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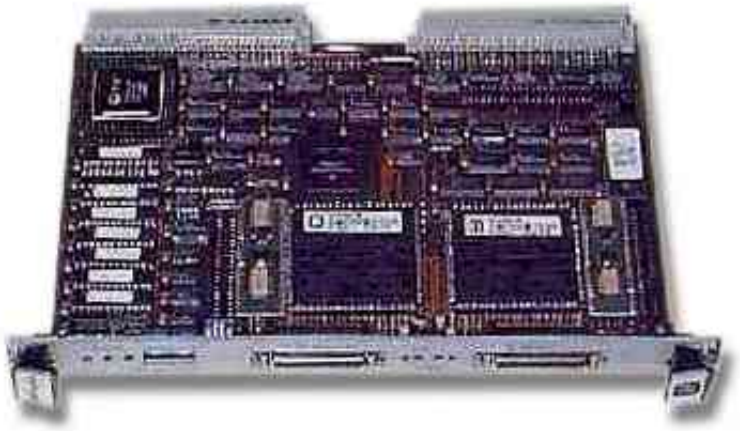
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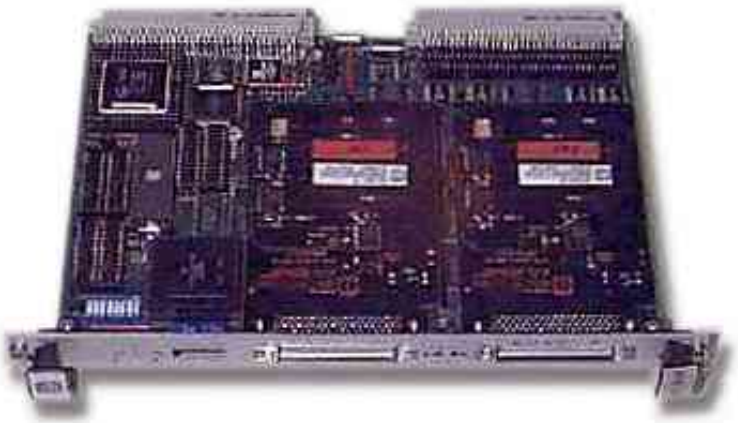
Find the *Macrolink MVS/216* at our website: ***Click HERE***

VMEbus
MVS Series
SCSI Host Adapters

- Up to 40MB/s SCSI Data Rate Per Port
- Over 55MB/s VMEbus Burst Rate With Scatter/Gather
- Up to 5X The Performance of Embedded CPU Ports
- Mix SCSI FAST , FAST/WIDE & Ultra SCSI 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 Drivers



Macrolink's MVS series of SCSI host adapters provide a complete, single board solution for all your peripheral needs. You can realize the full potential of the latest SCSI 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 3800 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 under 100ns 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.

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 feature of the MVS/200 and MVS/216 is their 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 37MB/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 8MB/s and burst transfer rates in excess of 26MB/s.

MVS/216 - Fast/Wide SCSI

The MVS/216 supports any mix of SCSI-1, SCSI-2 and SCSI-2 FAST/WIDE 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 18MB/s synchronous and up to 9MB/s asynchronous. 256KB of 12ns SRAM is standard on the MVS/216.

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 12MB/s and burst transfer rates in excess of 34MB/s.

MVS/316 - Ultra SCSI

The MVS/316 brings support for the latest Ultra SCSI disks and RAIDs to your system. The MVS/316 also 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/316 supports up to 15 physical SCSI IDs, at data rates of 39MB/s synchronous and up to 18.5 MB/s asynchronous. 256KB of 12ns SRAM is standard on the MVS/316.

The MVS/316's advanced design features a true dual-ported memory scheme. The SCSI port and the VMEbus have their own dedicated memory buses, ensuring minimum latency. Each SCSI port features 128KB of dedicated dual-port RAM.

As with its sister products, the MVS/316's 32 bit internal buses are controlled by streamlined code guaranteeing low overhead. Time from host command to an idle MVS/316, to SCSI target select, including all overhead, is less than 50µs. Time from command complete to new command to SCSI target select is less than 40µs. In D32 mode, the MVS/316's optimized DMA architecture supports sustained VMEbus transfer rates over 22MB/s and burst transfer rates in excess of 36MB/s. In D64 mode the sustained VMEbus transfer rate exceeds 39MB/s and burst transfer rates achieve in excess of 55MB/s.

