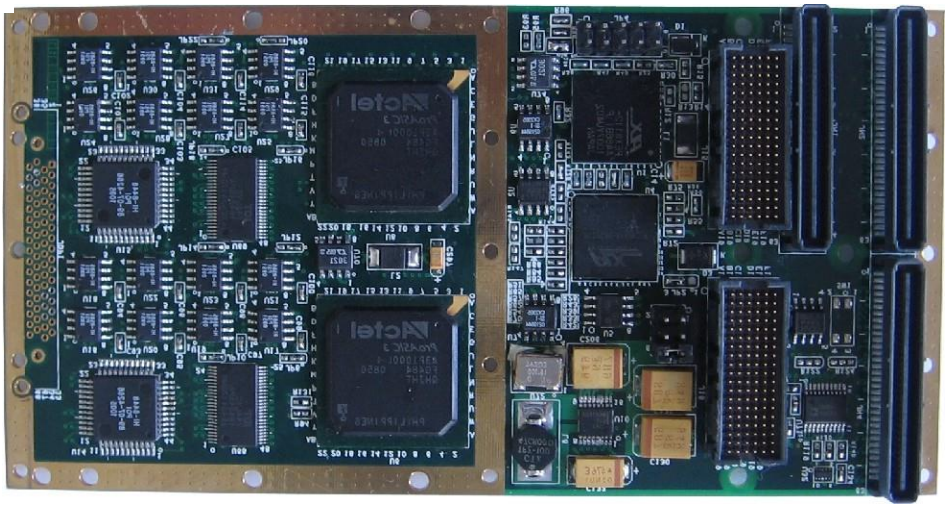
AT-XMC/PMC-429

MultichannelHighPerformanceArinc429MezzanineCard



- XMC-x1LanePCIe,2.5Gbps/PMC-PCIbus32-bit, 33MHz
- IPC429-Nextgeneration429core
- Improvedarchitecturetoenhanceperformance
- 16TransmitChannels,16ReceiveChannels
- Configurable for High Speed/Low Speed
- LowhostCPUloadthrough FIFOs
- Upto256LabelmemoryforeachReceivechannel.
- 128WordTxandRxFIFOsforeachTransmitand Receive Channel.
- Programmableinterrupts
- Asynchronous and Synchronous Messaging
- ProgrammableRefreshratesof20msminto200msmin
- RearP16orRearP14orFrontI/O available
- IRIG-BTimeCodeInput(Digital)
- 48-bit,microsecondtime tagging
- LabelSelectiveTriggerforCapture/FilteringandSDI filtering
- Optionaldiscretel/OandIRIG-B
- OptionalDisconnectofArinc429transmitchannels through PhotoMos Relays
- Availableintwovariants-AirCooled,Conduction Cooled
- Driver&High-levelAPIforWindowsXP,Windows7and Linux.
- LabVIEWdriversavailable optionally

OVERVIEW

TheAT-XMC/PMC-429cardenable electronic systems to interface with commercial and military avionics data buses.They provide extensivefunctionalityandareusedtocommunicatewith,simulate,test,andmonitorARINC429equipmentandsystems.Thishigh- density high-performance card is suitable for applications ranging from test equipment to rugged deployable systems.A wide selectionofmodelsisavailable:XMCandPMC,frontandrearpanelI/O,variousARINCchannelcountsandcapabilities.Theyall include avionics discrete, timers, IRIG Synchronization/ generation. All modes may be used in either conduction or air cooled systems.

The card is designed to transmit and receive messages up to 32 channels. Upto 16 channels for Receive (Rx) and 16 channels Transmit(Tx)mode.Eachchannelissoftwareconfigurableforhighorlowspeed(12.5kor100kbitspersecond)andARINC429 protocolrequirements.ToprovideI/Oandprocessingexpansioncapabilities,I/Oareavailableoneitherrearuserl/Oconnectorsor front panel VHDCI Connectors. An onboard IRIG-B time encoder and decoder allow users to accurately synchronize single or multiplemodulestoacommontimesource.TheARINCdatawordcanbedecodedandsortedbasedontheLabelandSDIbitsand storedinFIFOs.Thecardisintegratedwithpowerfulsoftwarethatreducesdevelopmenttime.

