ARINC

FEATURES

› Up to 8 receive and 4 transmit ARINC 429 channels

› Intelligent interface with large buffers

› Low cost

› Interrupt-driven or polled operation

› 100% full-load rated

› 32-bit time tagging

› Full featured API included for Windows Me, NT, 98, 95, Visual Basic and LabWindows/CVI

› Easy-to-use *BusTools*/ARINC Windows-based GUI bus analyzer available

› High performance processor

› Three receive buffering mechanisms

› Two transmit mechanisms

› Support for 2-wire ARINC 419, 561, 575 and 582 also available
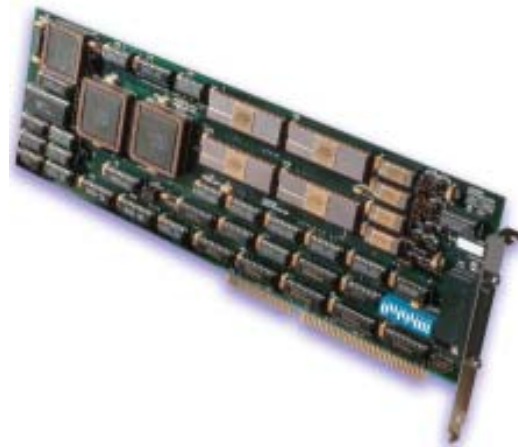
Hardware

The CEI-200 is a full-function ARINC 429 interface platforms for IBM PC/AT and compatible ISA bus computers. An on-board processor allows this interface to keep up with maximum ARINC 429 data rates on all channels without loading down the PC host. Dual-ported RAM provides large data buffers and the optimal host computer interface for performance and versatility.

Software

Accelerate ARINC 429 development and testing activities with Condor's powerful software tools and solutions. Rapidly develop your own ARINC applications with our versatile high-level API (Application Programming Interface) libraries for Windows Me, NT, 98, 95, Visual Basic, and LabWindows/CVI. Optional high-level API support for LabVIEW VI is available.

BusTools/ARINC, Condor's Windows-based GUI software, is an optionally available integrated solution for ARINC databus analysis, simulation, and testing. API libraries are also available.

Architecture

The CEI-200 uses a 16MHz, 16-bit Intel 80186 processor, interfaced to the host computer via high performance, 16-bit Dual-Ported RAM (16Kbyte or 32Kbyte).

The CEI-200 utilizes Condor's unique ROMless design, where the controlling firmware executes in Dual-ported RAM. This greatly simplifies access to on-board firmware in custom applications, while supporting transparent upgrades of factory firmware. Expensive emulators and specialized development systems are not required, as users can easily modify the firmware with standard DOS based compilers.

ARINC

Interface for PC/AT

OPERATIONAL FEATURES

Configurations with up to 8 receive and 4 transmit ARINC channels are available on the CEI-200. Industry standard chip sets provide full functionality for any ARINC bit rate.

ARINC channel data is accessed via large data buffers in efficient, Dual-Ported memory, assuring absolute data validity with minimal host intervention. 32-bit time tagging with selectable resolution is supported, and the hardware can run in either interrupt-driven or polled modes.

Incoming data can be filtered by label and/or SDI for each receive channel. Three different methods for buffering received data provide total flexibility in reviewing ARINC bus traffic: Buffered Mode utilizes a separate circular buffer for each channel; Merged Mode combines all data received into a single, time-sequenced circular buffer; and Dedicated Mode allows you to view only the very latest data, by updating individual locations in memory for each combination of label and channel. On-board firmware either automatically schedules messages or transmits from a FIFO.

AVAILABLE CONFIGURATIONS

CEI-200-21	ARINC 429 intelligent PC/AT card with 2Rx, 1Tx channels
CEI-200-22	ARINC 429 intelligent PC/AT card with 2 Rx, 2 Tx channels
CEI-200-42	ARINC 429 intelligent PC/AT card with 4 Rx, 2 Tx channels
CEI-200-44	ARINC 429 intelligent PC/AT card with 4 Rx, 4 Tx channels
CEI-200-84	ARINC 429 intelligent PC/AT card with 8 Rx, 4 Tx channels

Optional Software

BusTools/**ARINC**	Bus analysis and simulation software for Windows Me, 2000, NT, 98 and 95
CEI-LV	LabVIEW support for ARINC 429

SPECIFICATIONS

ARINC 429 Receive Channels

- Number of channels: up to 8
- Data rates: 12-14.5 KHz , 100 KHz or programmable
- Input levels: ± 6.5 to ±13 VDC (A to B)
- Filtering: label and/or SDI
- Parity: odd or none

ARINC 429 Transmit Channels

- Number of channels: up to 4
- Data rates: 12.5 KHz or 100 KHz
- Standard output level: ±10 VDC (A to B)
- Parity: odd, even or none

ARINC 429 Transmit Channels

- API - Includes high-level API for Windows Me, NT, 98, 95, DOS, Visual Basic and LabWindows/CVI
  - Source code API library included
- GUI - Optional *BusTools*/ARINC GUI bus analyzer
- LabVIEW - Support optional

Architecture

- Processor: 16 MHz 80C186
- RAM: 16 Kbyte or 32 Kbyte

Physical / Environmental

- Full-size PC/AT card
- Standard operating temperature: 0°C to +70°C
- Relative humidity: 5% to 80% (non-condensed)

Power (typical)

- +5 VDC: 530 mA
- +12 VDC: 40 mA
- -12 VDC: 40 mA

Warranty: 3 year limited hardware warranty

See our on-line Commercial Products Configuration Guide for available configurations.
http://www.condoreng.com

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