



**Embedded Design
and
I/O Solutions**

2009 Short Form Catalog



ALPHI TECHNOLOGY CORPORATION

Alphi Technology

Alphi Technology is a leader in design, manufacturing and support of industrial board level and system level solutions.

We have been customer driven for over 20 years providing the highest quality and performances products to Boeing, Honeywell, Bell Textron, NASA, Northrop Grumman, Spectrum Astro, Tactical Displays, Lockheed Martin, Westinghouse, and countless others companies.

Our flexibility, expertise and competence, enable us to provide boards and system integration in record time with the highest level of reliability at very reasonable budget. Whether your needs are for the latest peripheral boards or to replace obsolete systems, we have the perfect fit.

Industry Pack Carrier

Industry Packs offer a very economical and effective way to add the highest density of I/O to your system. Combining different IP types on one carrier simplifies the design of low-cost custom I/O board.

Alphi has one of the largest choices of IP modules, IP carriers available for all major buses, adapted to industrial process control, medical equipment, traffic control, telecommunication, semiconductor equipments, military, and aerospace application. It is also a reliable source for many IP products that have become obsolete by their original manufacturer.

We also offer transition modules, termination panels, cable kits and cable adapters, software drivers, detailed manuals and data sheets for each IP module.

Analog I/O

An extensive choice of 16 bits Analog Inputs/Outputs boards designed for any type of Bus (PCI, CPCI, IP, VME...). Alphi Analog I/O's offer from 8 to 48 channels, single-ended or differential inputs, high-speed DMA transfers, simultaneous sampling.

Multi-Function Boards

Intelligent DSP Based MFIO Board with powerful combination of 16 Bits A/D converters, Analog channels and general purpose Digital I/O. Up to 32 Single-ended channels or 16 Differential analog inputs. Proposed in 3U & 6U form factor, PCI, CPCI, IP, VME.

Serial I/O

The largest offering in Serial I/O featuring from 4 and up to 16 channels, RS-232, RS-422, RS-485, Asynchronous and Synchronous Mode, 512 Kbaud, FIFO Buffers.

FPGA

The FPGA technology lets you develop custom digital or serial I/O boards quickly and inexpensively.

Alphi supports a large variety of FPGAs. Depending on the board the output lines are differential EIA-485 lines, LVTTTL or TTL outputs, LVDS I/O lines or a combination.

Digital I/O

Chose from an extended selection of Digital I/O Modules, from 18 to 48 channels, featuring 0-60 VDC range, bi-directional, Intelligent FPGA solution, 16 bit counter timers.

Servo Controller and Signal Conditioning

Selection of complete multi channel data acquisition systems and digital servo control module for high performance closed loop applications. Entirely configurable, combinable modules based on VXI, VME or PCI.

MIL-1553

Alphi supports the MIL-1553-B products of DDC Mini-ACE and Enhanced Mini-ACE, and UTM SUMMIT. We offer one of the widest range of boards at very competitive prices.

Intelligent Industry Pack Carrier

| Part # | Bus type | IP Site | Speed 8/32Mhz | Debug Port RS-232 | RS-422 | DSP | I/O | | Note |
|--------------------------|----------|---------|---------------|-------------------|--------|-------|-------|------|-----------|
| | | | | | | | Front | Rear | |
| CPCI-IPC-6713 NEW | CPCI 3U | 2 | √ | √ | | C6713 | √ | | 3.3/5 PCI |
| CPCI-IPC | CPCI 3U | 2 | √ | √ | | C31 | √ | | 5V PCI |
| CPCI-DUALIPC | CPCI 6U | 4 | √ | √ | | 2xC31 | √ | √ | 5V PCI |
| CPCI-QIPC | CPCI 6U | 4 | √ | √ | √ | C31 | √ | √ | 5V PCI |
| PCI-4pack | PCI | 4 | √ | √ | √ | C31 | √ | | 5V PCI |
| PCI-4IPM | PCI | 4 | √ | √ | √ | C32 | √ | | 3.3/5 PCI |
| PCI-IPC | PCI | 2 | √ | √ | | C31 | √ | | 5V PCI |
| PCI-6713-4IP NEW | PCI | 4 | √ | √ | | C6713 | √ | | 3.3/5 PCI |
| PCI-6713-2IP | PCI | 2 | √ | √ | | C6713 | √ | | 3.3/5 PCI |

