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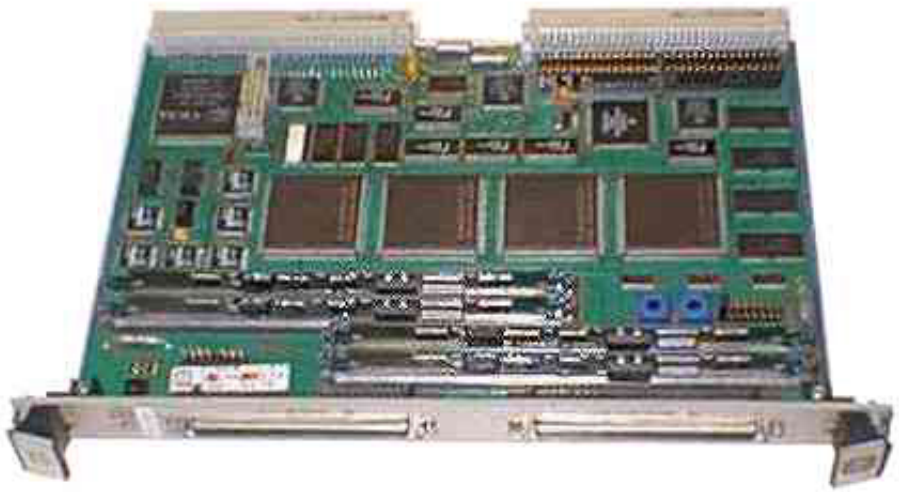
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Find the *Macrolink MVCQuick 16-Line* at our website: ***Click HERE***

VMEbus
MVCQuick Synchronous/Asynchronous Quad MC68360 QUICC Serial Controller

- 16 ports on a single 6U module
- Up to 12Mbps serial line speed
- Mix RS-232/422/485 & MIL-STD-188
- HDLC/SDLC, Bi-Sync, Transparent, Async & Custom protocol support
- 4MB to 16MB of 60ns EDO DRAM



- VMEbus Master/Slave, D32/D64
- Front panel & P2 serial line connections
- Power On Self Test (POST)
- Comprehensive Software Development Kit
- VxWorks Board Support Package

Macrolink's MVCQuick Multi-Protocol Communications Processor is an advanced high-speed microprocessor based controller for VMEbus Master/Slave, D32/D64 applications. Available with 8 or 16 synchronous/asynchronous serial lines, the MVCQuick provides an aggregate throughput of 64Mbps.

Combining Motorola's MC68040 code compatible ColdFire processor, and four Motorola MC68360 QUICC serial controllers operating in companion mode, the MVCQuick allows uninterrupted transfers of high-speed data -- from a single character

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to large contiguous blocks -- between the VMEbus and the serial lines. The MVCQuick architecture is optimized for message based protocols and streaming data formats.

Allowing any mix of synchronous & asynchronous lines and baud rates from 23.4bps to 12.288Mbps, the MVCQuick supports all 16 channels at 4Mbps -- *simultaneously*. VMEbus traffic is minimized by on-board character processing, flow control, status and error handling. Self-clocking data (DPLL), HDLC/SDLC & Bi-Sync protocols are processed in the QUICC's RISC protocol/DMA engine, eliminating host overhead and maintaining maximum throughput.

Our 4-port serial line conditioning modules allow each MVCQuick to handle multiple line disciplines. A single MVCQuick 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.

Serial line and VMEbus configuration information is user defined and downloaded to the MVCQuick at system initialization, and can be dynamically reconfigured. A comprehensive Power On Self Test (POST) verifies over 90% of the controller. With optional loop-back connectors and Extended-POST, 100% controller verification is achieved meeting virtually all Built In Test (BIT) requirements.

Your custom developed applications, and industry standard protocol solutions, run on-board in 4MB of 60ns EDO DRAM. The MVCQuick also features 512KB of Flash EPROM, with 256KB available for instant-on user applications. Native power-up bootstrap firmware allows easy application program downloading and Flash EPROM programming. Expanded memory configurations are available.

Our comprehensive Software Development Kit allows you to program and optimize the MVCQuick for your specific application. The SDK includes a download program, Flash EPROM loader, I/O & memory maps, driver code samples, application notes and MC68360 User's Guide & Application Notes. Program source, with annotation, is provided in C. The MVCQuick's 68040 code compatible MCF5102 ColdFire processor offers a common and familiar programming environment as well as the use of readily available programming tools. To ensure ongoing compatibility, Macrolink offers an annual SDK maintenance program that includes updates and on-line support.

In addition to the SDK, Macrolink offers a VxWorks Board Support Package (BSP) for Wind River's VxWorks 5.x operating system and Tornado development tools. The BSP for the MVCQuick is a Wind River Systems-validated package that provides a VxWorks run-time environment for the MCF5102 ColdFire processor as well as VxWorks serial device drivers for the MC68360 QUICC processors. The BSP opens the way to using a vast array of third-party products compatible with VxWorks, and provides a significant time-to-market advantage in software development. Macrolink offers an annual BSP maintenance program that includes updates and on-line support

Macrolink has designed and manufactured performance oriented communications, mass storage, memory and related subsystem products since 1978 and understands

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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.

