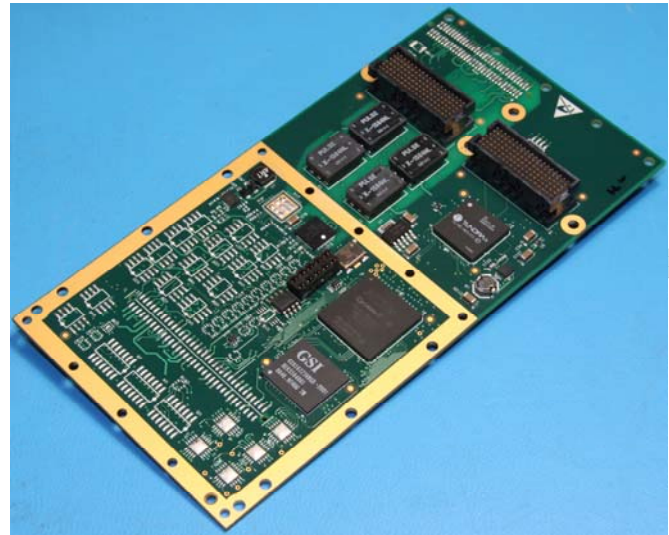


RXMC-1553

High Density XMC Module

Features

- 1 or 2 dual-redundant MIL-STD-1553A/B Notice II channels
- XMC.3 (1x PCIe) host interface
- Simultaneous Bus Controller, up to 31 Remote Terminals and Bus Monitor
- High-level API for Windows XP, 2000, NT, VxWorks, included. Contact factory for additional operating system support.
- Multi-function and single-function versions
- Rear P16 or Rear P14 or Front I/O available
- IRIG-B receiver/generator
- 45-bit, microsecond time-tagging
- Complete message programmability
- Flexible message status/interrupt generation
- I/O triggering
- RoHS compliant
- Transition cabling to 1553 cable jacks included with front I/O configurations
- Rich compliment of I/O options including programmable I/O, differential discretes and Avionics discretes



GE Fanuc Embedded Systems' RXMC-1553 is the latest generation of performance and flexibility for MIL-STD-1553A/B Notice II on a XMC.0 Mezzanine Card. With one or two dual-redundant channels, the RXMC-1553 includes advanced API (Application Programming Interface) software that reduces application development time.

Conductively cooled with conformal coating versions available. Standard features include 1 Mbyte of RAM per channel, 45-bit message timetagging, triggers, extensive BC & RT link-list structures, IRIG-B signal Receiver/Generator with GPS synchronization, automatic/manual RT Status Bit and Mode Code responses, along with advanced BC functionality. Avionics low and high side discretes, RS-485 differential discretes, or programmable I/O are factory configurable options. The RXMC-1553 Bus Monitors provide unparalleled 100% monitoring of fully loaded buses.

Multi-function Interfaces

RXMC-1553 multi-function interfaces are easily configured to operate with simultaneous Bus Controller, up to 31 Remote Terminals and Bus Monitor functionality.

Single-function Interfaces

Single-function RXMC-1553 interfaces have all the features and functionality of the multi-function versions, but only one major operational mode is enabled at a time. Each interface can emulate either a Bus Controller or up to 31 Remote Terminals or a Bus Monitor.

Software

GE Fanuc Embedded Systems provides our advanced 1553 API in source code, along with support for Windows XP, 2000, NT, VxWorks. Contact factory for additional operating system support.

RXMC-1553 High Density XMC Module

Specifications

Physical

- XMC Mezzanine Card (74mm x 149 mm without bezel)
- Standard configuration is P16 rear panel I/O

Environmental

- Standard operating temperature range: -40 to +85 C
- Relative humidity: 5 to 90% (non-condensing)
- Optional conductively cooled with conformal coating configurations

Software Support

- API - High-level libraries with source code included for Windows NT, XP, 2000, Vista, and VxWorks

Connections

- Transformer coupling standard, contact factory for direct coupling configurations
- One dedicated trigger per 1553 channel
- RT addressing and MIL-STD-1760 compliant
- Orderable I/O options:

<u>Discrete I/O</u>	<u>Avionics Discretes</u>
8 General Purpose I/O	4 Low-Side I/O
8 General Purpose I/O	4 High-Side I/O
8 Low-Side I/O	4 Low-Side I/O
8 Low-Side I/O	4 High-Side I/O
4 x RS-485 Level	4 Low-Side I/O
4 x RS-485 Level	4 High-Side I/O

