- **Available on various industry standard & custom bus platforms**

UART
- **1 each of RS-232 / 422 channels (Standard UART)**

DIGITAL I/O
- **16 Channel Digital I/O (TTL/CMOS voltage)**

MIL-STD-1553B - Optional
- **1 dual redundant channel**
- **DDC controller**
- **Programmable as BC, RT, MT modes**
- **Direct or Transformer coupled**

ARINC429 - Optional
- **2 ARINC429 controller (4 Transmit / 8 Receive Channels)**
- **Configurable for High Speed/Low Speed**
- **Programmable Interrupts**
- **Software Driver support for a host of operating systems**

OVERVIEW

The AT-cPCI-MPAC family of products provides the highest level of performance and flexibility on various hardware interface architectures and custom platforms. Integrating MIL-STD-1553B, ARINC429, RS-232, RS-422 and Digital I/O channels, all in a single card, it offers the ideal platform for test & evaluation of avionics systems and sub-systems. While the UART and DIO features are provided as standard, the user has a choice of configuring the card to support either MIL-STD- 1553B or ARINC429 or both. The card provides one dual redundant channel of MIL-STD-1553B and 2 ARINC429 controllers. Each ARINC429 controller provides 2Tx and 4Rx channels achieving a maximum of 4 Tx and 8 Rx channels. The MIL-STD-1553B functionality is available with DDC controller and ARINC429 is also available with DDC controller. The AT-cPCI-MPAC is integrated with powerful software that reduces development time. All data bus functionality is supported by our advanced API (Application Programming Interface).

CompactPCI Card

The AT-cPCI-MPAC card meets the compactPCI spec 2.0 Rev 3.0 and are available in both 3U and 6U formats. The cPCI card is available in commercial grade only. Front panel and Rear I/O connectivity options are provided.

I/O Connectivity
UART Channels

The AT-cPCI-MPAC card provides two standard serial UART ports supporting RS-232 and RS-422 interfaces. These are capable of a maximum asynchronous baud rate of 115.2 Kb/s.

Digital I/O Channels

Additional to the serial I/O capabilities, the AT-cPCI-MPAC is equipped with TTL/CMOS level digital I/O channels. It comes with 16 general-purpose digital I/O channels. These are pre-configured as 8 inputs and 8 outputs. These can be used to generate an interrupt on any type of level shift event.

MIL-STD-1553B Interface - Optional

The AT-cPCI-MPAC single function MIL-STD-1553B architecture can emulates as a Bus Controller or 31 Remote Terminals or Monitor Terminal modes. Polling and interrupt generation is also provided. The 1553B Channel come with 64K (DDC) of static RAM.

Transformer and Direct Coupling

The card can be configured to work either in the transformer-coupled mode or in the direct-coupled mode. A jumper is provided on the card to select the mode. It is configured to work in the transformer-coupled mode by default.

ARINC429 Interface - Optional

The card can be configured with up to 2 ARINC429 controllers. Each controller is configured with 2Tx & 4Rx channels and has 128 x 32 bit static RAM. Look-up tables loaded into the RAM enable the modules receive circuitry to filter and sort incoming data by label and destination bit. It also provides multilevel data specific interrupts or hardware triggers.

AT-cPCI-MPAC
Multi Protocol Avionics Cards

PRODUCT SPECIFICATIONS

UART

- One each of standard serial UART ports supporting RS-232/422 interfaces
- Baud Rate - Max 115.2 kbps

Digital I/O Channels

- 16 digital I/O channels pre-configured as 8 Inputs and 8 Outputs
- TTL/CMOS compatible I/O channels

MIL-STD-1553B - Optional

- Single channel dual redundant interface
- DDC controller
- Programmable as BC or RT or MT
- 64K words of SRAM - DDC controller
- 31 remote terminal controls
- Message formats: BC-RT, RT-BC, RT-RT, Broadcast and System Control
- Transformer or Direct coupling options

ARINC429 - Optional

- 1 or 2 ARINC429 controllers (Each controller 2Tx / 4Rx)
- DDC controller
- 128 x 32 bit Static RAM interface on each ARINC429 controller (2Tx & 4Rx)
- Programmable Interrupts
- Configurable Bit Format Control
- Built-in Fault Detection Circuitry
- Wraparound Test for each channel

Software Support

- Windows XP, Linux & RT-Linux

Physical

- Standard compactPCI card size (160mm x 100mm)

Environmental

- Operating Temperature: 0°C to +70°C
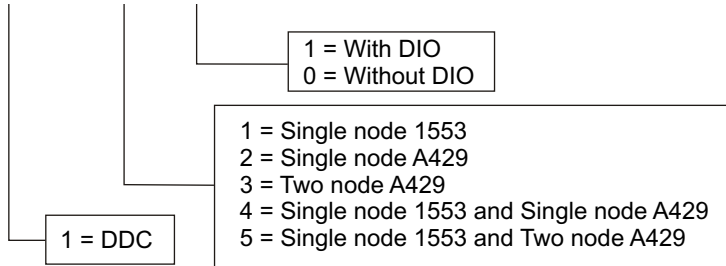- Storage Temperature: -20°C to +70°C

Warranty

- 1 year limited warranty

ORDERING INFORMATION
Hardware Selection

AT-cPCI-1-1-MPAC- Controller - Channels - DIO

1 = With DIO
0 = Without DIO

1 = Single node 1553
2 = Single node A429
3 = Two node A429
4 = Single node 1553 and Single node A429
5 = Single node 1553 and Two node A429

1 = DDC

- Contact sales for support for other Operating Systems
- Contact sales for configuration of front and rear I/O configuration
- Contact sales for environmental options

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