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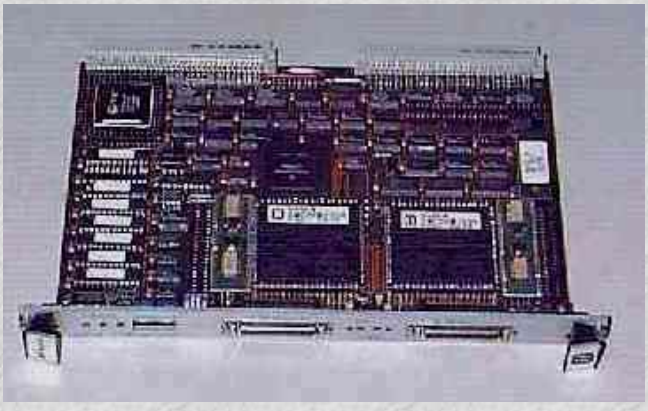
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Find the *Macrolink MVS-222001-50* at our website: *Click HERE*

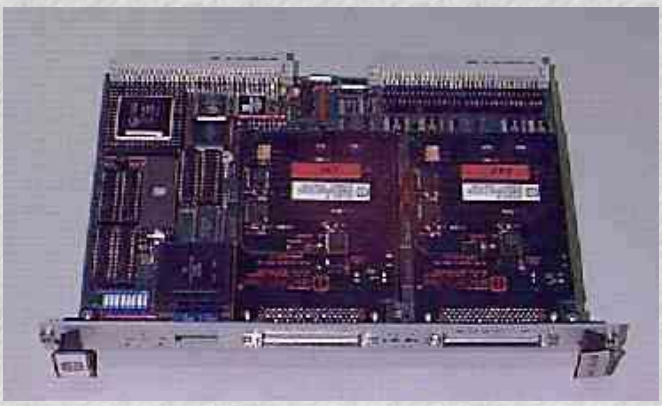
Macrolink, Inc.

MVS Series VMEbus SCSI-2 Host Adapters

- Up to 40MB/s SCSI Data Rate Per Port
- 70MB/s VMEbus Burst Rate With Scatter/Gather
- Up to 5X The Performance of Embedded CPU Ports
- Mix SCSI FAST and FAST/WIDE Devices
- Single & Dual SCSI Port Configurations
- Single-Ended, Differential or Mixed Configurations
- Up to 30 Physical IDs Per Controller
- Initiator/Target Mode Support
- VMEbus Master/Slave With D32/D64 Support
- Direct P2 SCSI Port Connection
- UNIX, SunOS/Solaris, VxWorks, HP-UX/HP-RT Drivers
- SunOS/Solaris Boot Support



MVS-200



MVS-216

Macrolink's MVS series of SCSI-2 host adapters provide a complete, single board solution for all your peripheral needs. You can realize the full potential of the latest SCSI-2 devices while protecting your investment in existing SCSI peripherals. The MVS series opens new doors in performance and flexibility for your VMEbus systems - all at a very affordable price.

Maximum Performance

Each SCSI port employs a dedicated RISC processor to control all SCSI functions, like port arbitration and disconnect/reselect with multi-threaded operation. Unlike most stand-alone SCSI host adapters, the MVS's 68030 based architecture performs virtually all data handling and SCSI control processing locally, minimizing host overhead and insuring the highest data rates possible.

Optimized for multi-tasking/multi-threaded operations, the MVS series features very fast, independent SRAM buffers for data, operational code, SCSI scripts and command queuing. With command queues capable of stacking over 3100 commands while performing optimization sequencing, combined with high-speed data FIFOs and a sophisticated DMA structure, the MVS guarantees maximum throughput between the VME and SCSI buses. VMEbus burst rate cycle times as low as 102ns further assure efficient bus utilization and optimal transfer rates.

In their dual port configurations, the MVS's Disconnect/Reselect feature guarantees a clear path between the VME and SCSI buses. By enabling ports to disconnect from the internal bus to process commands, the other port is immediately available for command servicing. This feature, combined with command optimization sequencing, assures an absolute minimum latency between the VME and SCSI buses.

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Stand-Alone Vs Embedded

Embedded CPU SCSI ports are designed to support a system disk and a media distribution device. These SCSI ports rely on the main processor for service. When system design and application demand maximum data transfer, embedded SCSI ports simply cannot provide the necessary throughput without sacrificing processor power. Extended SCSI functions, when implemented, or multiple embedded CPU SCSI ports, demand even greater processor intervention. By supporting all extended SCSI functions and performing interrupt processing, command queuing & optimization, data buffering and scatter/gather locally, the MVS series provides up to 5 times the throughput of embedded CPU SCSI ports.

Target Mode Support

A unique MVS series feature is its full SCSI Target Mode implementation. Host-to-host, multi-host and shared file systems can realize enormous benefits from this capability. Being able to act as both initiator and target, multiple MVSs can create a local network capable of operating at up to 40MB/s.

Configuration Flexibility

Available in both single and dual port versions, each with a differential option, the MVS series offers unmatched configuration flexibility. With the dual port version, the second port can be used to augment your system with the latest high-speed devices, provide very fast host-to-host links, or simply balance the SCSI bandwidth.

