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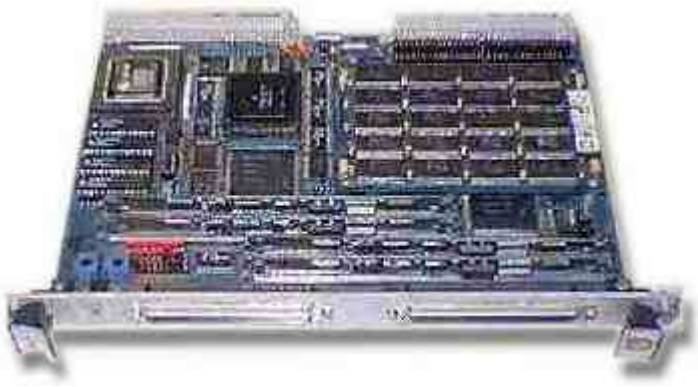
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Find the *Macrolink MVCP* at our website: ***Click HERE***

VMEbus
MVCP 16-Port Multi-Protocol Synchronous/Asynchronous Serial Communications Processor

- **Up to 2Mbps serial line speeds**
- **Custom & multi-protocol support**
- **8 or 16 ports on a single 6U module**
- **Front panel & P2 connections**
- **1MB 12ns SRAM - expandable to 4MB**



- **Mix RS-232/422/485 & MIL-188 on a single board**
- **Independent line programmability**
- **VMEbus D32/D64 support**
- **Comprehensive Software Development Kit available**

The Macrolink MVCP VME Multi-Protocol Communications Processor is a sophisticated, high-speed, microprocessor based controller configured with 8 or 16 independent synchronous/asynchronous serial communications channels. Each channel supports serial data rates up to 2Mbps. Status, data movement & detection, port arbitration & selection, and protocols are processed on-board, minimizing driver calls and host intervention while maximizing overall systems throughput.

The MVCP is designed to allow for the uninterrupted transfer of data, from a single character to a large contiguous block of characters, bi-directionally between the VMEbus and the serial lines. The MVCP handles all character processing, flow control, status decoding & interpretation, and error handling. The MVCP supports baud rates from 75 bps to 2Mbps on all 16 ports, with an aggregate throughput of 15Mbps.

The MVCP features and functional parameters are soft-selectable via a command line providing the user with greater flexibility to alter configurations without removing the controller from the system. These alterations may be done on a line-by-line or

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split line basis.

A single slot, 6U Eurocard module, the MVCP features socketed, 4-line serial interface modules. Up to 4 different interfaces can be configured on each controller. Current interfaces include RS-232, RS-422, RS-485, MIL-STD-188 and buffered TTL. Base memory is 1MB of 12ns SRAM which can be expanded to 4MBs.

Serial line connections are made via one or two 100-pin, high-density front panel connectors, with each connector supporting 8 ports. Supporting 12 signals per channel, each line features full modem control. Any unused or unwanted signals, on any line, or split line, may be masked. A full complement of 16 ports is also available via the P2 VMEbus connector.

A comprehensive Software Development Kit in C is available which includes the MVCP download program, Flash EPROM loader, I/O & memory maps, code samples and application notes. Siemens publications for the 82538 Enhanced Serial Communication Controller are available in PDF format:

- 82538 User Manual (2.2M)
- 82538 Addendum
- 82538 Product Overview
- 82538 Data Sheet V3.1
- 82538 Errata V3.1
- 82538 Application Note

MVCP Specifications

VMEbus Interface	
Compliance	IEEE 1014/IEC 821, VME64 ANSI/VITA 1-1994
Master Data Transfer	A32/A24/A16 -- D64/D32/D08 Programmable address modifiers UAT/BLT/RMW Block & scatter/gather mode DMA transfers Programmable DMA VMEbus ownership time
Slave Data Transfer	A32/A24/A16 -- D64/D32/D16/D08 Short Supervisory (2D) Standard Supervisory (3C, 3D, 3E, 3F) Extended Supervisory (0C, 0D, 0E, 0F) Short non-privileged (29) Standard non-privileged (38, 39, 3A, 3B) Extended non-privileged (08, 09, 0A, 0B)
Bus Request Lines	BR(0) through BR(3) programmable selection of all lines
Interrupt Support	IRQ1-7, BR0-3, RWD/ROR/ROC programmable selection of all lines

