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Find the *Macrolink 221034* at our website: ***Click HERE***

VMEbus
MVC Sierra 16-port
Asynchronous Serial Commux

- Mix RS-232/ 422/ 485 & MIL-STD-188
- 8 or 16 ports -- Data Rates to 1.5Mbs
- 64-Byte Deep FIFOs
- Interrupt Processing & Pacing Engine
- 16550 style programming interface for easy driver portability



- Standard A32/D32 VME Slave Interface
- Option for High-Performance FIFO Support
- Low cost per port

Macrolink's MVCS Sierra Asynchronous Serial I/O Commux is an advanced high-speed controller for VMEbus D32 applications. Available with 8 or 16 asynchronous serial lines, it supports individual line rates up to 1.5 Mbps, and an aggregate throughput of 48Mbps. Independent baud rates for each port and a wide variety of I/O interfaces allows you to tailor the MVCS for your needs.

High Performance

The MVCS combines innovative hardware design with an Industry Standard 16550 Serial I/O application interface. We use the latest generation UARTs with 64-byte internal FIFOs. Deeper FIFOs mean less interrupt overhead and less load on your host. FIFO status bits are combined and readable in one single 32-bit access, as 16-bits of read status and 16-bits of write status.

UART interrupts are combined and presented at paced intervals to the VMEbus, dramatically reducing interrupt handling overhead by the system's Host CPU card. Optional extended FIFOs are available to lower VMEbus bandwidth requirements, supporting rates over 30 MB/s.

Easy to Use

Device driver support is available for popular UNIX and Real-Time Operating Systems. The Sierra is the ideal solution for new high-speed Async designs, and brings improved performance to legacy systems.

Mixed Electrical Interfaces

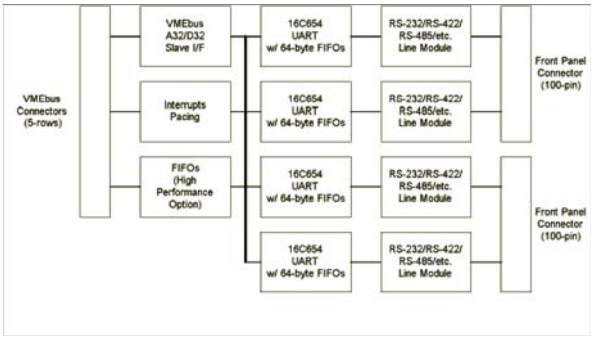

Optional Front I/O

Our 4-port serial line conditioning modules allow each MVCS to handle multiple line disciplines. A single MVCS can be configured with any mix of RS-232, RS-422, RS-485, MIL-STD-188C and buffered TTL in 4-line groups. Up to 4 different serial line conditioning modules can be installed with up to 12 signals per line for full modem control. Serial line connections are made via two 100-pin, high-density front panel connectors. An optional P2 transition module is also available.

Macrolink has designed and manufactured performance oriented communications, mass storage, memory and related subsystem products since 1978 and understands your demand for reliability and support. Macrolink products are covered by one of the most comprehensive warranties in the industry. All products are temperature cycled and burned-in to eliminate failures in the field. Computer testing checks virtually every parameter and aspect of the products.

Call about our ship-from-stock emergency exchange and customer training programs. In-house or on-site training is available directly from Macrolink.

MVC Sierra Block Diagram



Specifications

VMEbus	
Compliance	IEEE 1014/IEC 821; ANSI/VITA 1-1994
Slave Data Transfer	A32/A24 -- D32/D16/D08/D32BLT Standard Supervisory (3C, 3D, 3E, 3F) Extended Supervisory (0C, 0D, 0E, 0F) Standard non-privileged (38, 39, 3A, 3B) Extended non-privileged (08, 09, 0A, 0B)
Interrupt Support	IRQ1-7, programmable level Programmable Pacing Interval timing from 17085 uS to 11 mS.
Transfer Rate	D32 mode: DMA burst: >30MB/s (with external FIFOs option) Sustained: 4.8MB/s (line speed dependent; 16 ports x 1.5Mbps x 2 = 4.8MB/s)
Address Pipelining	VMEbus address pipelining support standard
Serial Interface	
Signal Support	**Front panel connectors:** 8 ports per connector, 10 signals per line -- TXD, DTR, RXD, DSR, SGND, CGND, RTS, CD, CTS, RI **P2 Connector:** 96 lines; signal compliment for TXD, RXD, RTS, CTS, DCD, DTR using 160 pin DIN connectors
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 1.5Mbps
General	
Serial Controllers	Startech ST16C654 Quad UARTs Full manual available in PDF
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) P2 transition module: 180mm high x 15.5mm wide x 73mm deep
Connectors	Front Panel: One 100-pin, shielded high-density connector per 8-port group Backplane: P1/P2 5-row DINs
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)	8 port configuration: >80,000 P.O.H. 16 port configuration: >80,000 P.O.H.
MTTR	.25 hrs
Certification	FCC Part 15 Class A
Warranty	
Standard **Extended**	1 year return to factory Available; contact factory

Order Information

Description	Part #
MVCS Sierra	
Standard Configurations	
MVCS with 16 ports of RS-232	221048-53
MVCS with 8 ports of RS-232	221048-52

MVCS with 16 ports of RS-422	221048-55
MVCS with 8 ports of RS-422	221048-54
Custom Configuration Options	
MVCS 16 port base board - requires any 4 serial line conditioning modules	221048-51
MVCS 8 port base board - requires any 2 serial line conditioning modules	221048-50
MVCS High Sierra High Performance Option with extended FIFOs	
Standard Configurations	
MVCS with 16 ports of RS-232 and extended FIFOs	221047-53
MVCS with 8 ports of RS-232 and extended FIFOs	221047-52
MVCS with 16 ports of RS-422 and extended FIFOs	221047-55
MVCS with 8 ports of RS-422 and extended FIFOs	221047-54
Custom Configuration Options	
MVCS 16 port base board with extended FIFOs – requires any 4 serial line conditioning modules	221047-51
MVCS 8 port base board with extended FIFOs – requires any 2 serial line conditioning modules	221047-50
serial line conditioning modules & Accessories	
RS-232 4-port serial line conditioning module	221044-02
RS-422 4-port serial line conditioning module	221045-01
RS-485 4-port serial line conditioning module	221036-02
MIL-STD-188C 4-port serial line conditioning module	221039-00
Buffered TTL 4-port serial line conditioning module	221046-01
DB-25 8-port I/O transition panel; 6U dual-wide (2 required for 16 ports)	330058-50
RJ-45 16-port I/O transition panel; 6U triple-wide	330056-50
6’ shielded cable (2 required for 16 ports)	320275-00
3’ UN-shielded cable (2 required for 16 ports)	320271-00
P2 transition module, with straight serial connectors (requires 2 serial line conditioning modules for 8 ports, 4 for 16 ports)	221049-00
P2 transition module, with right-angle serial connectors (requires 2 serial line conditioning modules for 8 ports, 4 for 16 ports)	221049-01
Loop-back connector; shielded, 100-pin; RS-232/TTL/MIL-188C	320358-00
Loop-back connector; shielded, 100-pin; RS-422/485	320358-01
Software & Manuals	
VxWorks Software developers kit; -XX denotes media distribution type & format	4552XX-XX
Annual software maintenance for DDK; includes on-line support	900023-XX
Installation, Programming & User’s Manual	341048-00

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