M8K429RTx

The M8K429RTx is an intelligent multichannel ARINC 429 interface module for Excalibur's 8000 family of multiprotocol carrier boards. The module supports up to five ARINC 429 channels in any combination of transmitters and receivers. Each of these channels feature error injection and detection capabilities.

The receive channels allow for the storage of all selected Labels with status and Time Tag information appended to each word. The receivers allow for filtering and multi-storage modes of Data Words. The transmit channels operate via a transmit 'instruction stack' which allows scheduling of data transmissions and reduces the need for host computer intervention.

General Features

♦ Supports 5 ARINC 429 channels
♦ Supports maximum data throughput on all channels simultaneously
♦ Each channel individually configurable as transmit or receive
♦ Programmable per channel:
  Buffer size
  Bit rates (Hi, Lo, Programmable)
  Parity (Odd, Even, On, Off)
♦ 64K x 8 dual-port RAM
♦ Programmable hardware output trigger
♦ Interrupt and polling modes
♦ IRIG B input (standard IRIG B120 Serial Time Code)
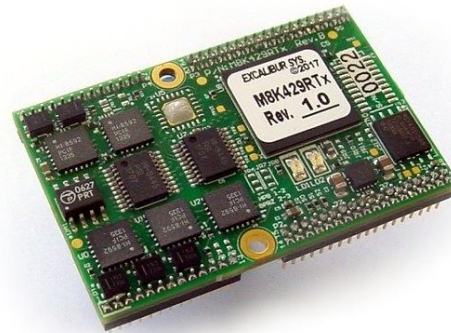♦ Ruggedized and extended temperature options

Transmit Channel

♦ One-shot, N-times or Loop transmission
♦ Three transmit modes:
  Interblock Time
  Data Rate
  FIFO
♦ Programmable gap time between words
♦ Programmable interblock time
♦ Error injection per block:
  Bit Count Hi/Lo, Sync Time, Stretch Bit, Bit Rate, Parity

Receive Channel

♦ Three receive modes:
  Look-up table
  Sequential per channel
  Sequential merge
♦ Word status tagging
♦ 32-bit, 10 microsecond Time Tag or 64-bit IRIG B Time Tag
♦ Label/data filtering
♦ Start triggers
♦ Receive error count per channel
♦ Receive count interval trigger
♦ Error detection per word:
  Bit Count, Sync Time, Parity, Bit Coding

Physical Characteristics

♦ Dimensions: 46mm x 30mm
♦ Weight: 9g

Operating Environment

♦ Temperature: 0°–70°C standard temperature
  -40° to +85°C extended temperature (optional)
♦ Humidity: 5%–90% noncondensing
♦ MTBF: 406,300 hours at 25°C, G_F, S217F

Host Interface

♦ EXC-8000 family of carrier boards
♦ Power: 5V @ 480mA

Software Support

♦ *Software Tools:* Intuitive and flexible API with source code
  ♦ Compatible with 32/64-bit Windows 7/8/10/11 & Linux kernel 3.x/4.x/5.x
  ♦ Includes application interface for NI LabView & CVI
♦ *Mystic ARINC 429 Bus Analyzer* for Windows
♦ *Exalt Plus:* Excalibur Analysis Laboratory Tools (optional)

Ordering Information

♦ **M8K429RT5** ARINC 429 five channel module
♦ Additional Options:
  -E Extended temperature option
  -R Ruggedized option
  -001 With conformal coating

Note: When ordering this module with a carrier board, use the module code specified in the user's manual of the carrier board.

These specifications are subject to change without notification

ISO 9001 CERTIFIED COMPANY

AS 9100 CERTIFIED COMPANY

CE

EXCALIBUR SYSTEMS