

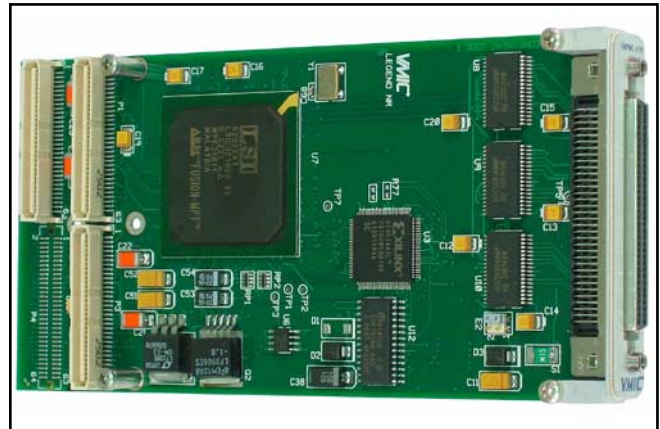
- Ultra320 SCSI features
  - 133 MHz, 64-bit PCI-X interface
  - 32-/64-bit, 33/66 MHz PCI bus backward compatible
  - Transfer rates up to 320 Mbyte/s on SCSI bus
  - Theoretical 1066 Mbyte/s transfer rate on PCI-X bus
  - Compliant with PCI 2.2, PCI-X addendum 1.0, PCI Power Management 1.1, and PC2001
  - Cyclic Redundancy Check (CRC): CRC protects data
  - Domain validation, including margining
  - Supports Integrated Mirroring (IM)
  - Quick Arbitrate and Select (QAS)
  - Covers all non-data, including command, status and messages
  - SCSI Interrupt Steering Logic (SISL) alternate interrupt routing for RAID applications
  - Compliant with SPI-4 SCSI draft specification

**INTRODUCTION** — The VMIPMC-5797 is a single-channel PCI-X Ultra320 SCSI Host Bus Adapter (HBA) based on the PMC form factor. Ultra320 SCSI connectivity is provided through an external female 68-pin high density connector on the front bezel. The VMIPMC-5797 leverages the LSI53C1020 PCI-X Ultra320 SCSI controller to support both LVD and single-ended SCSI operations, connects directly to a 64-bit, 133 MHz PCI-X bus, and is backward compatible with 32-/64-bit, 66 or 33 MHz PCI bus. The VMIPMC-5797 includes an easy-to-use on-board configuration utility which allows the viewing and changing of default configuration settings for the host adapter and SCSI devices.

**PRODUCT OVERVIEW** — The VMIPMC-5797 Ultra320 SCSI HBA is specifically designed for storage on workstations, server systems and computer clustering applications. Due to its high network bandwidth, it is well suited for telecom, signal processing and distributed computing applications. The independent SCSI controller supports wide Ultra320 SCSI synchronous transfer rates up to 320 Mbyte/s on a Low-Voltage Differential (LVD) SCSI bus. The VMIPMC-5797 supports both LVD and single-ended signals with no external transceivers required. Fast SCSI, UltraSCSI, Ultra2 SCSI, and Ultra160 SCSI are all supported by the VMIPMC-5797.

The VMIPMC-5797 supports Cyclic Redundancy Check (CRC), which exceeds most methods for detecting errors during high-speed data transfers. CRC is a proven international standard that checks all transferred data and adds significantly to data reliability.

The VMIPMC-5797 supports RAID Level 1 Integrated Mirroring (IM). The Integrated Mirroring feature provides data protection for the system boot volume to safeguard critical information such as the operating system on servers and high-performance workstations. This new Integrated Mirroring feature gives customers a robust, high-performance, fault-tolerant solution that is less expensive than a dedicated RAID controller. The IM feature provides simultaneous physical mirroring of two disk drives



to assure fault-tolerant, high availability data. If a disk drive fails, the hot swap capability allows the system to be easily restored by simply swapping drives. The system then automatically remirrors the swapped drive. Additionally, the hot spare feature allows a third drive to automatically replace a failed drive in the volume which makes the system even more fault tolerant.

**NOTE:** Integrated Mirroring is supported only on Intel® x86 systems.

Ordering Options							
June 23, 2003 800-755797-000 B	A	B	C	-	D	E	F
<b>VMIPMC-5797</b>	-	0		-			
<b>A = RAID Level</b> 0 = Integrated Mirroring (Level 1) 1 = No Integrated Mirroring (No RAID) <b>B = 0 (Options reserved for future use)</b>							
<b>Ultra320 SCSI Connector Data</b> 68-Pin Female High Density							
<b>Cable Specifications</b>							
<b>C = SCSI Cable</b> 0 = No Cable 1 = VMICBL-002-68-001 = 1 ft 2 = VMICBL-002-68-003 = 3 ft 3 = VMICBL-002-68-006 = 6 ft 4 = VMICBL-002-68-009 = 9 ft							
<b>Ultra320 SCSI Software Driver Support</b>							
	A	B	C	-	D	E	F
<b>VMISFT-57MPT</b>	-	0	1	3	-		
<b>A = 0 (Options reserved for future use)</b> <b>BC = Media</b> 13 = CD-ROM <b>DEF = Operating System</b> 000 = LSI Driver Suite (including Windows NT®, Windows® 2000, XP, Linux® and Solaris Sparc 037 = VxWorks® Intel x86 and PowerPC; VxWorks 5.4 Tornado 2.0/2.1							
<b>For Ordering Information, Call:</b> 1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859 E-mail: info@vmic.com Web Address: www.vmic.com Copyright © January 2003 by VMIC Specifications subject to change without notice.							