Slave Industry Pack Carrier

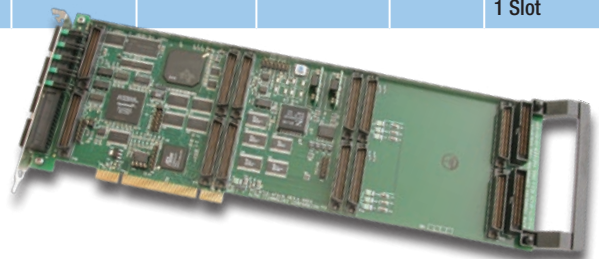
| | | | | | | | | | |
|---------------------|---------|---|---|--|--|--|---|----|------------|
| CPCI-SIP | CPCI 3U | 2 | √ | | | | √ | | 5V PCI |
| CPCI-SIP-RP | CPCI 3U | 2 | √ | | | | | √ | 5V PCI |
| CPCI-SIP-PLX | CPCI 3U | 2 | √ | | | | √ | | 3.3/5 PCI |
| CPCI-4SIP | CPCI 6U | 4 | √ | | | | √ | √ | 3.3/5 PCI |
| PCI-4SIP NEW | PCI | 4 | √ | | | | √ | | 3.3/5 PCI |
| PCI-2SIP NEW | PCI | 2 | √ | | | | √ | | 3.3/5 PCI |
| VME-4SIP | VME 6U | 4 | √ | | | | √ | P2 | A32/24:D16 |
| VME-5SIP | VME 6U | 5 | √ | | | | √ | | A32/24:D16 |

Specialized Carrier

| | | | | | | | | | |
|-------------------------|-----------------------------|--|--|--|--|--|--|--|--------|
| CPCI => PMC | CPCI to PMC carrier | | | | | | | | 1 Slot |
| CPCle => PMC NEW | CPCI express to PMC carrier | | | | | | | | 1 Slot |
| PCI => PMC | PCI to PMC carrier | | | | | | | | 1 Slot |
| PCle => PMC NEW | PCI express to PMC carrier | | | | | | | | 1 Slot |

* Extended Temperature Available

** Software Drivers Available: VxWorks, LabView, Linux, Other



ANALOG I/O A/D

| Part # | Functionality | Bus type | A/D # ch. | #Bits | Rate | DSP | Debug Port | Input | | Voltage Range |
|-----------------------|---------------|----------|-----------|-------|------|-------|------------|-------|------|-----------------------------|
| | | | | | KSPS | | | SE | Diff | |
| CPCI-AD16 | A/D | CPCI 3U | 16 | 16 | 100 | C31 | | √ | | ±10V / ±1V / ±0.1V / ±0.01V |
| CPCI-AD8 | A/D | CPCI 3U | 8 | 16 | 200 | C32 | √ | | √ | ±10V / ±5V / ±2.5V / ±1.25V |
| CPCI-AD16D | A/D | CPCI 3U | 16 | 16 | 200 | C32 | √ | | √ | ±10V / ±5V / ±2.5V / ±1.25V |
| PMC-AD8 | A/D | PMC | 8 | 16 | 200 | C32 | √ | | √ | ±10V / ±5V / ±2.5V / ±1.25V |
| PMC-AD250 | A/D | PMC | 16 | 16 | 250 | | | | √ | ±10V |
| PCI-AD16 | A/D | PCI | 16 | 16 | 100 | C31 | √ | | √ | ±10V / ±1V / ±0.1V / ±0.01V |
| PCI-AD32 | A/D | PCI | 32 | 16 | 250 | C6713 | √ | | √ | ±10V / ±1V |
| IP-AD8100 | A/D | IP | 8 | 16 | 100 | FIFO | | √ | | ±10V |
| IP-AD8100-D | A/D | IP | 8 | 16 | 100 | FIFO | | | √ | ±10V / ±1V |
| IP-AD8250 | A/D | IP | 8 | 16 | 250 | FIFO | | √ | | ±10V |
| IP-AD8250-D | A/D | IP | 8 | 16 | 250 | FIFO | | | √ | ±10V / ±1V |
| IP-AD4500 | A/D | IP | 4 | 16 | 500 | FIFO | | | √ | ±10V / ±5V / ±2.5V |
| IP-AD250 | A/D | IP | 4 | 16 | 250 | FIFO | | | √ | ±10V / ±5V / ±2.5V |
| IP-AD41meg | A/D | IP | 4 | 16 | 1000 | FIFO | | | √ | ±10V / ±5V / ±2.5V |
| IP-AD3216 | A/D | IP | 32/16 | 16 | 200 | FIFO | | √ | √ | ±10V / ±5V / ±2.5V |
| IP-48AD | A/D | IP | 48 | 16 | 250 | FIFO | | √ | | ±10V / ±5V |
| IP-48ADM16 NEW | | IP | 48/24 | 16 | 1000 | 128K | SRAM | √ | √ | ±10V / ±5V / ±2.5V / ±1.25V |

