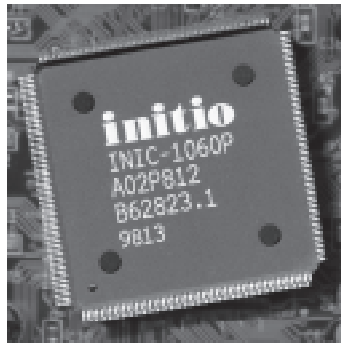


INIC-1060™

PCI to Ultra2 SCSI Single-Chip Bus Master Host Adapter



Overview

The Initio INIC-1060 is a single-chip PCI to Ultra2 SCSI host adapter that provides a truly high performance SCSI solution for PCI motherboards and add-in host adapter cards.

The INIC-1060 combines Ultra2 data transfer rates of up to 80 MB/s with PCI burst rates of up to 133 MB/s to provide excellent

I/O performance for high-end desktop, workstation, and server systems. An integrated 32-bit I/O processor significantly reduces host CPU utilization while requiring a maximum of one interrupt per I/O operation making INIC-1060 the ideal candidate for high-end servers and RAID subsystem applications. INIC-1060 is expected to excel in forth coming I/O intensive applications such as imaging, video/audio, client-server databases, intranet, and web tools.

SCSI Block Features

Initio multi-mode (LVD/SE) SCSI I/O cell design meets all the requirements of the SPI-2 standard. In Low Voltage Differential (LVD) signaling mode it removes both the distance and total number of device constraint of UltraSCSI while it doubles the data transfer rate. The INIC-1060 supports up to 15 peripheral LVD devices on a 12 meters cable. In point-to-point applications like external RAID storage devices, common in clustering environments, the cable length can be as much as 25 meters.

- **80 MB/s data burst rates on the Ultra2 SCSI bus**
- **32-bit I/O processor handles command queueing and DMA processing**
- **Complies with I³ (Initio I/O Interface) specifications**
- **Integrates Flash, Auto-termination, Scatter/Gather engine, PCI device ID programming functions**
- **Fully supports Microsoft™ PC 98 initiative without any external logic**
- **Hot plug PCI Power Management support**
- **Backward compatible with Legacy SCSI devices**

In Single-Ended (SE) mode, INIC-1060 complies with UltraSCSI standards. In this mode, INIC-1060 is backward compatible with legacy SCSI devices. The mode selection is done automatically by INIC-1060. Per SPI-2 specifications, either LVD or SE mode can be supported on a single SCSI cable.

Performance, Architecture, PCI

INIC-1060 employs a wide range of I/O technologies to improve the total system performance. The INIC-1060 32-bit I/O processor automatically handles command queuing and DMA processing. It has an integrated Scatter/Gather engine with caching capabilities designed to improve PCI bus utilization. In addition to the I/O processor, the INIC-1060 incorporates a SCSI protocol sequencer to efficiently manage SCSI bus phases; thus reducing the SCSI overhead and increasing the total bandwidth available for data transfer.

Additional Features

The INIC-1060 is designed to be PC 98 compliant without the help of any external logic. The INIC-1060 supports Hot-plug PCI and the ACPI power management. The INIC-1060 is a highly integrated device that makes it the most cost effective SCSI solution available to date. It integrates Flash logic, SCSI Auto-termination logic, and PCI ID programming logic which otherwise would have been necessary to implement a SCSI subsystem. Furthermore, the internal SCSI command buffer with its associated hardware caching scheme eliminates the need for local RAM storage.

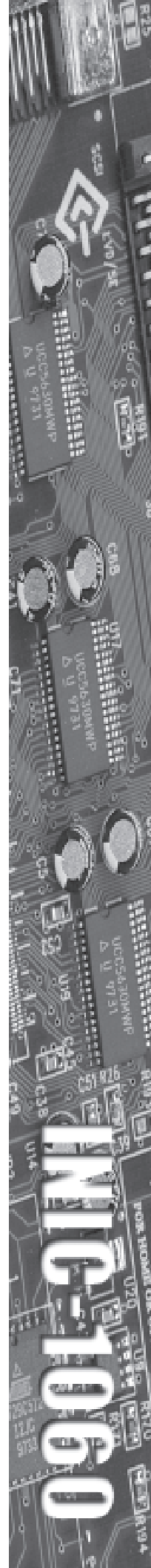
Software Features

INIC-1060 complies with Initio I/O Interface (I³) specifications. I³ is architected to significantly reduce the device driver development time. This is accomplished in two ways. First, the internal I/O processor, along with the I³, drastically simplifies the OS driver layer necessary to operate I³-compatible devices such as the INIC-1060. Second, once a driver is developed for an I³ class of product it will largely remain the same across future product generations that also comply with the I³ specifications. Therefore, the time to market will be significantly reduced for Initio next generation of SCSI or Fibre channel products.

The INIC-1060 comes with a wide range of popular operating system support in addition to SmartSCSI™ BIOS and Initio MarcoPolo™ suite of I/O utilities. In addition, the INIC-1060 will be supported by Initio I/O_Pro class of products that is developed to improve the performance and reliability of Windows NT or Windows based systems.