- I/O orderable as P16, P14 or Front panel connections
- Transition cabling to 1553 cable jacks included on front panel configurations

Multi-function Operational Modes

- Simultaneous BC, 31 RTs and BM

Single-function Operational Modes

- BC or 31 RTs or BM

Power (2 channels at 75% duty cycle)

- +3.3 VDC @ TBD mA (typ.)
- < 5 W power dissipated on board

On-board Shared RAM

- 1 Mbyte (per dual-redundant channel)

Optional Configurations

- 1 or 2 dual-redundant channels
- I/O orderable as P16, P14 or Front panel connections
- Optional conductively cooled with conformal coating configurations

Descriptions

Bus Controller

- Programmable control over:
 - Major and minor frame content and timing - Inter-message gap times
 - Response time-out and late response
- Modify messages, data or setup while card is running
- Insert aperiodic messages into a running BC list
- Conditional message sequencing based on real-time message data or status
 - Selectable interrupt generation and status messages on full range of system conditions or all detected errors
- Synchronize BC operation to external time source

Remote Terminal

- Multiple RT simulation (up to 31 RTs)
- Modify data, status words or setup while card is running
- Programmable message content (linked message buffers)
- Selectable interrupts upon multiple conditions
- RT Map Monitoring

Bus Monitor

- Capture 100% fully loaded bus traffic with:
 - Time-tagging
 - Word status
 - Message status
- Interrupts can be selected by RT / SA / WC
- Extensive filtering and triggering options
 - By individual RT/subaddress
 - Transmit, receive or broadcast mode codes - internal or external triggering
 - Trigger output on user specified data
- Real-time bus playback with RT edit mode
- 45-bit, microsecond resolution timetagging
- IRIG/GPS synchronization

Ordering Information

RXMC1553-1S:	MIL-STD-1553, XMC INTERFACE, SINGLE-FUNCTION, SINGLE DUAL-REDUNDANT CHANNEL, P16 REAR I/O, NO DISCRETES
RXMC1553-2S:	MIL-STD-1553, XMC INTERFACE, SINGLE-FUNCTION, TWO DUAL-REDUNDANT CHANNEL, P16 REAR I/O, NO DISCRETES
RXMC1553-1M:	MIL-STD-1553, XMC INTERFACE, MULTI-FUNCTION, SINGLE DUAL-REDUNDANT CHANNEL, P16 REAR I/O, NO DISCRETES
RXMC1553-2M:	MIL-STD-1553, XMC INTERFACE, MULTI-FUNCTION, TWO DUAL-REDUNDANT CHANNEL, P16 REAR I/O, NO DISCRETES
RXMC1553-1S-41:	MIL-STD-1553, XMC INTERFACE, SINGLE-FUNCTION, SINGLE DUAL-REDUNDANT CHANNEL, FRONT I/O, 8 X GP I/O DISCRETES (CMOS LEVEL), 4 X LOW SIDE AVIONICS DISCRETES
RXMC1553-2S-41:	MIL-STD-1553, XMC INTERFACE, SINGLE-FUNCTION, TWO DUAL-REDUNDANT CHANNEL, FRONT I/O, 8 X GP I/O DISCRETES (CMOS LEVEL), 4 X LOW SIDE AVIONICS DISCRETES
RXMC1553-1M-41:	MIL-STD-1553, XMC INTERFACE, MULTI-FUNCTION, SINGLE DUAL-REDUNDANT CHANNEL, FRONT I/O, 8 X GP I/O DISCRETES (CMOS LEVEL), 4 X LOW SIDE AVIONICS DISCRETES
RXMC1553-2M-41:	MIL-STD-1553, XMC INTERFACE, MULTI-FUNCTION, TWO DUAL-REDUNDANT CHANNEL, FRONT I/O, 8 X GP I/O DISCRETES (CMOS LEVEL), 4 X LOW SIDE AVIONICS DISCRETES

About GE Fanuc Embedded Systems

GE Fanuc Embedded Systems is a leading global provider of embedded computing solutions for a wide range of industries and applications. Our comprehensive product offering includes many types of I/O, single board computers, high performance signal processors, fully integrated, rugged systems including flat panel displays, plus high speed networking and communications products. The company is headquartered in the U.S. and has design, manufacturing and support offices throughout the world. Whether you're looking for one of our standard products or a fully custom solution, GE Fanuc Embedded Systems has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.gefanucembedded.com.

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Additional Resources

For more information, please visit the GE Fanuc Embedded Systems web site at:

www.gefanucavionics.com