D/A

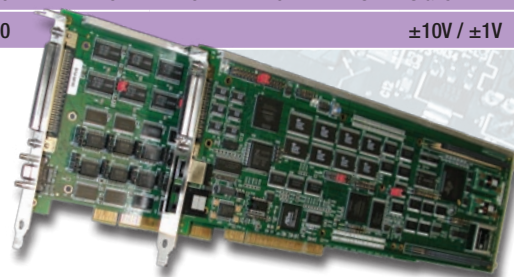
| Part # | Functionality | Bus type | D/A # ch. | #Bits | Rate | Reference | | Output Buf. | Mem | Voltage Range |
|--------------------------|---------------|----------|-----------|-------|------|-----------|------|-------------|------|---|
| | | | | | us | Int. | Ext. | | | |
| CPCI-DA8 | D/A | CPCI 3U | 8 | 16 | 10 | √ | | √ | 256k | ±10V |
| CPCI-DA16 | D/A | CPCI 3U | 16 | 16 | 10 | √ | | √ | | ±10V |
| PMC-DA816 | D/A | PMC | 8 | 16 | 10 | √ | | √ | 128k | ±10V |
| PMC-SoftDac-M NEW | D/A | PMC | 16 | 16 | 2 | √ | √ | √ | 512k | ±10V / ±5V / ±2.5V / -2.5+7.5 0-5 / 0-10 Soft. Programmable |
| PCI-DA816 | D/A | PCI | 8 | 16 | 10 | √ | | √ | 128k | ±10V |
| PCI-SoftDac-M NEW | D/A | PCI | 12,14,16 | 16 | 2 | √ | √ | √ | 256k | ±10V / ±5V / ±2.5V / -2.5+7.5 0-5 / 0-10 Soft. Programmable |
| IP-DAC816 | D/A | IP | 8 | 16 | 10 | √ | | | | ±10V |
| IP-fastDAC-8 | D/A | IP | 8 | 16 | 2 | √ | √ | √ | | ±10V, 4 Quadrant |
| IP-SoftDac | D/A | IP | 16 | 16 | 2 | √ | √ | √ | | ±10V / ±5V / ±2.5V / -2.5+7.5 0-5 / 0-10 Soft. Programmable |
| IP-SoftDac-M NEW | D/A | IP | 16 | 16 | 2 | √ | √ | √ | 64k | ±10V / ±5V / ±2.5V / -2.5+7.5 0-5 / 0-10 Soft. Programmable. |
| IP-48DAM16 NEW | D/A | IP | 48 | 14,16 | 2 | √ | √ | √ | 64k | ±10V Gain & Offset error corr. |

* Extended Temperature Available

** Software Drivers Available: VxWorks, LabView, Linux, Other

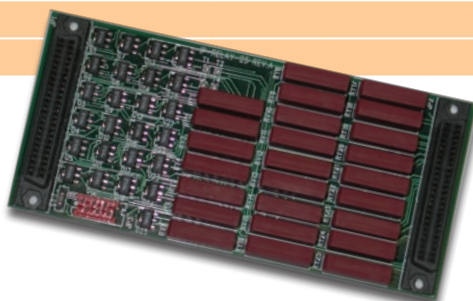
Multi Function Board (MFIO)

| Part # | Functionality | Bus type | A/D # ch. | #Bits | Rate | D/A # ch. | #Bits | Rate | DIG I/O | DSP |
|---------------------------|-----------------|----------|-----------|-------|------|-----------|-------|------|---------|--------------|
| | | | | | KSPS | | | us | | |
| CPCI-MFIO-6713 NEW | A/D, D/A, I/O | CPCI 3U | 8 | 16 | 250 | 8 | 16 | 2 | 16 | TMS320C6713B |
| CPCI-MFIO | A/D, D/A, I/O | CPCI 6U | 32 | 16 | 200 | 8 | 16 | 10 | 16 | TMS320C31 |
| CPCI-AD320 | A/D, D/A, I/O | CPCI 6U | 16 | 16 | 200 | 16 | 16 | 10 | 32 | TMS320C32 |
| PCI-MFIO-6713 | A/D, D/A, I/O | PCI | 16 | 16 | 500 | 16 | 16 | 2 | 48 | TMS320C6713B |
| IP-Synchro | Syncro Resolver | IP | 2 ch. | 16 | | | | | | 2V,11V, 90V |
| VME-MFIO | A/D, D/A, I/O | VME | 16 | 16 | 250 | 16 | 16 | 10 | 48 | Slave |
| VME-AD32D | A/D | VME | 32 | 16 | 250 | | | | | ±10V / ±1V |