The MVS series makes it easy to add the latest SCSI devices to you system. New SCSI peripherals can be added to a port at any time without impacting your existing devices. Once cabled into the SCSI daisy-chain, the MVS performs all necessary interrogation and negotiation and then updates the device table with the new parameters.

A modular design allows for simple and quick field upgrade from single to dual port and/or single-ended to differential configurations.

MVS/200 - Fast SCSI

The MVS/200 supports any mix of SCSI-1, SCSI-2 and SCSI-2 FAST devices on the same SCSI port protecting your existing investments while enhancing your system performance. The MVS/200 supports up to 7 physical SCSI IDs per port, at data rates of 10MB/s synchronous and 5MB/s asynchronous. 128KB of 45ns SRAM is standard on the MVS/200. A 32 bit high-speed internal bus combined with streamlined code assure minimal overhead. Time from host command to an idle MVS/200, to SCSI target select, including all overhead, is less than 210µs. Time from command complete to new command to SCSI target select is less than 80µs. The MVS/200's optimized DMA architecture supports sustained VMEbus transfer rates of 14MB/s and burst transfer rates in excess of 30MB/s.

MVS/216 - Fast/Wide SCSI

The MVS/216 supports any mix of SCSI-1, SCSI-2, SCSI-2 FAST/WIDE and ULTRA SCSI devices on the same SCSI port protecting your existing investments while maximizing your system performance with the latest SCSI devices. The MVS/216 supports up to 15 physical SCSI IDs per port, at data rates of 40MB/s synchronous and up to 20 MB/s asynchronous. 256KB of 12ns SRAM is standard on the MVS/216.

The MVS/216's advanced design features a triple ported memory scheme. Each SCSI port, as well as the VMEbus, have their own dedicated memory buses. This particular feature ensures minimum latency with maximum data availability between the SCSI and VME buses.

The 32 bit internal buses are controlled by streamlined code guaranteeing low overhead. Time from host command to an idle MVS/216, to SCSI target select, including all overhead, is less than 185µs. Time from command complete to new command to SCSI target select is less than 65µs. In D32 mode, the MVS/216's optimized DMA architecture supports sustained VMEbus transfer rates over 22MB/s and burst transfer rates in excess of 34MB/s. In D64 mode, read/write cycles are further reduced to an average of 105ns, yielding VMEbus burst rates exceeding 70MB/s.

Easy Installation

Macrolink's complete driver kits for UNIX SVR4, SunOS, Solaris, VxWorks, HP-UX & HP-RT make installation a breeze. Our driver kits include annotated source in "C" to ease porting to your system, or optimization for your specific application. A one-time license fee provides the right to use on an unlimited number of systems with Macrolink hardware. Annual driver maintenance is also available insuring OS revision compatibility and on-line support.

The MVS series features a comprehensive Power-On Self-Test (POST), verifying the correct operation of over 95% of the host adapter. Operational status is confirmed via front panel indicators. Disk formatters and media certification utilities are also available.

SunOS/Solaris Boot Support

When the MVS is used in a SPARC based system running SunOS or Solaris, all devices, including system disk, can be connected to it. Macrolink's boot code is simply loaded into the Open Boot Prom (OBP) or Open Boot section of FLASH and the boot routine is automatically redirected to the MVS. This allows all devices to take advantage of the MVS's superior performance, while freeing additional host CPU processing power.

Simple Connections

SCSI connections are made to the MVS series via front panel and/or P2 connectors. The shielded front panel SCSI connectors ensure FCC Class A compliance. Ribbon cables are also available for device configuration internal to a chassis. The P2 connection provides direct SCSI connectivity via the VMEbus backplane. The P2 connection can be user disabled. Macrolink offers several P2 cable options for the MVS series with up to 7 SCSI connections.

The MVS/200 front panel SCSI connections are made via 1 or 2 50-pin, high-density connectors. Direct P2 SCSI connection is made via the A & C rows of P2. The MVS/216 front panel SCSI connections are made via 1 or 2 68-pin, high-density connectors. P2 SCSI connections are made via a passive cable adapter module using the A & C rows of P2. The cable adapter module measures only 1.75"D x 3.75"H and provides both 50-pin (SCSI Fast) and 68-pin (SCSI Fast/Wide) connectors.

Macrolink Support

Since 1978, Macrolink has designed and manufactured performance oriented communications, mass storage, memory and related subsystem products. We understand your demand for reliability and support. Our products are covered by one of the most comprehensive warranties in the industry. All Macrolink products are temperature cycled and burned-in to eliminate failures in the field. Computer testing checks virtually every parameter and aspect of our products. In-house or on-site training is available directly from Macrolink.

Check our specifications, then call us for prices. Ask us about our ship-from-stock emergency exchange, extended warranty programs and Engineering Change Notice (ECN) subscription service.