Available in a very high speed single port version, it can be configured as either single-ended or differential. Host adapter connections can be made via the shielded 68-pin high-density front panel connector, P2 adapter module, or both.

Easy Installation

Macrolink's complete driver kits for UNIX SVR4, SunOS, Solaris, VxWorks & HP-UX 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.

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 one or two 50-pin, high-density connectors. Direct P2 SCSI connection is made via the A & C rows of P2. The MVS/216 and MVS/316 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 and 68-pin 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 End of Life Notice	MVS/216	MVS/316
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 D32/D08	A32/A24/A16 D64/D32/D08
	Programmable address modifiers UAT/BLT/RMW DMA with scatter/gather Transfer		Programmable address modifiers UAT/BLT/RMW DMA Transfer support
Slave Data Transfers	A32/A24/A16 D32/D16/D08	A32/A24/A16 D32/D16/D08	A32/A24/A16 D64/D32/D16/D08
Short Supervisory (2D) Standard Supervisory (3D, 3E, 3F)		Short Supervisory (2D) Standard Supervisory (3C, 3D, 3E, 3F)	

	Extended Supervisory (0D, 0E, 0F) Short non-privileged (29) Standard non-privileged (39, 3A, 3B) Extended non-privileged (09, 0A, 0B)	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) 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	<50µs
Data Transfer Rates	Sustained D32: 8MB/s DMA Burst D32: 26MB/s	Sustained D32: 12MB/s DMA Burst D32: 34MB/s	Sustained D32: 22MB/s D64: 39MB/s DMA Burst D32: 36MB/s D64: 55MB/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 Pass-thru mode		Common Command Set (CCS) Disconnect/reselect, Initiator modes Tagged commands, Command queuing Overlapped commands Multi-threaded operation Pass-thru mode

Data Transfer Rates	10MB/s sync 5MB/s async	40MB/s sync 10MB/s async	40MB/s sync 10MB/s async
P2 SCSI Interface	Direct to P2 DIN	Cable adapter module	Cable adapter module
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 or two 50-pin shielded high-density connectors VMEbus P1/P2 standard 96-pin DIN connectors	Front Panel One or two 68-pin shielded high-density connectors VMEbus P1/P2 standard 96-pin DIN connectors	
SCSI Bus Length	Single-ended Up to 6m (19.68') Differential Up to 25m (82.02')		Single-ended Up to 2m (6.56') 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 @ 3.1Amps 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)	Single Port 96,304 P.O.H Dual Port 92,101 P.O.H.	Single Port 101,163 P.O.H. Dual Port 97,130 P.O.H.	>100,000 P.O.H.
Certifications	FCC Part 15 Class A Approved		
Ordering Information			

Single SCSI Port Host Adapters -			
Single-Ended	222001-50	222015-51	222030-50
Differential	222001-53	222015-52	222030-51
Dual SCSI Port Host Adapters			
Single-Ended	222001-51	222015-53	222030-53
Differential	222001-55	222015-54	222030-54
Single-Ended/Differential	222001-52	222015-55	- n/a -
Accessories			
Installation, Programming & User's Manual	340004-00	340015-00	342030-00
6 Ft. Shielded Cable; high-density connectors	320183-02	T40000-02	
6 Ft. Shielded Cable; high-density to "D"-ribbon connectors	320174-00	- n/a -	
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 4.1.1 - 4.1.4 Driver Kit Annual Maintenance	455004-XX 900022-01		pending

Solaris 2.2 up Driver Kit Annual Maintenance	455010-XX 900022-03	455026-XX 900023-03
VxWorks 5.3 /Tornado Driver Kit Annual Maintenance	455008-XX 900022-02	455027-XX 900023-02
HP-UX 9.xx Driver Kit Annual Maintenance	455020-XX 900022-04	455028-XX 900023-04
HP-UX 10.2 Driver Kit Annual Maintenance	Available 98Q3 900022-04	Available 98Q3 900023-04

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