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Transfer Rate	**D32 mode** DMA burst: >30MB/s; Sustained: 2MB/s (serial line speed dependent) **D64 mode** DMA burst: >60MB/s; Sustained: 2MB/s (serial line speed dependent)
Address Pipelining	VMEbus address pipelining support standard
Serial Interface	
Signal Support	Front panel connectors: 8 ports per connector, 12 signals per line -- TXD, DTR, RXD, DSR, TXCLK, SGND, RXCLK, CGND, RTS, CD, CTS, RI P2 Connector: 16 ports; signal compliment selectable for TXD, RXD, RTS, CTS or TXD, RXD, TXCLK, RXCLK
Electrical Interfaces	Up to 4 electrical interfaces per card in 4 line groups; RS-232, RS-422, RS-485, MIL-STD-188C & buffered TTL (other interfaces available; contact factory)
Line Programming	Independently programmable on a line-by-line basis Autobaud capability on all lines Line-by-line hardware/software flow control
Line Data Rates	Synchronous: Up to 2Mbs Asynchronous: Up to 625Kbs
Line Priority	Selectable for Fixed Interleaved or Rotating
General	
CPU	Motorola 68EC030 @ 40MHz
Serial Controller	Siemens SAB82538 Enhanced Serial Communication Controller - ESCC8
Memory	1MB 12ns SRAM standard; expandable to 4MB
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-line group Backplane: P1/P2 standard 96-pin DINs
Power	5 VDC @ 5 Amps (maximum) +12 VDC @ .25 Amps (maximum) -12 VDC @ .10 Amps (maximum)
Dissipation	75 BTU/hr.

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Temperature	0° - 50°C (32° - 120°F) operating -40° - 68°C (0°- 150°F) non-operating
Humidity	5% - 95%, non-condensing
MTBF (per MIL-HDBK-217E)	8 port configuration -- 117,688 P.O.H. 16 port configuration -- 112,680 P.O.H.
MTTR	.25 hrs
Certification	FCC Part 15 Class A
Warranty	Standard: 1 year return to factory Extended: Contact factory

Order Information

Description	D32	D64
Standard Configurations		
MVCP with 16 ports of RS-232 & 1MB SRAM	221025-61	221025-81
As above with 4MB SRAM	221025-62	221025-82
MVCP with 8 ports of RS-232 & 1MB SRAM	221025-51	221025-71
As above with 4MB SRAM	221025-52	221025-72
MVCP with 16 ports of RS-422 & 1MB SRAM	221025-64	221025-84
As above with 4MB SRAM	221025-65	221025-85
MVCP with 8 ports of RS-422 & 1MB SRAM	221025-54	221025-74
As above with 4MB SRAM	221025-55	221025-75
Custom Configurations		
MVCP 16 port base board (requires any 4 serial line conditioning modules & 1 memory kit)	221025-91	221025-93
MVCP 8 port base board (requires any 2 serial line conditioning modules & 1 memory kit)	221025-90	221025-92
RS-232 4 port serial line conditioning module	221044-00	
RS-422 4 port serial line conditioning module	221035-00	
RS-485 4 port serial line conditioning module	221036-00	
Buffered TTL 4 port serial line conditioning module	221046-00	
MIL-STD-188C 4 port serial line conditioning module	221039-00	
1MB SRAM memory kit	221030-03	

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4MB SRAM memory kit	221030-04
Accessories	
DB-25 8-line 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 100-pin serial connectors (requires 2 serial line conditioning modules for 8 ports, 4 for 16 ports)	221041-00
P2 transition module with right-angle 100-pin serial connectors (requires 2 serial line conditioning modules for 8 ports, 4 for 16 ports)	221041-01
Software & Manuals	
Software Development Kit (SDK)	455022-XX
Annual software maintenance for one OS type; includes on-line support	900021-XX
MVCP Installation, Programming & User's Manual	340025-00

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