

INIC-1620 User Manual

INITIO Corporation, Taiwan Office.

8F, No. 192, Rueiguang Rd, Neihu Distric, Taipei City 114, Taiwan.

Tel: (+886 2) 8751-6377

Fax: (+886 2)8751-0165

[Http://www.initio.com](http://www.initio.com)

USA Office: +408 519 6100 Fax +408 943 3100

2343 Bering Drive, San Jose, CA 95131, USA



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1 Product Introduction

1.1 Overview

The INIC-1620 provides advanced Host Adapter features in a single 128 pin TQFP package with 2 Serial ATA, 32-bit/66 MHz PCI 2.3 compliant, and Cardbus compliant interfaces. The third memory interface allows access to FLASH and Serial EEPROM devices. The Flash interface provides Read/Write access to the attached BIOS. The Serial EEPROM interface provides Read/Write access to the attached Serial EEPROM for bus configuration information.

Serial ATA is the next -generation internal storage inter-connect, designed to replace parallel ATA technology. Serial ATA is the proactive evolution of the ATA interface from a parallel bus to serial bus architecture. This architecture overcomes the electrical constraints that are increasing the difficulty of continued speed enhancements for the classic parallel ATA bus. Though Serial ATA will not be able to directly interface with legacy Ultra ATA hardware, it is fully compliant with the ATA protocol and thus is software compatible.

1.2 Features

1.2.1 PCI 32 bit/66MHz interface

- ◆ PCI 2.3 compliant interface.
- ◆ Burst transfer rate of 264 Mb/s.
- ◆ Built in hardware bus master engine.
- ◆ Supports both 3.3V and 5V.

1.2.2 Cardbus Interface

- ◆ Cardbus compliant interface.

1.2.3 ATA Interface

- ◆ Serial ATA Revision 1.0a, Serial ATA II Revision 1.0 (Extensions to Serial ATA 1.0a)
- ◆ Serial ATA transfer rate of 1.5 GB/s.
- ◆ Two SATA channels support.
- ◆ SATA TCQ and NCQ commands support.

1.2.4 Memory Interface

- ◆ Support for 256K FLASH and Serial EEPROM.

1.2.5 Data FIFO

- ◆ 256 Byte data FIFO for each channel.

1.2.6 On Board PCI Bus Master Engine

- ◆ On board Bus Master Engine relieve the system processor from book keeping and enhance performance.

1.2.7 Uses Initio's Proprietary Host Adapter Mode of Operation

- ◆ Initio Proprietary Auto DMA mode (IDMA).
- ◆ Queued/ Overlapping ATA Commands support.

1.2.8 Other Features

- ◆ SATA hot plug/unplug hardware support.
- ◆ Implements Power Management.
- ◆ Full driver support for all Major Operating Systems.
- ◆ Supports Plug and Play allowing users to change configurations without the use of jumpers.
- ◆ Integrated Serial ATA Transport, link logic and PHY layer.
- ◆ Supports 48-bit LBA (Logical Block Addressing) for hard drives larger than 137GB.
- ◆ Supports ATAPI devices.
- ◆ LED support for each channel.
- ◆ External Flash BIOS.

1.3 Supported Operating Systems

Windows Operating System



Windows 98SE
Windows ME
Windows 2000
Windows XP
Windows Server 2003

2 BIOS Configuration for Booting Function

This chapter explains how to booting from optical drive device via our INIC1620.

2.1 BIOS Booting Process

Perform the following steps to boot from optical drive device,

1. Boot the system.
2. Check it has support the bootable add-in cards in the setup BIOS of system. Enable the function if it has support.
3. Start the Booting function by pressing <Ctrl>+<C>.
4. The booting function will be enabled automatically if there is a bootable disc in the optical drive.

2.2 Starting the Guide of Booting Function

During boot up the system, the following BIOS banner displays as the below,

Press Ctrl and C key to boot from the CD/DVD ROM via the INIC1620 SATA Adapter BIOS.

```
Initio INIC1620 SATA Adapter BIOS Version 1.11
Copyright (C) Initio Corp. 2005

Controller at Bus 0, slot 9

Scan Drives...
Channel 0 : Device Not Found
Channel 1 : PLEXTOR DVDR PX-716A ATAPI DEVICE

---- Press <CTRL+C> to boot from CD/DVD ROM ----
---- Press <ESC> to continue ----
```

