

CompactPCI

MCCR Romeo 16-Port Asynchronous Serial Commux

- **Mix RS-232/422/485 & MIL-STD-188**
- **16 Ports -- Data Rates to 12.5Mbps**
- **Aggregate Throughput of Up to 30Mbps**
- **128-Byte Deep FIFOs**
- **Quad UARTs with on-chip PCI interface**
- **Standard 32-bit cPCI Slave Interface**
- **Front or Rear Panel I/O with standard modem interface support**
- **Low cost per port**



Macrolink's MCCR "Romeo" 16-port Serial I/O Communications Multiplexer is an advanced low cost high-speed controller for CompactPCI D32 applications. It supports individual line rates up to 12.5 Mbps, with aggregate throughput of over 30Mbps full duplex. Advanced UART technology, combined with innovative interrupt handling makes the MCCR ideal for a variety of applications like data acquisition, process control, and telecommunications. The MCCR is simple to use, with its standard 32-bit Slave-only interface and available driver support for WindowsNT, VxWorks, Solaris and Linux. The MCCR is flexible. Independent baud rates for each port and a wide variety of I/O interfaces allows you to tailor the MCCR for your needs. In addition to rear panel I/O, the MCCR also offers options for front panel I/O.

High Performance

The MCCR utilizes 4 high-performance quad-UARTs with built-in PCI interfaces. Their 128-byte FIFOs reduce interrupts, and therefore the load on the host, for higher system performance and efficiency. The FIFO depth can be read by the host computer on a per-channel basis, while the interrupts from all of the channels are combined and presented as a single interrupt to the cPCI bus. The host can peek into the FIFOs for each channel, and empty only those needing service. So the host spends less time polling or dumping empty FIFOs, and more time processing the data that is actually there.

Easy to Use

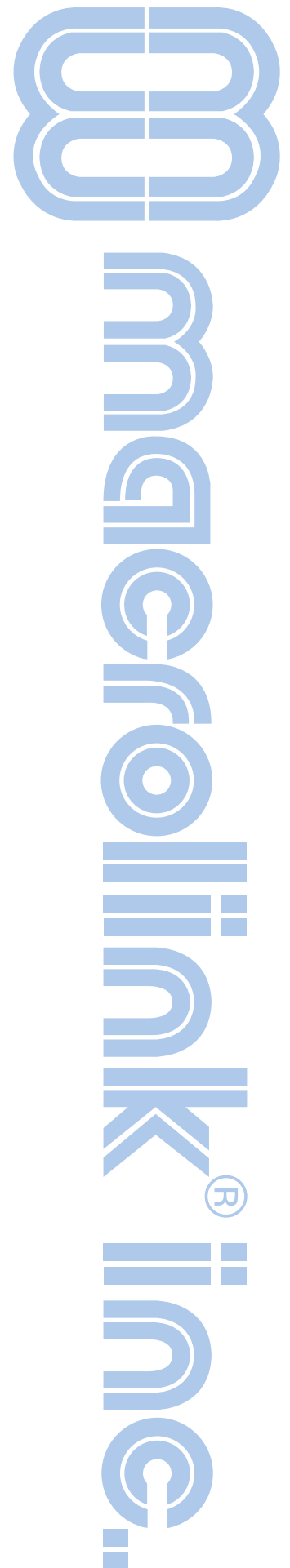
The MCCR has a remarkably low parts count, which reduces the initial unit cost and improves the MTBF, resulting in lower life cycle costs and a lower cost of ownership. The UARTs incorporate an Industry Standard 16500-type programming interface, allowing driver portability. Macrolink's Device Driver Kit provides turnkey driver support for a number of operating systems. The binary run-time software comes complete with source code for user configuration, test and application examples.

Mixed Electrical Interfaces

A single MCCR can be configured with any mix of RS-232, RS-422, RS-485, MIL-STD-188C and buffered TTL in 4-line groups using our Serial Line Conditioning (SLiC) modules. Up to 4 different line modules can be installed with up to 10 signals per line for full modem control. Serial line connections are made via the P3 and P5 cPCI connectors for back panel access. Configurations for front panel I/O, or a combination of front and rear I/O are also available.

Low Cost per Port

With the lowest cost per port of any serial communications controller in the cPCI market, the MCCR delivers CompactPCI performance at a PCI price. Reliable hardware plus off-the-shelf software support equals the best value available in high-density serial I/O today. Macrolink's MCCR is the ideal solution for new serial controller designs, and brings improved performance to legacy systems.



CompactPCI	
Compliance	CompactPCI Specification Revision 2.2, PCI Power Management Specification Revision 1.0
Slave Data Transfer	32-bit, 33MHz
Interrupt Support	Standard single-level interrupt support
Transfer Rate	133MB/s peak
Serial Interface	
Signal Support	Front panel connectors: 8 ports via RJ45s and 8 ports via an 80-pin HDD connector or 16-RJ45s in 2-slot configuration; 10 signals per line -- TXD, DTR, RXD, DSR, SGND, CGND, RTS, CD, CTS, RI Rear Panel I/O Connector: signal compliment for TXD, RXD, RTS, CTS, DCD, and DTR.
Electrical Interfaces	Up to 4 electrical interfaces per card in 4 line groups; RS-232, RS-422, RS-485, MIL-STD-188C & TTL (other interfaces available; contact factory)
Line Programming	Independently programmable on a line-by-line basis Line-by-line hardware/software flow control
Data Rates	Asynchronous: Up to 12.5Mbps
General	
Serial Controllers	Oxford Semiconductor OX16PCI954 Quad UART with on-chip PCI interface
Indicators	Single, tri-color LED (Status levels for Off/Red/Yellow/Green)
Physical	
Dimensions	Module: 6U Dual-height Eurocard (160mm x 233mm) Front Panel: Single-width 6U dual-height (20mm x 262mm) I/O Transition Module: 180mm high x 15.5mm wide x 80mm deep
Connectors	CompactPCibus connectors J1, J3 and J5
Power	5 VDC @ 5 Amps (maximum with serial line conditioning modules) +12 VDC @ .25 Amps (maximum with serial line conditioning modules) -12 VDC @ .10 Amps (maximum with serial line conditioning modules)
Dissipation	75 BTU/hr.
Temperature	0° - 55° C (32° - 131° F) operating -40° - 70° C (0° - 158° F) non-operating
Humidity	5% - 95%, non-condensing
MTBF (per MIL-HDBK-217E)	>80,000 P.O.H.
MTTR	.25 hrs
Certification	FCC Part 15 Class A
Warranty	
Standard	2 year return to factory
Extended	Available; contact factory



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