Digital

| Part # | Bus type | Functionality | I/O # | Interface | | | | | | | Note |
|------------------------|----------|---------------------|-------|-----------|-----|--------|----------|---------|-------|-----|-----------|
| | | | | IN | Out | Bi Dir | Isolated | Counter | Timer | TTL | |
| CPCI-48IN | CPCI 3U | Input | 48 | √ | | | √ | √ | √ | | 5V PCI |
| CPCI-48OUT | CPCI 3U | Output | 48 | | √ | | √ | √ | √ | | 5V PCI |
| PCI-48IN | PCI | Input | 48 | √ | | | √ | √ | √ | | 5V PCI |
| PCI-48OUT | PCI | Output | 48 | | √ | | √ | √ | √ | | 5V PCI |
| IP-CIO32 | IP | Input/Output | 32 | | | √ | | √ | √ | √ | |
| IP-DIO32 | IP | Input/Output 0-48 V | 32 | | | √ | | | | | Threshold |
| IP-CounterTimer | IP | Input/Output | 32 | | | √ | | √ | √ | √ | |
| IP-optoIN | IP | Input | 18 | √ | | | √ | √ | √ | | |
| IP-optoOUT | IP | Output | 18 | | √ | | √ | √ | √ | | |
| IP-Relay NEW | IP | Relay | 25 | | | | | | | | SPST |
| IP-Resistor NEW | IP | Resistor | 128 | | | | | | | | 1-128kOhm |



Graphics

| | | | | | | | | | | |
|-------------------|-----|----------------------|---------------|----------------|-----------|------|--------------------|------------------|---------------|------------|
| PVGA-1722 | PMC | 33/66 MHz 200 MHz | XGA RAMDAC | 1280 24-bit | x LVDS | 1024 | S-video 8 Mbyte | Memory 18-bit | Memory LCD | Analog RGB |
| IP-LCD NEW | IP | Video/Graphic | VGA | | | | | | | RGB |

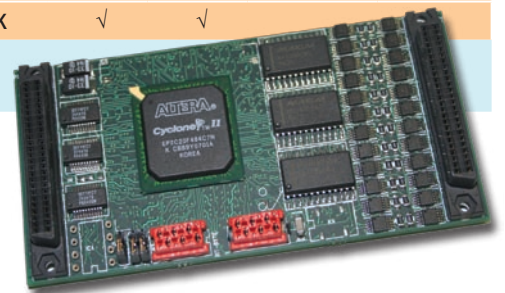
Transition modules

Multiples transition modues available. Call Alphi Technology Corp. 480-838-2428

Serial I/O

| Part # | Bus type | Channel # | Interface | | | Baud Rate | Mode ASYNC | SYNC | DSP | Note |
|---------------------------|----------|-----------|-----------|--------|--------|------------|------------|-----------|--------------|-----------|
| | | | RS-232 | RS-422 | RS-485 | | | | | |
| CPCI-ISC8 | CPCI 3U | 8 | √ | √ | √ | 115K | √ | √ | C31 | 5V PCI |
| CPCI-6713-ISC8 NEW | CPCI 3U | 8 | √ | √ | √ | 115K | √ | √ | C6713 | 3.3/5 PCI |
| CPCI-SCC16-6U | CPCI 6U | 16 | √ | √ | √ | 115K | √ | √ | C31 | 3.3/5 PCI |
| PCI-ISC8 | PCI | 8 | √ | √ | √ | 115K | √ | √ | C31 | 5V PCI |
| PCI-6713-ISC8 NEW | PCI | 8 | √ | √ | √ | 115K | √ | √ | C6713 | 3.3/5 PCI |
| PSCC-1008E | PMC | 8 | | √ | √ | 6.25 Mbits | 2.5 KV | Isolation | 32-bit/33MHz | 3.3/5 PMC |
| PSCC-1028 | PMC | 8 | √ | | | | | | 32-bit/33MHz | 3.3/5 PMC |
| IP-SCC04A | IP | 4 | √ | | | 115K | √ | √ | | |
| IP-SCC04B | IP | 4 | | √ | √ | 115K | √ | √ | | |

