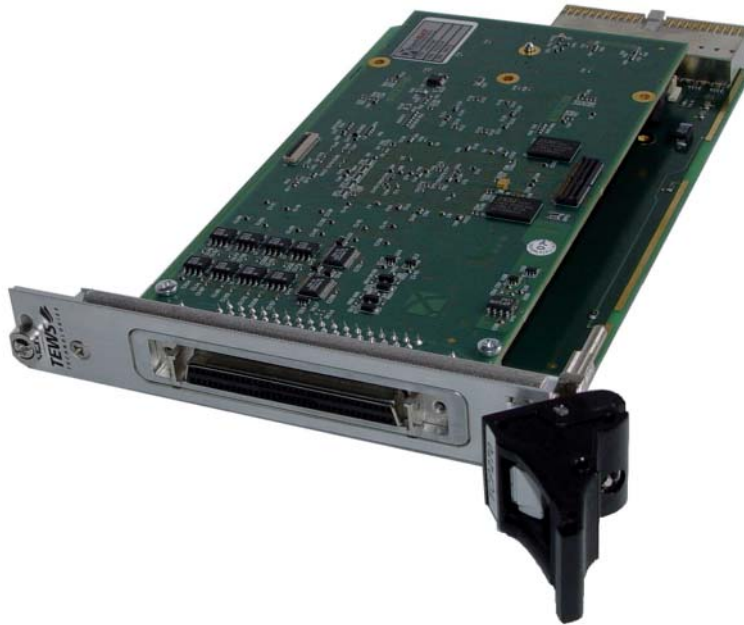


A429-PMC-cPCI

Multichannel/High-Performance ARINC 429-PMC Module



- Highly integrated, multichannel – up to 16 Tx / 16 Rx channels
- High-Performance FPGA-only design – no firmware
- Low host CPU load through FIFOs
- Optional bidirectional discrete I/O and IRIG-B
- Optional galvanic isolation for the ARINC 429 and discrete I/O user interface
- Sophisticated error injection & detection features, programmable bus load
- Driver & API support for Windows 2k/XP/Vista and Linux



A429-PMC-cPCI

Multichannel/High-Performance ARINC 429-PMC Module

Overview

The TechSAT **A429-PMC-cPCI** is a powerful, multichannel ARINC 429 interface implemented on a PMC (PCI Mezzanine Card) form factor module form factor module mounted on a standard PMC-to-PCI carrier. It has been specially designed to comply with high-performance test- and simulation requirements where the ARINC 429 bus is used.

The **A429-PMC-cPCI** features a fully parallel hardware design with strictly independent Tx-/Rx-channel state-machines. The dual global FIFO host interface allows for extremely simplified and accelerated board access. The fully autonomous hardware implemented Tx-scheduler and the Rx-FIFO handler relieve any host platform from realtime tasks. Receive time stamping and error detection are also implemented in hardware.

The **A429-PMC-cPCI** is equipped with comprehensive test features such as error injection/detection. Galvanic isolation, bidirectional discrete I/O lines, IRIG-B input and conformal coating are available as an option.

A429-PMC-cPCI is supported by TechSAT's ADS2 (Avionics Development System - 2nd Generation) which is used as a software platform in numerous test- and integration environments. In addition the **A429-PMC-cPCI** is based on the unified TechSAT Software Environment Interface architecture that can be found on various other TechSAT interface products. The **A429-PMC-cPCI** comes with driver and interface library for Microsoft Windows 2k/XP/Vista and Linux.

Technical Data

ARINC 429 Interface and Features

- Up to 16 Tx and 16Rx channels (per PCI-Slot)
- High speed and low speed selectable per channel
- Tx-schedule resolution: 100 µs
- Rx-timestamp resolution: 1 µs
- Error injection / detection:
 - word-gaps: 0-15 bit-times
 - short word (31 bit) or long word (33 bit)
 - parity
- 32K Rx-FIFO entries (A429 word + channel + timestamp + error information)
- 16K Tx-FIFO entries (A429 word + channel + port + error injection)
- Rx-speed auto-detect
- On-board temp. sensor for overheat detection
- Optional bidirectional discrete I/O-lines (GND/open)
- 4 MB dual-bank SRAM, 32 MB DDR2 RAM

Host Interface

- PCI 2.2 standard, 33/66 MHz, 32/64 bit interface
- 5 V and 3.3 V supported

Software

- TechSAT unified API compatible with ADS2
- DLL and driver for MS Windows 2000, XP and Vista
- Drivers for Linux and VxWorks

Physical Dimensions

- single size cPCI 3U 160 x 100 mm

Operating Environment

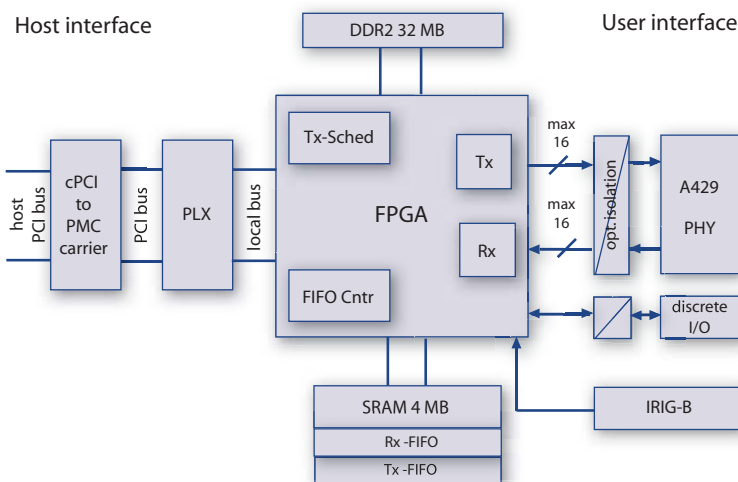
- Operating Temp. range: 0 to +60 °C (optional -20 to +75 °C)
- Storage Temp. range: -10 to +85 °C

Power Consumption

- Power dissipation: max. 12 W

Order Information

- A429-PMC-4T8RGI3DIO – 4Tx/8Rx, galvanically isolated, 3 discrete I/O
- A429-PMC-15T16RNI3DIO – 15Tx/16Rx, non isolated, 3 discrete I/O
- A429-PMC-2T2R – 2Tx/2Rx, non isolated
- A429-PMC-4T4R
- A429-PMC-8T8R
- A429-PMC-16T16RNI – 16Tx/16Rx, non isolated
- variable Rx/Tx partitioning on request
- IRIG-B-time-synchronisation (optional)
- Conformal Coating (optional)



Distributor