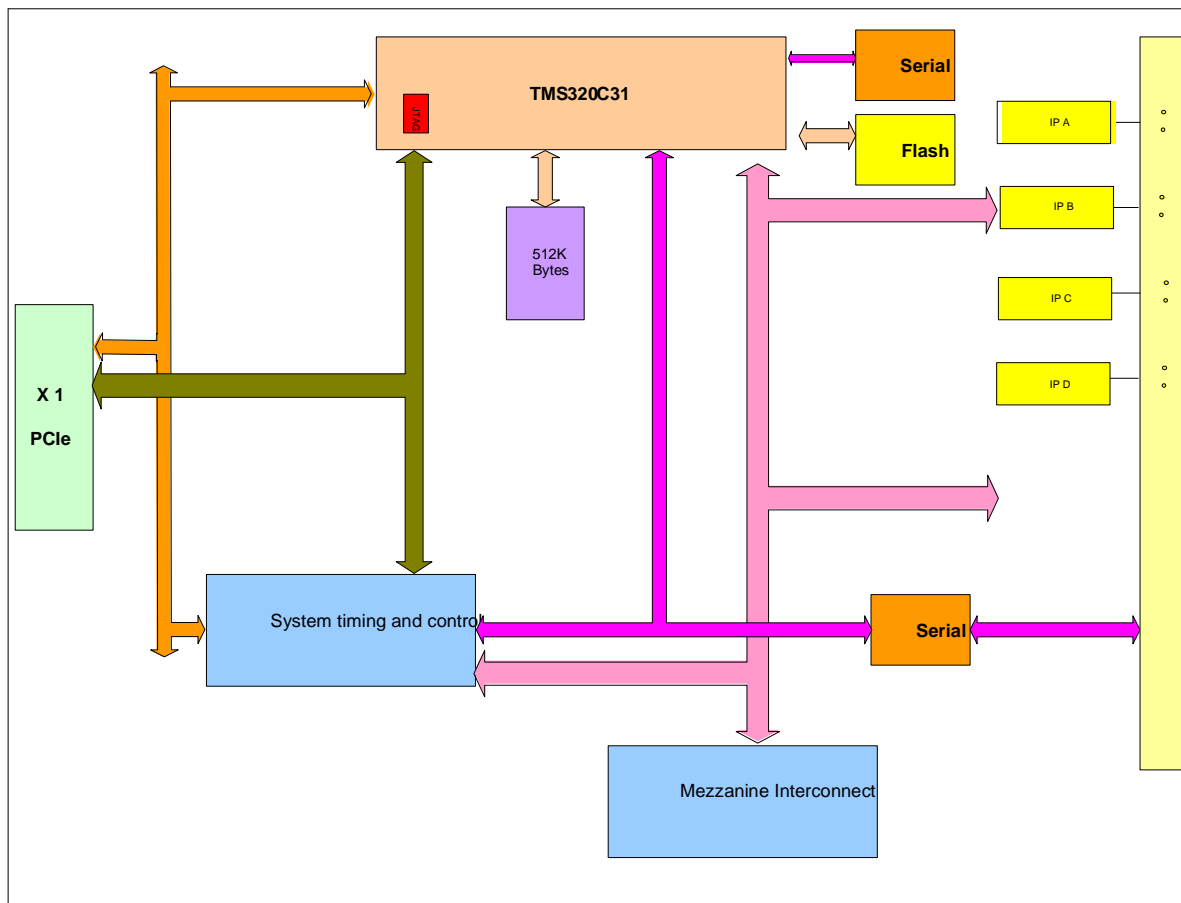
RS-422 DSP C31 Serial port

### IP Specifications:

(4) quad Industry Pack Sites  
 Meets ANSI Vita 4  
 8/32 MHz operation  
 Support ID, I/O, Int. & mem spaces  
 2 Interrupts  
 5, +/-12 volt reset-able fuse per IP  
 Rear Panel I/O  
 8/16 bit data

### I/O panel connectors:

- (1) 50 pin high density connector
- (1) C31 Serial Interface Mezzanine
- (1) IP C Front Panel Interface



### Functional Block Diagram

### Mechanical & Environmental

- Operating temp. 0 to +70 °C
- Airflow requirement: 1 CFM
- Humidity: 5 to 90% (non-cond.)

- Altitude: 0 to 10'000 ft
- Full size PCI card
- Front panel I/O
- Power: +5v 1 amp, +-12v 1 amp

- Vibration: 0.5G RMS 20-2KHz
- Shock: 20 G, 11 ms, ½ sine
- Weight: 2 lbs
- MTBF: >413000 hour

## Ordering Information

PCIe-4PACK-64  
4pack-Mez  
CBL-50-HRS

x1 PCIe Express Quad Industry Pack carrier With TMS 320C31 and Interface Board  
C31 Serial Interface Board  
50 pin cable, HRS

819-10-000-4100

**Alphi Technology Corporation**  
1898 E. Southern Ave.  
Tempe, Arizona 85282, USA  
Tel: (480) 838 2428  
Fax: (480) 838 4477

For ordering information: [sales@alphitech.com](mailto:sales@alphitech.com) Please visit our web site at [www.alphitech.com](http://www.alphitech.com)

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