



- PCI bus compatible
- Available in a combination of 2Tx / 4Rx channels per Arinc429 controller
- Supports up to 24 Channels per card
- 8 Transmit Channels
- 16 Receive Channels
- Configurable for High Speed/Low Speed
- 128 x 32 Shared RAM Interface on each Arinc429 controller
- Programmable interrupts
- Two 32 x 32 Transmit FIFO on each Arinc429 controller
- Built-in Fault Detection Circuitry
- Software Driver support for a host of Operating Systems / Environments

## OVERVIEW

The AT-PCI-429 card provides a flexible, powerful ARINC429 avionics data bus interface card for the development and maintenance of commercial avionics. The card is designed to transmit and receive messages up to 24 channels. Each channel is software configurable for high or low speed (12.5k or 100k bits per second) and ARINC429 protocol requirements. The ARINC data word can be decoded and sorted based on the Label and SDI bits and stored in RAM and/or FIFO's. The card is integrated with powerful software that reduces development time. All data bus functionality is supported from our advanced API (Application Programming Interface) and VIP (Virtual Instrument Panel).

## HARDWARE

The AT-PCI-429 card can be configured up to 4 ARINC429 controllers from DDC, each containing 2 Transmit and 4 Receive channels, providing a maximum of 24 channels. Each controller has a 128 x 32 bit static RAM, four 32 (words deep) x 32 (bit) Receive FIFO's and two 32 (words deep) x 32 (bit) transmit FIFO's. Look-up tables loaded into RAM enable the module's receive circuitry to filter and sort incoming data by label and destination bit as well as provide multilevel data specific interrupts or hardware triggers.

## SOFTWARE

The AT-PCI-429 software includes Drivers & APIs. The card comes with a powerful set of library functions to access the entire ARINC429 functionality. The drivers are designed in a modular fashion consisting of component functions and application functions. The user's test program can be developed with few calls to the driver, by using the set of Application functions provided. Driver and high-level API libraries for Windows XP, Windows 7 are available. Linux, RT-Linux and LabVIEW support is also available. Sample applications are included.

# AT-PCI-429

## ARINC429 PCI CARD

### PRODUCT SPECIFICATIONS

#### ARINC429 Interface

- Supports up to 24 ARINC429 channels
  - > 8 Transmit Channels
  - > 16 Receive Channels
- 128 x 32 shared RAM interface on each ARINC controller
- Programmable Interrupts
- Configurable Bit Format Control
- Built-in Fault Detection Circuitry

#### Transmit Interface

- Programmable 12.5/100KHz bit rate
- Two 32 x 32 Transmit FIFO's on each ARINC429 controller
- Independent data transmit by each channel
- Programmable data transmit rate for each channel
- Transmit FIFO Status Indicators

#### Receive Interface

- Four 32 x 32 Receive FIFO's on each ARINC429 controller
- Receive data rates can be programmed for channel 0 and 1 independent of channel 2 and 3 in each ARINC429 controller
- Reducing Receive Data Latency
- Filtering & Sorting of data
- Storage of data
- Parity Error Checking & Reporting
- Receive FIFO status indicator

#### Diagnostics

- Testing of Memory Elements
- Testing Transmit/Receive functions
- Wraparound Test for each channel
- Interrupt Function Testing

#### Error Conditions

- Sequence Error
- Address Error
- FIFO Overflow Error
- Receive Data Parity Error
- ARINC Clock Error

#### Software Support

- Driver and high-level API libraries for Windows XP, Windows 7 provided
- Linux, RT-Linux and LabVIEW - Optional
- Sample applications provided
- Contact sales for Windows 98/2000/NT/ME operating system

#### Physical

- Standard PCI card size (7.4" X 3.8")

#### Environmental

- Operating temperature: 0° C to +50° C
- Storage temperature: -20° C to +70° C

#### Power

- Maximum Power consumption for each ARINC controller is
  - > + 5 VDC @ 500mA
  - > +12 VDC @ 300mA
  - > -12 VDC @ 300mA

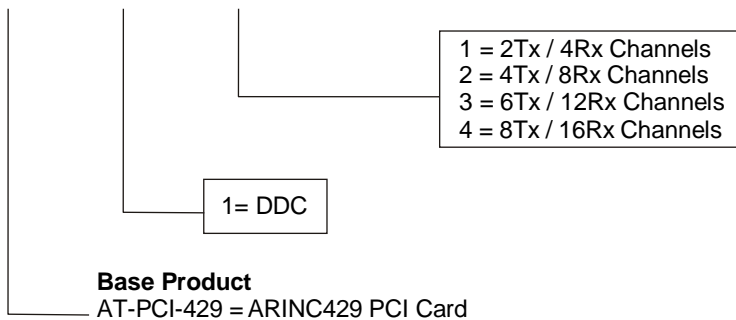
#### Warranty

- 1 year limited warranty

### ORDERING INFORMATION

#### Hardware Selection

AT-PCI-429- Controller-Channels



- 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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