* Extended Temperature Available
 ** Software Drivers Available: VxWorks, LabView, Linux, Other



FPGA

| Part # | Bus type | Channel # | Interface | | | Term 100Ω | IN/OUT | User Prog. | Note | Target Chip |
|---------------------------|----------|-----------|-----------|------|--------|-----------|--------|------------|--------|-------------|
| | | | TTL/LVTTL | LVDS | RS-485 | | | | | |
| PMC-CYCLONE II NEW | PMC | 68 | √ | √ | √ | √ | √ | √ | Altera | EP2C20 |
| PMC-VIRTEX | PMC | 68 | √ | √ | √ | √ | √ | √ | Xilinx | VIRTEX-2 |
| IP-10K50E-PIO | IP | 48 | √ | | √ | √ | √ | √ | Altera | 10K50E |
| IP-10K50E-LVDS | IP | 48 | √ | √ | | √ | √ | √ | Altera | 10K50E |
| IP-10K100E-PIO | IP | 48 | √ | | √ | √ | √ | √ | Altera | 10K100E |
| IP-10K100E-LVDS | IP | 48 | √ | √ | | √ | √ | √ | Altera | 10K100E |
| IP-ALTERA | IP | 48 | √ | | | | √ | √ | Altera | 10K20/30 |
| IP-CYCLONE | IP | 48 | √ | √ | √ | √ | √ | √ | Altera | EP1C20 |
| IP-FPGA | IP | 48 | √ | | | | √ | √ | Xilinx | XC4020 |
| IP-SPARTAN | IP | 48 | √ | √ | | | √ | √ | Xilinx | XC2S300E |
| IP-CYCLONE II NEW | IP | 48 | √ | √ | √ | √ | √ | √ | Altera | EP2C20 |

* Extended Temperature Available
 ** Software Drivers Available: VxWorks, LabView, Linux, Other

Servo Controller and Signal Conditioning

| Part # | Bus type | Channel # | Interface | | | Signal Conditioning | PGA | DIG. I/O | | DSP | Note |
|--------------------|----------|-----------|-----------|--------|------|---------------------|-----|----------|-----|------------|----------------|
| | | | RS-232 | RS-422 | LVDT | Load cell | | IN | OUT | | |
| VDSP31 | VXI | 2/4or 8 | √ | √ | √ | √ | √ | 32 | 32 | TMS320CC31 | Modular |
| VDSP431 | VME | 2 | √ | √ | √ | √ | √ | 16 | 16 | TMS320CC31 | Dual-redundant |
| PCI 231 NEW | PCI | 2 | √ | √ | √ | √ | √ | 16 | 16 | TMS320CC31 | Dual-redundant |

MIL-STD-1553 UTMC SUMMIT

| Part # | Bus type | Channel # | Xfomer | Stub | SRAM | Ext. Temp | Note |
|---------------------------|----------|-----------|--------|------------|------|-----------|-----------|
| | | | | Short/Long | | | |
| CPCI-1553-1 | CPCI 3U | 1 | √ | √ | 64K | √ | 5V PCI |
| CPCI-1553-2 | CPCI 3U | 2 | √ | √ | 128K | √ | 5V PCI |
| CPCI-1553-1-6U | CPCI 6U | 1 | √ | √ | 64K | √ | 5V PCI |
| CPCI-1553-2-6U | CPCI 6U | 2 | √ | √ | 128K | √ | 5V PCI |
| PCI-1553 | PCI | 1 | √ | √ | 64K | √ | 5V PCI |
| PCI-1553-PLX | PCI | 1 | √ | √ | 64K | √ | 3.3/5 PCI |
| PCI-1553-PLX-2 NEW | PCI | 2 | √ | √ | 128K | √ | 3.3/5 PCI |

| | | | | | | | |
|---------------------------|-----|---|---|---|------|---|-----------|
| PMC-1553-1 | PMC | 1 | √ | √ | 64K | √ | 5V PCI |
| PMC-1553-PLX | PMC | 1 | √ | √ | 64K | √ | 3.3/5 PCI |
| PMC-1553-PLX-2 NEW | PMC | 2 | √ | √ | 128K | √ | 3.3/5 PCI |

| | | | | | | | |
|---------|----|---|---|---|-----|---|--|
| IP-1553 | IP | 1 | √ | √ | 64K | √ | |
|---------|----|---|---|---|-----|---|--|

| | | | | | | | |
|-------------------|-----|---|---|---|------|---|--|
| VME-1553-4-SUMMIT | VME | 4 | √ | √ | 256K | √ | |
|-------------------|-----|---|---|---|------|---|--|