Software

TheAT-XMC/PMC-A429softwareincludesDrivers&APIs.Theproductcomeswithapowerfulsetoflibraryfunctionstoaccessthe entireARINC429functionality.Thedriversaredesignedinamodularfashionconsistingofcomponentfunctionsandapplication functions.Theuser'stestprogramcanbedevelopedwithfewcallstothedriverbyusingthesetofapplicationfunctionsprovided. Driverandhigh-levelAPIlibrariesforWindowsXP,Windows7andLinuxareavailable.LabVIEWdriversavailableoptionally.

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PRODUCTSPECIFICATIONS

BusInterface

- XMC-x1lanePCIe,2.5Gbps(PCIebasespecification1.0a) or PMC - 32-bit, 33/66 MHz (PCI 2.2)

ARINC429Interface

- Supportsupto32ARINC429channels
  - > 16TransmitChannels
  - > 16ReceiveChannels
- 128WorddeepFIFOoneachchannel
- ProgrammableInterrupts
- Built-inFaultDetectionCircuitry
- Setparityperchannel(odd/even/data)
- Syncoutputonallorselectedmessages
- Handlesperiodicandtransferprotocols
- Messagefiltersandschedules
- Datarates:12.5kbps/50KbpsinLowSpeedand100kbps in High Speed
- Standardinputlevels:±6.5to±13VDC
- Filtering:Labeland/orSDI
- Parity:Odd,evenornone
- Errorreporting:Parity
- Outputlevels:±10VDC

Others

- OptionalEightDiscreteInputsandOutputs
- OptionalIRIGDigitalIN
- OptionalDisconnectofArinc429transmitchannelsthrough PhotoMos Relays
- 48-bithardwaretime-tag(1µsresolution)

DiscreteI/O

- TwoTTLDiscreteInputs&DiscreteOutputsonlyin XMC mode
- OptionalSixTTLDiscreteInputs&sixDiscreteOutputsin PMC mode

IO Configurations

- IOavailableonbothFrontPanel68pinVHDCIConnector and Rear Connectors (P14 - PMC or P16 - XMC)
- StandardconfigurationisP16rearpanel I/O

Software Support

- DriverandhighlevelAPIlibrariesforWindowsXP, Windows 7 & Linux
- Sampleapplicationswillbe provided
- LabVIEWdriversavailableoptionally

Physical

- StandardSinglewideMezzanineCardformfactorconfirming to IEEE 1386.1 (74 mm x 149 mm)
- ConductionCooledXMC/PMCCardwithoutBezel

Environmental

	Air-Cooled	Conduction-Cooled
Operatingtemperature	0°C to+60°C	-40°Cto+85°C

Power

- Primary Supply +5V, +3.3V, +12V and -12V from PMCConnectorswhenconfiguredasaPMCCard, +3.3Vandallothervoltagesinternallyderived
- Primary Supply +3.3V, +12V, and -12V from XMC ConnectorswhenconfiguredasXMCCard,allother voltages internally derived

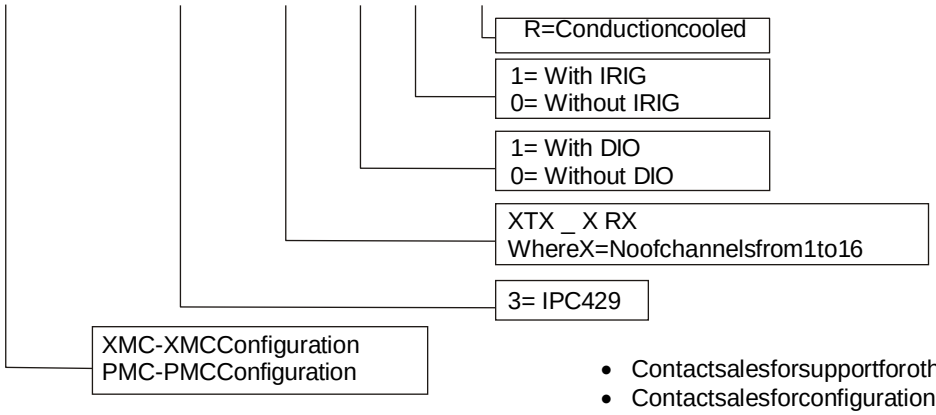
Warranty

- 1yearlimitedwarranty

ORDERINGINFORMATION

HardwareSelection

AT-XMC/PMC-429-Controller–Channels–DIO–IRIG-Ruggedization



- ContactsalesforsupportforotherOperatingSystems
- Contactsalesforconfigurationoffrontandrearl/Oconfiguration
- Contactsalesforenvironmentaloptions

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