**Domain Validation** – The VMIPMC-5797 supports domain validation which effectively manages the connection to reduce installation problems. With domain validation the transfer is actually checked at the negotiated rate prior to communication. If errors are detected, the rate is stepped down until the connection becomes error-free. In this way, if a connection can be made, it will be made. The highly integrated design promotes high reliability and low power consumption.

### TECHNICAL SPECIFICATIONS

**SCSI Transfer Rate:** Up to 320 Mbyte/s

**Host Bus Transfer Rate:** 133 MHz, 64-bit bus master DMA maximum burst data transfers up to 1066 Mbyte/s (PCI-X interface)

**Host Bus Signaling:** Supports 5 or 3.3 V signaling

### PHYSICAL/ENVIRONMENTAL

**Temperature Range:** 0 to 50 °C, operating  
-40 to 70 °C, storage

**Relative Humidity:** 20 to 80 percent, noncondensing

**Power Requirements:** 3.3 or 5 VDC (2.5 A maximum)

**Network Connections:** SCSI, maximum distance - 12 m (LVD mode)

### TRADEMARKS

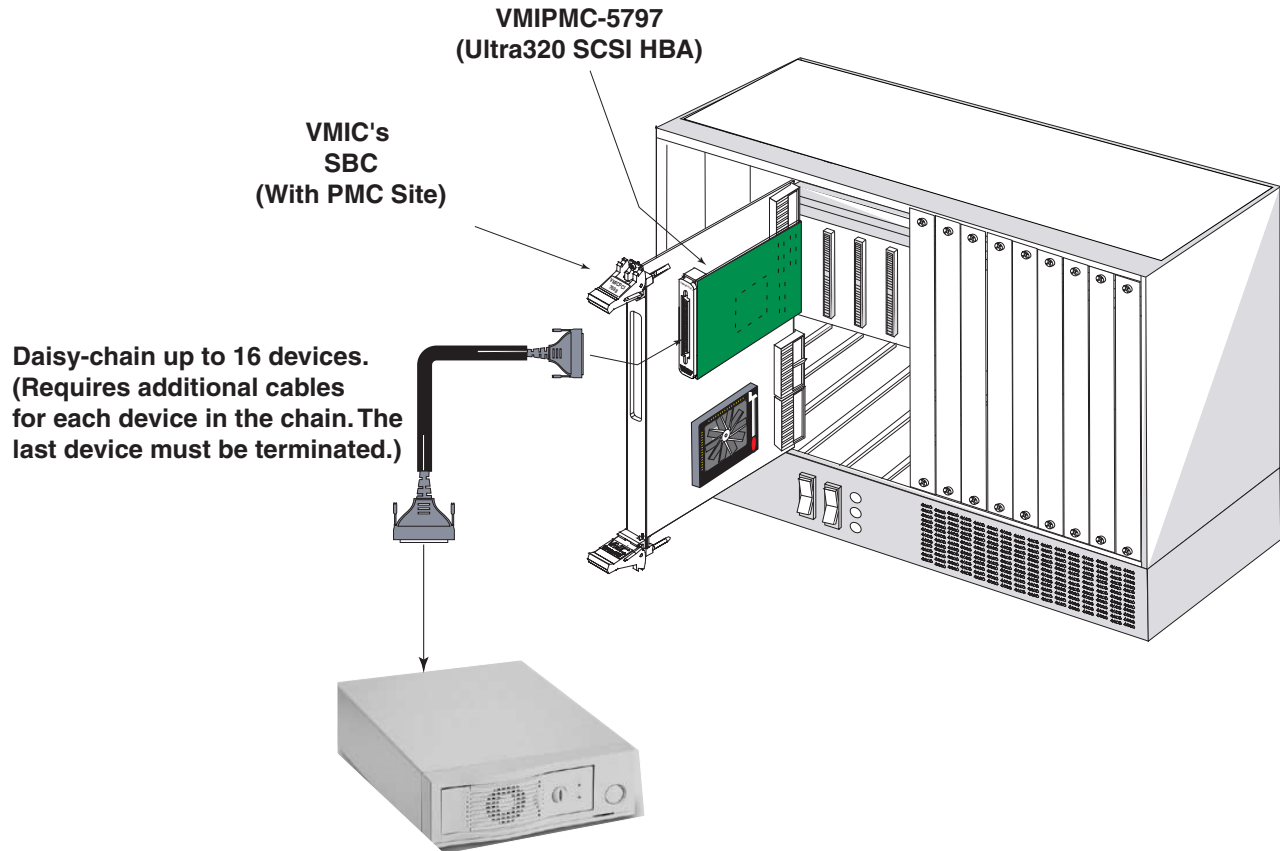
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### Ultra320 SCSI

When Ultra320 SCSI is used with Low-Voltage Differential (LVD) signaling, cable lengths of 12 meters are maintained to provide full backward compatibility. Ultra320 SCSI can connect up to 16 devices on a single channel. Table 1 is a matrix comparing Ultra320 SCSI against the other connectivity technologies.

**Table 1. Comparative Matrix**

	Maximum Transfer Speed	Maximum Cable Length	Maximum Number of Devices	Application Performance
IDE/UDMA 33	33 Mbyte/s	18 inches	2	Low
IDE/UMDA 66	66 Mbyte/s	18 inches	2	Low/Medium
Wide Ultra SCSI	40 Mbyte/s	1.5 meters	16	Low/Medium
Wide Ultra2 SCSI	80 Mbyte/s	12 meters	16	High
Fibre Channel	200 Mbyte/s	10 Kilometers	126	High
Ultra160 SCSI	160 Mbyte/s	12 meters	16	High
<b>Ultra320 SCSI</b>	<b>320 Mbyte/s</b>	<b>12 meters</b>	<b>16</b>	<b>High</b>



**Figure 1. VMIPMC-5797 Connectivity**