Specifications	
VMEbus	
Compliance	IEEE 1014/IEC 821; VME64 ANSI/VITA 1-1994
Master Data Transfer	A32/A24/A16 -- D64/D32/D08 Programmable address modifiers UAT/BLT/MBLT/RMW Block & scatter/gather mode DMA transfers Programmable DMA VMEbus ownership time
Slave Data Transfer	A32/A24/A16 -- D64/D32/D16/D08 BLT/MBLT 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; RWD/ROR/ROBC (dynamic)
Interrupt Support	IRQ1-7, BR0-3; programmable selection of all lines
Transfer Rate	D32 mode: DMA burst: >30MB/s Sustained: 8MB/s (line speed dependent; 16 ports x 4Mbps = 8MB/s) D64 mode: DMA burst: >60MB/s Sustained: 8MB/s (line speed dependent; 16 ports x 4Mbps = 8MB/s)
Address Pipelining	VMEbus address pipelining support standard
Serial Interface	
	Front panel connectors: 8 ports per connector, 12 signals per line -- TXD, DTR, RXD, DSR, TXCLK, SGND, RXCLK,

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Signal Support	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 & 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
Data Rates	Synchronous: Up to 12.288Mbps Asynchronous: Up to 625Kbps
Line Priority	Selectable for Fixed Interleaved or Rotating
General	
CPU	Motorola MCF5102 ColdFire @ 25MHz/20+ MIPs (68040 instruction set)
Serial Controllers	Motorola 68360 QUICCs @ 25MHz (2 QUICCs/8-port config.; 4 QUICCs/16 port config.)
Memory	4MB EDO DRAM standard; expandable to 16MB 512KB Flash EPROM standard; expandable to 2MB (On-board programmable)
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 standard 96-pin DINs
Power	5 VDC @ 5 Amps (maximum) +12 VDC @ .25 Amps (maximum) -12 VDC @ .10 Amps (maximum)
Dissipation	75 BTU/hr.
Temperature	0° - 50° C (32° - 120° F) operating

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	-40° - 68° C (0° - 150° 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	1 year return to factory
Extended	Available; contact factory

Order Information

Description	Part #
Standard Configurations	
MVCQuick with 16 ports of RS-232 & 4MB DRAM	221027-51
As above with 8MB DRAM	221027-53
As above with 16MB DRAM	221027-55
MVCQuick with 8 ports of RS-232 & 4MB DRAM	221027-50
As above with 8MB DRAM	221027-52
As above with 16MB DRAM	221027-54
MVCQuick with 16 ports of RS-422 & 4MB DRAM	221027-61
As above with 8MB DRAM	221027-63
As above with 16MB DRAM	221027-65
MVCQuick with 8 ports of RS-422 & 4MB DRAM	221027-60
As above with 8MB DRAM	221027-62
As above with 16MB DRAM	221027-64

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Custom Configuration Options	
MVCQuick 16 port base board & 4MB DRAM (requires any 4 serial line conditioning modules)	221027-72
MVCQuick 16 port base board & 8MB DRAM (requires any 4 serial line conditioning modules)	221027-74
MVCQuick 16 port base board & 16MB DRAM (requires any 4 serial line conditioning modules)	221027-76
MVCQuick 8 port base board & 4MB DRAM (requires any 2 serial line conditioning modules)	221027-71
MVCQuick 8 port base board & 8MB DRAM (requires any 2 serial line conditioning modules)	221027-73
MVCQuick 8 port base board & 16MB DRAM (requires any 2 serial line conditioning modules)	221027-75
RS-232 4-port serial line conditioning module	221044-01
RS-422 4-port serial line conditioning module	221045-00
RS-485 4-port serial line conditioning module	221036-01
MIL-STD-188C 4-port serial line conditioning module	221039-00
Buffered TTL 4-port serial line conditioning module	221046-01
Accessories	
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)	221041-00
P2 transition module, with right-angle serial connectors (requires 2 serial line conditioning modules for 8 ports, 4 for 16 ports)	221041-01
Loop-back connector; shielded, 100-pin; RS-	

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232/TTL/MIL-188C	320358-00
Loop-back connector; shielded, 100-pin; RS-422/485	320358-01
Software & Manuals	
Software developers kit; -XX denotes media distribution type & format	455023-XX
Annual software maintenance for SDK; includes on-line support	900021-XX
MVCQuick Installation, Programming & User's Manual	341027-00

Macrolink, Inc. 1500 North Kellogg Drive Anaheim, California 92807-1902
Phone 714.777.8800 Fax 714.777.8807

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