ARINC

ARINC 429 IP Module

FEATURES

- › Up to 8 receive / 8 transmit channels
- › Intelligent module with buffering
- › VME, VXI, PCI, CompactPCI and PC/AT carriers available
- › Full featured API for Windows XP, 2000, Me, NT, 98, 95 and source code included
- › 64 Kbyte true dual-port RAM
- › Up to 96 channels in single slot
- › Programmable receive thresholds and transmit output voltages
- › Fully independent channel operation
- › Error injection/detection
- › 32-bit time-tagging
- › Extended temperature/ ruggedized options

Condor's IP-429HD is an intelligent, high density IP Module (IndustryPack compatible) interface for ARINC related avionics protocols that provides up to 8 pairs of fully independent ARINC 429 channels. Standard IP-429HD features include programmable selection of data rates, parity, on-board buffering modes, error detection and automatic slew rate adjustment.

The parametric option adds error injection, programmable input thresholds on Receive channels and adjustable output voltage on Transmit channels. Configuration options include Rx/Tx channel count and a mix of ARINC 429/575 with other avionics protocols (ARINC 561 6-wire, ARINC 573 or ARINC 717).

IP modules are industry standard I/O mezzanine boards (about the size of a business card), designed for mounting on host carrier boards to enable cross-platform portability. Up to six IP-429HD modules can be mounted on a single carrier board, providing up to 48 receive and 48 transmit ARINC 429/ 575 channels in one slot. Host carrier boards are available for VME, VXI, PCI, CompactPCI, and PC/AT platforms. Condor's VME-AIC product line integrates multiple IP-429HD modules with flexible firmware on powerful 68040 or 68060 platforms to provide the industry leading VME and VXI solutions for ARINC 429 and other avionics databus protocols.

Software

Source code example software (DOS) is included with IP-429HD. Our high-level API (Application Programming Interface) for Windows XP, 2000, Me, NT, 98 and 95 is included. LabVIEW support is optionally available.

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SPECIFICATIONS

ARINC 429 Receive Channels

- Number of channels: up to 8
- Configuration options
  - 2, 4 or 8 standard Rx channels
  - 4 parametric Rx channels
  - 4 standard, 4 parametric Rx channels
- Data rates: 12.5 KHz or 100 KHz (software selectable)
- Standard input levels: ±6.5 to ±13 VDC (A to B)
- Parametric threshold levels: ±0.1 to ±13.5 VDC (A to B)
- Parity: odd, even or none
- Error reporting: parity
- Buffering: 4 KB per channel

Receive Channel Buffering

- Circular buffer mode
  - One buffer for all Labels per channel
  - 32-bit time-tag with each word

Physical

- Single-wide IP module (1.8" x 3.9")

Power (-88 configuration)

- +5 VDC: 83 mA
- +12 VDC: 39 mA
- -12 VDC: 39 mA

ARINC 429 Transmit Channels

- Number of channels: up to 8
- Configuration options
  - 2, 4 or 8 standard Tx channels
  - 4 parametric Tx channels
  - 4 standard, 4 parametric Tx channels
- Data Rates: 12.5 KHz or 100 KHz (software selectable)
- Automatic slew rate adjustment
- Standard output level: ±10 VDC (A to B)
- Parametric output voltages: 0 to ±10 VDC (A to B)
- Parity generated: odd, even or none
- Error injection option: parity, gap, high or low bit count
- Buffering: 4 Kbyte per channel

Environmental

- Standard operating temperature: 0°C to +70°C
- Optional operating temperature: -40°C to +85°C
- Relative humidity: 5 to 90% (non-condensing)

Warranty: 3 year limited hardware warranty

AVAILABLE CONFIGURATIONS

IP-429HD-22	IP Module with 2 Rx and 2 Tx ARINC 429 channels
IP-429HD-42	IP Module with 4Rx and 2Rx ARINC 429 channels
IP-429HD-44	IP Module with 4 Rx and 4 Tx ARINC 429 channels
IP-429HD-44-P	IP Module with 4 Rx (Parametric) and 4 Tx (Parametric) ARINC 429 channels and error injection
IP-429HD-84	IP Module with 8 Rx and 4 Tx ARINC 429 channels
IP-429HD-88	IP Module with 8 Rx and 8 Tx ARINC 429 channels
IP-429HD-88-P	IP Module with 4 Rx/4 Tx (Parametric) and 4 Rx/4Tx ARINC 429 channels and error injection

EXAMPLE CARRIER BOARD CONFIGURATIONS

VME-AIC-DDDD	Intelligent 6U VME carrier with 32 Rx and 32 Tx ARINC 429 channels
VXI-AIC-BBBB	Intelligent C-size VXI carrier with 16 Rx Parametric and 16 Tx Parametric ARINC 429 channels
CEI-300-BB00	PC/AT carrier with 8 Rx Parametric, 8 Tx Parametric ARINC 429 channels
CEI-500-CC00	PCI carrier with 16 Rx and 8 Tx ARINC 429 channels
CEI-600-A000	3U compactPCI carrier with 4 Rx and 4 Tx ARINC 429 channels

Many other configurations are available. Contact the factory for additional solutions on the following platforms:

Half and full size PC/AT	3U and 6U VME
Full size PCI	6U intelligent VME
3U and 6U Compact PCI	B and C-size VXI

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

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