INIC-1060 operates at a 33 MHz PCI clock that puts it at a maximum PCI burst rate of 133 MB/s. It comes in a 208-pin PQFP package.

We Bring Innovative Solutions to Your I/O Needs.™



FEATURES:

SCSI INTERFACE:

- Data Transfer Rates up to 80 MByte/sec
- On-chip Universal Low Voltage Differential and UltraSCSI transceivers
- Supports both auto and programmable SCSI termination
- Built-in S/G execution engine and S/G cache buffer
- Supports Command Tag Queuing and Disconnect/Reconnect

PCI INTERFACE:

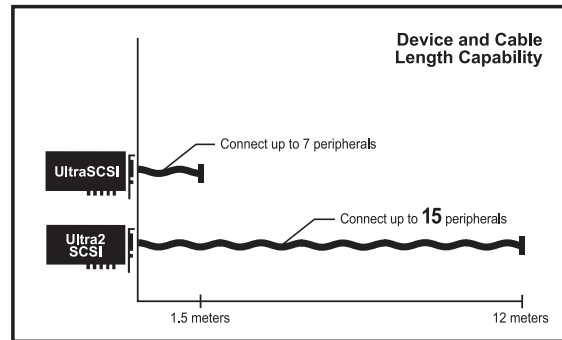
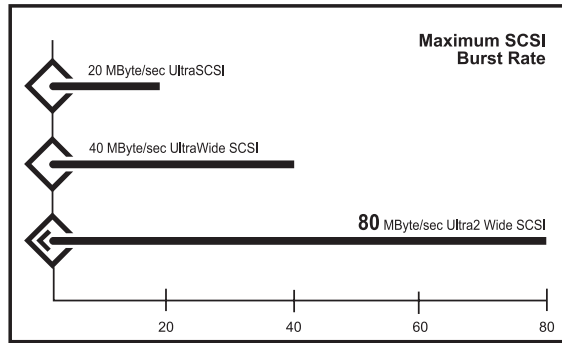
- PCI 2.1 Compliant, 33 MHz, 32-bit PCI burst transfer rates of 133 MB/s

CABLE LENGTHS:

- Up to 12 meters for Ultra2 devices
- Up to 25 meters in point-to-point configurations

ADDITIONAL FEATURES:

- Microsoft PC 98 Compliant
- Support for FLASH and EEPROM
- Dual rail power supply
- On-chip power management features to decrease the power consumption
- Programming interface specification available for OEM Software developers (I²)
- Provides ASPI manager for DOS®, Windows® and NetWare™
- BIOS support for DOS and Windows applications without driver involvement
- 208-pin PQFP package



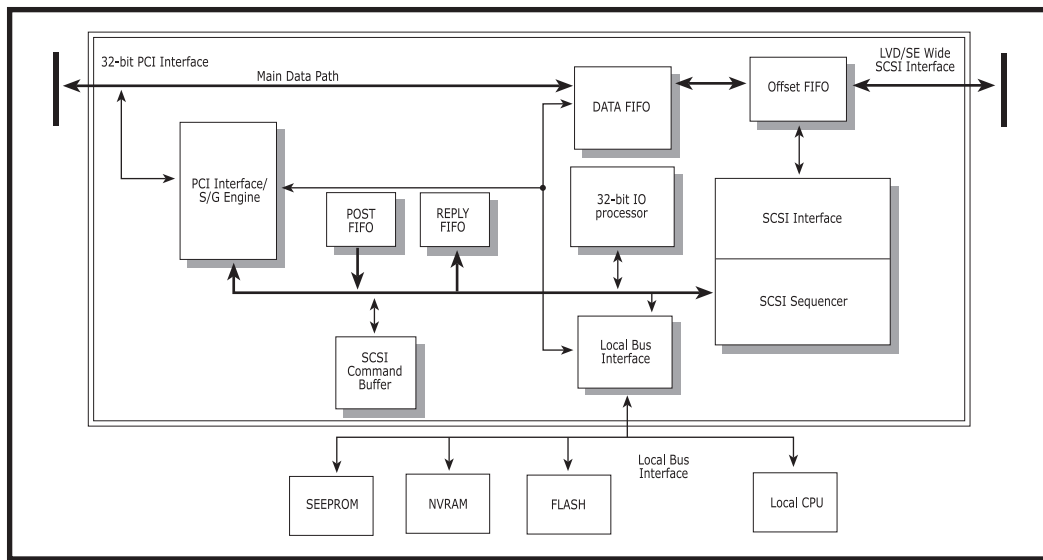
SOFTWARE SUPPORT:

Support for all major operating systems including:

- DOS
- Windows®95
- Windows®98
- Windows NT®
- Novell®NetWare
- SCO® Unix™
- OS/2™
- UnixWare™
- Linux™

APPLICATIONS:

- Client-server databases
- Imaging
- Video
- Audio
- Intranet
- Web Tools



INIC-1060 Block Diagram



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