

YED

pci-720

LOW COST PCI ARINC429 2TX/2RX INTERFACE

The PCI-720 ARINC 429 Interface card is a half-length PCI version 2.1 compliant interface card. Depending upon the options at time of ordering, the card will comprise of one (*PCI-720/1*) or two (*PCI-720/2*) independent transmitter channels that function as Bus Traffic Simulators and one or two independent receiver channels to provide advanced Bus Monitor and Analysis functions. The card also incorporates a microprocessor, a time tag register, on-card Filtering by Label and SDI, Data Acquisition FIFO's, and Dual Port memory for ease of interfacing to the PCI host bus.

To facilitate the conversion RS422 to RS232 for use by the PC's RS232 COM port, this card has optional on-card RS422/RS232 data translators. There is also an optional 28-volt Event input, which can be used for event marking of the recorded ARINC429 data streams. Note that these features must be requested at the time of order, as they are not available on the standard card. Please contact YED for further details.

transmitters

In Simulation mode, the PCI-720 executes autonomous instructions held in the dual port RAM and can perform scheduled and one shot modes of operation. Label repetition rate, minor and major frame rates are controlled at the board level. This significantly reduces the host PC overhead. The rise and fall time of the output signals are switchable to adapt to the selected transmit frequency. For each simulated ARINC 429 transmitter, all labels can be generated. The label data and descriptors can be updated during simulation at any time without corrupting the transmission. Multi-SDI transmissions of the same label are possible and variation of individual Label/SDI descriptors in real time is also permitted.

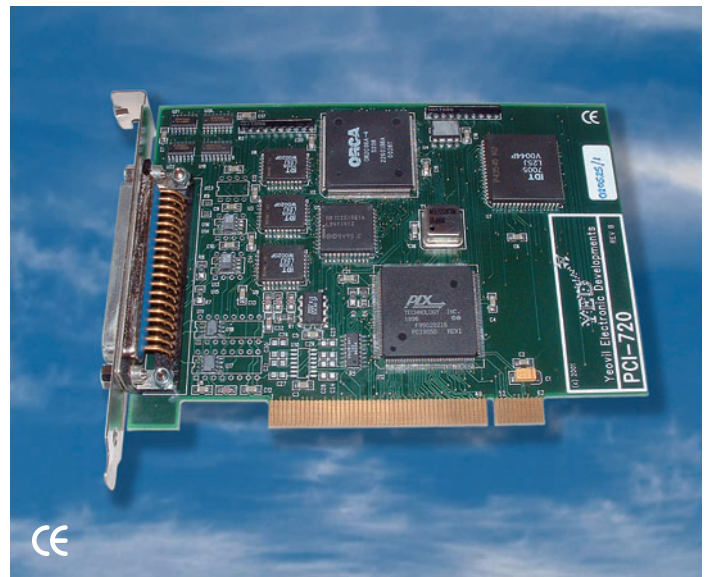
receivers

The opto-coupled receivers provide comprehensive Bus Monitoring and Data Acquisition to hard disk. All received data is time tagged to 1mS resolution. All Label/SDI filtering is performed on the card and data captured from each bus is stored in 8k of FIFO memory, which is off-loaded by the PC at regular interrupt intervals. The card can be programmed to generate interrupts when the FIFO reaches the half-full point or the status of the FIFO can be polled.

windows analyser software

The card is supplied with a Windows 95/98/NT4/2000/XP Real Time Simulation / Data Bus Analyser package providing a complete solution. For more information a brochure for the latest software can be downloaded from

www.yed.com/download/ARINCsw.PDF



'C' libraries

32-bit 'C' source code libraries are provided with this product.

pci-720 product features

- ✦ Available as a 1Tx/1Rx (*PCI-720/1*) or a 2Tx/2Rx (*PCI-720/2*) card.
- ✦ Dual Port RAM interface for holding transmit sequence and ARINC 429 data tables.
- ✦ Independent High/Low speed selection of transmitters
- ✦ 28 bit Time Tag register (*1mS resolution*) for timing incoming data.
- ✦ Rx automatically adapts to high and low speed data.
- ✦ On card filtering of received data by Label/SDI and Channel.
- ✦ 8 KB of Acquisition FIFO with Interrupt and polling capabilities.
- ✦ Optional RS232/RS422 translators on card.
- ✦ Optional 28-volt Discrete opto-coupled input for Event Marking.
- ✦ D37 Socket for I/O



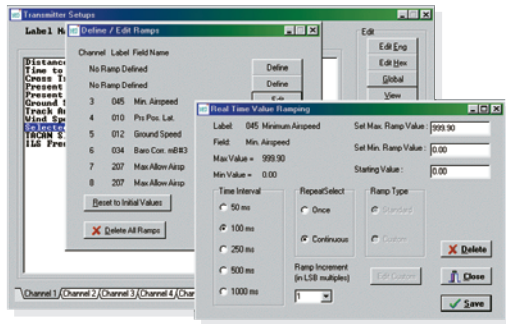
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windows analyser software

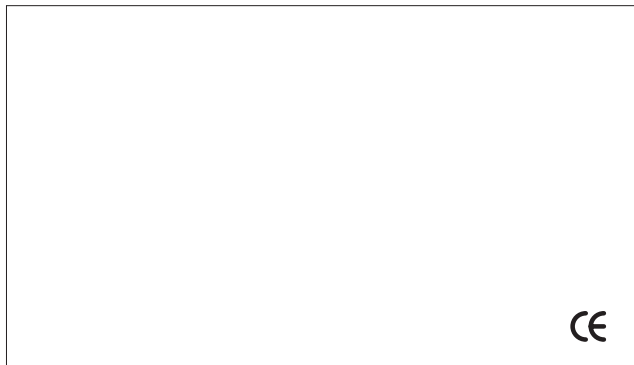
Packaged with the PCI-720 card, this intuitive software package provides the complete solution. You can quickly create and transmit ARINC labels, display received labels in real-time and log selected labels to disk for later analysis. This data can then be exported to a Spreadsheet such as Excel™ for further in depth analysis.

All data can be entered and displayed in hexadecimal and standard engineering units formats. In addition to this, custom engineering units conversions can be created/edited/saved/recalled providing a fully flexible solution for R&D facilities.



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pci-720 technical specification

transmitter operation

pulse rise/fall time	Lo Speed	10 ± 5µs
	High Speed	1.5 ± 0.5µs
voltage levels (Line A to B)	HI	10 ± 1.0 Vdc
	NULL	0 ± 0.5 Vdc
	LO	-10 ± 1.0 Vdc
output impedance	75 Ω ± 3 Ω	
bit rate	Lo speed, 12.5 kbps ± 0.5 % Hi speed, 100.0 kbps ± 0.5 %	
word rate	5 to 5000 ms (selectable) or S/Shot	
parity	ODD or EVEN (selectable)	

receiver operation

bit rate	Lo Speed	8 to 14 kbps
	Hi Speed	90 to 110 kbps
voltage levels (line A to B)	HI	10 ± 6 Vdc
	NULL	0 ± 2.5 Vdc
	LO	-10 ± 6 Vdc
input impedance	3 kΩ minimum (balance)	

general

product dimensions (mm)	155L x 125W	
weight	300 grams	
power requirements	External DC	
	5 V @ 120mA, ± 12V @ 50mA	
operating environment	Temperature	
	+0°C to 70°C	
	Humidity Range	
	0% to 95% non-condensing	

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