Specifications

	MVS/200	MVS/216
VMEbus		
Compliance	Compliant with: IEEE 1014-C.1, IEC 821, ANSI/VITA 1-1994	
Master Data Transfer	A32/A24/A16 - D32/D08	A32/A24/A16 - D64/D32/D08
	• Programmable address modifiers • UAT/BLT/RMW • DMA with scatter/gather Transfer	
Slave Data Transfers	A32/A24/A16 - D32/D16/D08	A32/A24/A16 - D/64/D32/D16/D08

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	• Short Supervisory (2D) • Standard Supervisory (3D, 3E, 3F) • Extended Supervisory (0D, 0E, 0F) • Short non-privileged (29) • Standard non-privileged (39, 3A, 3B) • Extended non-privileged (09, 0A, 0B)	
Bus Request Lines	• BR(0) through BR(3) • RWD/ROR • (STAT)Programmable selection of all lines	
Interrupt Request Lines	IRQ* through IRQ7; Programmable selection of all lines	
Host Command to Target Select (including overhead)	<210µs	<185µs
Data Transfer Rates	• Sustained - D32: >14MB/s • DMA Burst - : >30MB/s	• Sustained - D32: >22MB/s • DMA Burst - D32: >34MB/s • Sustained - D64: >24MB/s • DMA Burst - D64: >70MB/s
SCSI Interface		
Compliance	SCSI-1 X3.131; SCSI-2 X3.131-199X	
SCSI Support	• Common Command Set (CCS) • Disconnect/reselect, Initiator/target modes • Tagged commands, Command queuing • Overlapped commands • Multi-threaded operation • Mandatory/optional/vendor unique commands & "Pass-thru" mode.	
Data Transfer Rates	• SCSI-1: 5MB/s sync, 3MB/s async • SCSI-2: 10MB/s sync, 5MB/s async	• SCSI-1: 5MB/s sync, 3MB/s async • SCSI-2: 40MB/s sync, 20MB/s async
P2 SCSI Interface	Direct SCSI connection via unused pins on rows A & C	SCSI connection with passive cable adapter module via unused pins on rows A & C
Termination	Active ("forced perfect")	
Physical		
Dimensions	Module: 6U dual-height Eurocard; 160mm x 233mm Front panel: Single width, dual height; 20mm x 262mm	
Connectors	Front Panel: One 50-pin shielded high-density connector per SCSI port VMEbus: P1/P2 standard 96-pin DIN connectors	Front Panel: One 68-pin shielded high-density connector per SCSI port VMEbus: P1/P2 standard 96-pin DIN connectors
SCSI Bus Length	Single-ended: Up to 6m (19.68') Differential: Up to 25m (82.02')	
Status LEDs	Green:Run, Yellow:Busy, Red:Fail, Red:SCSI Term. Power Fail	Green:Run, Yellow:Busy, Red:Fail, Green:SCSI Term. Power OK
Power	5VDC @ 3.6Amps typical; 5Amps maximum; 65BTU/hr.	
Temperature & Humidity	0ºto 50ºC (32ºto 122ºF) operating; -40ºto 68ºC (-40ºto 153ºF) storage. 10% - 95% non-condensing	
MTBF (Calculated per MIL-HDBK-217E)	96,304 P.O.H. - Single Port Version 92,101 P.O.H. - Dual Port Version	101,163 P.O.H. - Single Port Version 97,130 P.O.H. - Dual Port Version
Certifications	FCC Part 15 Class A Approved	
Ordering Information		
Host Adapters - Single SCSI Port		

Single Port, Single-Ended, D32	222001-50	222015-51
Single Port, Single-Ended, D32/D64	- n/a -	222015-57
Single Port, Differential, D32	222001-53	222015-52
Single Port, Differential, D32/D64	- n/a -	222015-58
Host Adapters - Dual SCSI Ports		
Dual Port, Single-Ended, D32	222001-51	222015-53
Dual Port, Single-Ended, D32/D64	- n/a -	222015-59
Dual Port, Differential, D32	222001-55	222015-54
Dual Port, Differential, D32/D64	- n/a -	222015-60
Dual Port, Single-Ended/Differential, D32	222001-52	222015-55
Dual Port, Single-Ended/Differential, D32/D64	- n/a -	222015-61
Accessories		
Installation, Programming & User's Manual	340004-00	340015-00
6 Ft. Shielded Cable; high-density connectors	320183-02	T40000-02
6 Ft. Shielded Cable; high-density to "D"-ribbon connectors	320174-00	
3 Ft. P2 Internal Ribbon Cable; 6 connector	320156-00	320273-07
18" P2 to 6U high-density connector panel assembly	330091-00	- n/a -
18" P2 to 6U "D"-Ribbon connector panel assembly	330092-00	- n/a -
P2 Cable Adapter Module; 50 & 68 Pin SCSI	- n/a -	222014-00
Software Driver Kits		
SunOS/UNIX Driver Kit / Annual Maintenance	455004-XX / 900022-01	
Solaris Driver Kit / Annual Maintenance	455010-XX / 900022-03	
VxWorks Driver Kit / Annual Maintenance	455008-XX / 900022-02	
HP-UX Driver Kit / Annual Maintenance	455020-XX / 900022-04	
HP-RT Driver Kit / Annual Maintenance	455021-XX / 900022-05	

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