MIL-STD-1553 UTMC BCRTM

| | | | | | | | |
|----------------|-----|---|---|---|-----|---|-----------|
| PCI-1553-BCRTM | PCI | 1 | √ | √ | 64K | √ | 3.3/5 PCI |
|----------------|-----|---|---|---|-----|---|-----------|

| | | | | | | | |
|----------|-----|---|---|---|-----|---|--|
| COM-1553 | VME | 1 | √ | √ | 64K | √ | |
|----------|-----|---|---|---|-----|---|--|

MIL-STD-1553 DDC ACE

| | | | | | | | |
|---------------|-----|---|---|---|------|---|--------|
| IP-1553-DDC | IP | 1 | √ | √ | 64K | √ | |
| PMC-1553-DDC1 | PMC | 1 | √ | √ | 64K | √ | 5V PCI |
| PMC-1553-DDC2 | PMC | 2 | √ | √ | 128K | √ | 5V PCI |

MIL-STD-1553 DDC MINI ACE

| | | | | | | | |
|-------------|----|---|---|---|-----|---|--|
| IP-1553-DDC | IP | 1 | √ | √ | 64K | √ | |
|-------------|----|---|---|---|-----|---|--|

MIL-STD-1553 DDC Enhanced MINI ACE

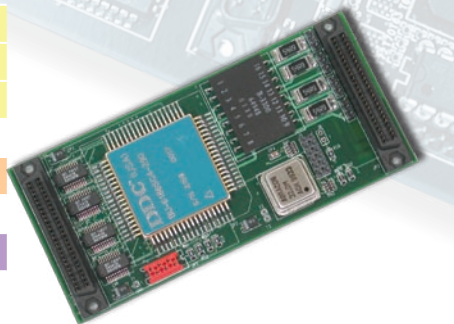
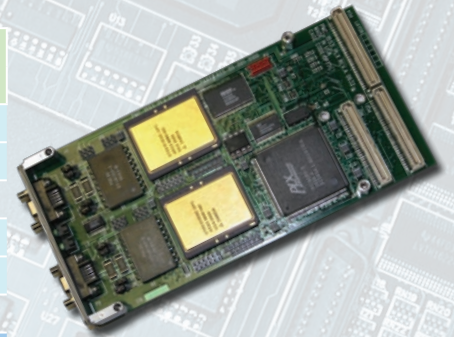
| | | | | | | | |
|-------------------|---------|---|---|---|------|---|--------|
| CPCI-1553-DDC1-6U | CPCI 6U | 1 | √ | √ | 64K | √ | 5V PCI |
| CPCI-1553-DDC2-6U | CPCI 6U | 2 | √ | √ | 128K | √ | 5V PCI |

| | | | | | | | |
|----------------|---------|---|---|---|------|---|--------|
| CPCI-1553-DDC1 | CPCI 3U | 1 | √ | √ | 64K | √ | 5V PCI |
| CPCI-1553-DDC2 | CPCI 3U | 2 | √ | √ | 128K | √ | 5V PCI |

| | | | | | | | |
|---------------|-----|---|---|---|------|---|--------|
| PCI-1553DDC-1 | PCI | 1 | √ | √ | 64K | √ | 5V PCI |
| PCI-1553DDC-2 | PCI | 2 | √ | √ | 128K | √ | 5V PCI |

| | | | | | | | |
|---------------|-----|---|---|---|------|---|--------|
| PCM-1553-DDC1 | PCM | 1 | √ | √ | 64K | √ | 5V PCI |
| PCM-1553-DDC2 | PCM | 2 | √ | √ | 128K | √ | 5V PCI |

| | | | | | | | |
|----------------|-----|---|---|---|------|---|--|
| VME-1553-4-DDC | VME | 4 | √ | √ | 256K | √ | |
|----------------|-----|---|---|---|------|---|--|



* Extended Temperature Available

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The logo for ALPHI Technology Corporation. The word "ALPHI" is written in a large, bold, teal-colored font with horizontal lines through each letter. To its right, the words "TECHNOLOGY CORPORATION" are written in a smaller, teal-colored, sans-serif font. A thin horizontal line is positioned above the text "TECHNOLOGY CORPORATION".

ALPHI TECHNOLOGY CORPORATION

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