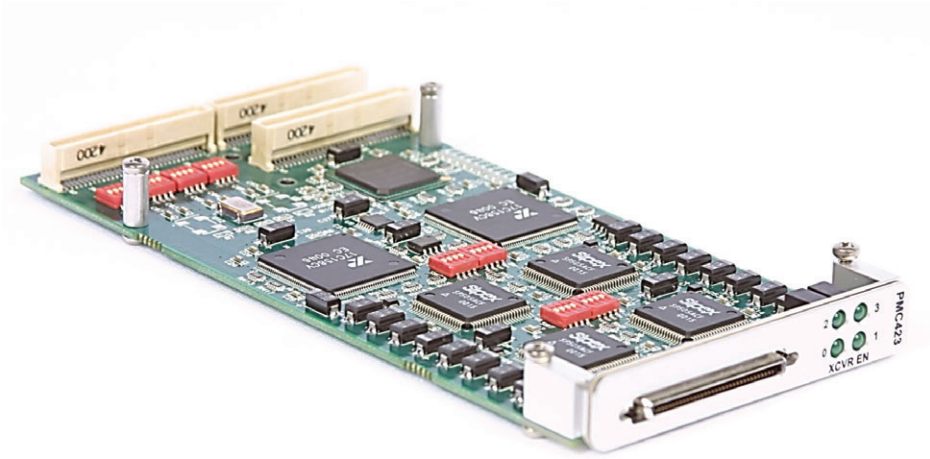
GE Fanuc
Embedded Systems



PMC423

16 Port Serial Controller, Front and Rear I/O

Features

- 16 Port Serial Controller with two 16-bit Timer/Counters
- PMC/PCI Form Factor (66 MHz Capable)
- 16 ports routed to the front and rear
- Read/Write Burst Operation
- Baud Rate from 150bps - 6.25Mbps
- Software selectable RS232, RS422 & RS485 (Full Duplex & Half Duplex)
- All Ports Fully Independent (16C550 Compatible Registers)

Benefits

The PMC423 provides a uniquely effective solution for integrating serial I/O requirements into a VMEbus or CompactPCI system. Implemented on a single PMC card, the PMC423 is fully compatible with current generation VMEbus and CPCI Single Board Computers, as well as any special purpose processor that includes a PMC connector. In addition, card edge PCI systems can be accommodated using GE Fanuc Embedded Systems' PMC239 adapter for rapid prototype and development.

Traditional single and multi-port Serial Interfaces place a high overhead on the host processor by requiring per-character-attention (i.e. each received and transmitted character generates interrupts and programmed I/O from the host.) Six features of the PMC423 remove this overhead:

- Data transfer in Byte, Word and Double-word, capable of Read/Write Burst
- FIFO buffers to avoid data overrun (64 Bytes on each port)
- Transmit and Receive FIFO Level Counters
- Automatic Xon/Xoff Software Flow Control
- Interrupt Source Register for all 16 ports
- RS485 Half-duplex Control with Selectable Delay

Each of the sixteen ports has individually programmable line drivers to set any of the most popular signaling types: RS232, RS422 and RS485 (full duplex & half duplex with termination or non-termination option). The signaling characteristics are set by software. Baud rate of each serial port is separately programmable. Supported rates are from 150bps to 6.25 Mbps. The PMC423 does not route the RTS/CTS and DTR/DSR signals to the I/O ports.

In addition, the PMC423 has two 16-bit general purpose Timer/Counters.

External Connection

Depending on the application's requirements, the PMC423 offers both front and rear I/O. The front I/O is a high density 68-pin connector. The 68-pin connector mates with a separate cable to provide standard connection to 16 DB-9 male connectors (purchased separately). For applications that require rear I/O, the ports are wired to the J4 connector of the PMC423. Custom cables can be fabricated by GE Fanuc Embedded Systems on request.

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PMC423, 16 Port Serial Controller, Front and Rear I/O

Specifications

Serial Characteristics
- Ports: RS485/RS422/RS232
- Port Routing: Front, 8 x serial ports via 68 pin SCSI

Power Specifications
- Power (Total): 4 watts
- @3.3 V: 0.6 amps
- @5 V: 0.4 amps

MTBF
- MIL 217-F Nav Shel 25 °C: 213,000 hours

Form Factor
- PMC Single Slot

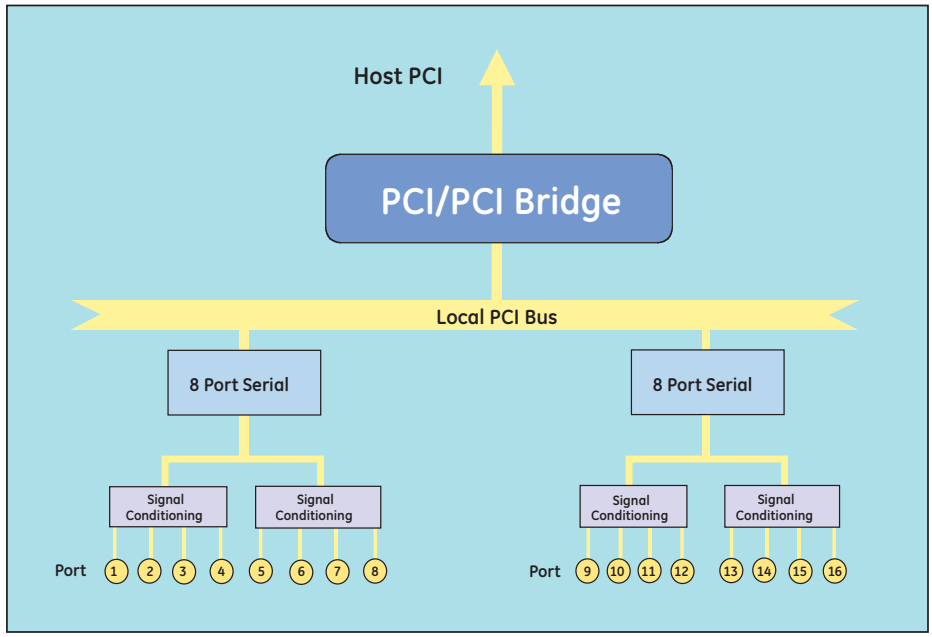
Temperature
- Operating: 0 to +60 °C
- Storage: -40 to +85 °C

Humidity
- Operating: 5% to 95% noncondensing
- Storage: 5% to 95% noncondensing

Conformal Coating
- Optional

PCI Bus Characteristics
- Signaling +3 & +5 V
- Specification 2.2
- Speed 33/66 MHz
- Width 32 bits

Block Diagram



Ordering Information

PMC423

PMC423
PMC Serial Controller, 16-port Front or Rear I/O

PMC423/IND
PMC Serial Controller, 16-port Front or Rear I/O, Industrial Temperature

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.

GE Fanuc Embedded Systems Information Centers

Americas:
1 800 322 3616 or 1 256 880 0444

Asia Pacific:
86 10 6561 1561

Europe, Middle East and Africa:
33 1 4324 6007

Additional Resources

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

www.gefanucembedded.com