3 Operating System Installation

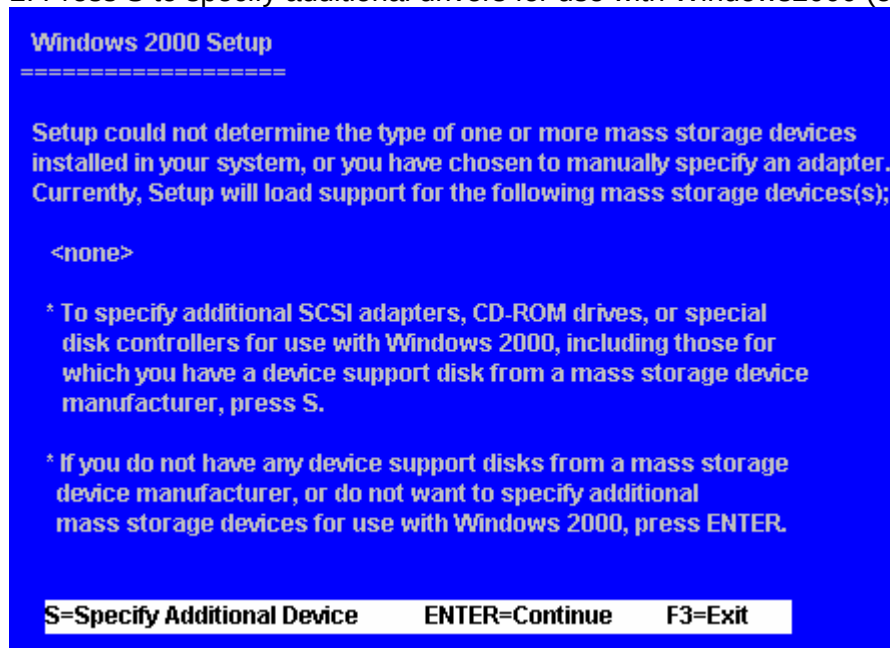
The chapter contains the procedures for installing the Windows* 98, ME, 2000, XP, and Server 2003 operating systems.

3.1 During Install the Windows* 2000/XP/2003 Operating System to SATA Hard Drive

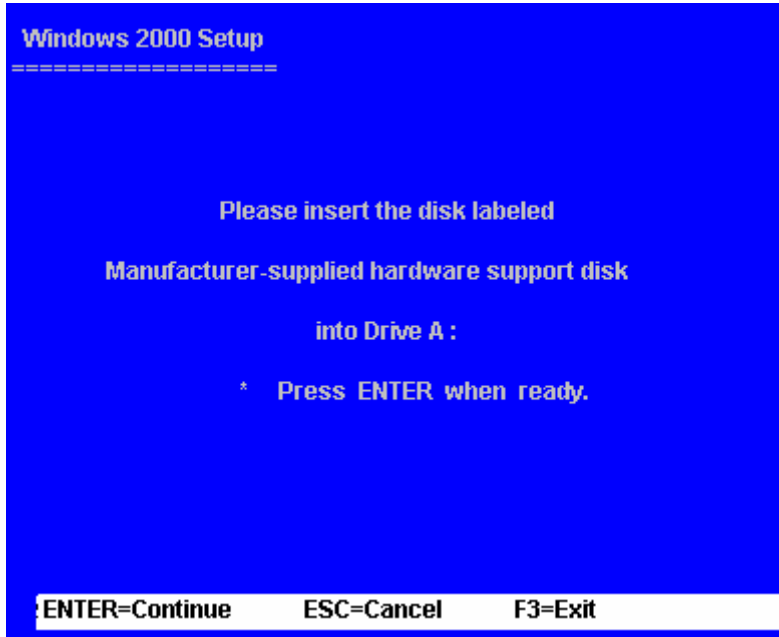
1. Press F6 to install the driver of SATA Host Controller.



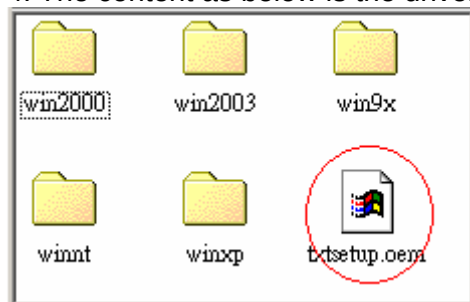
2. Press S to specify additional drivers for use with Windows2000 (example).



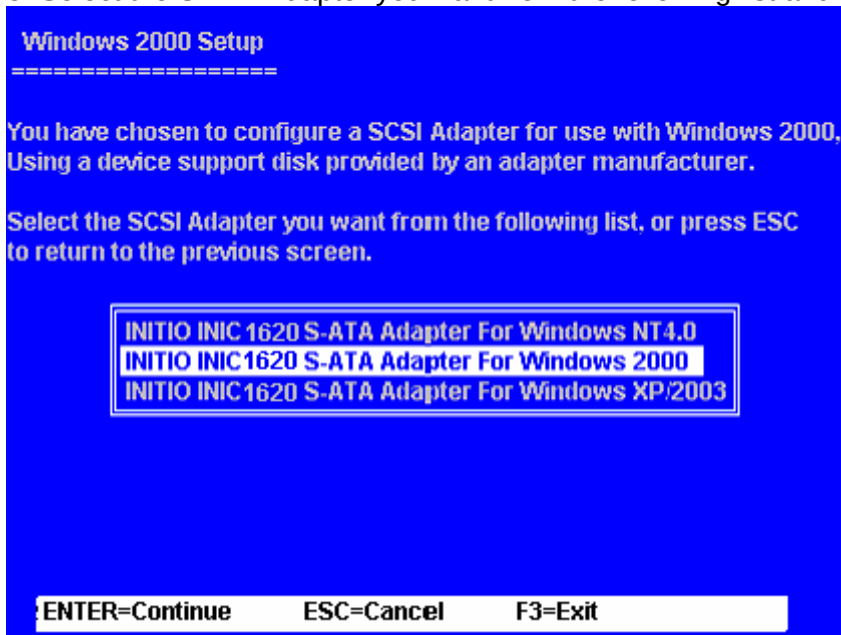
3. Please insert the disk labeled and press ENTER key when ready.



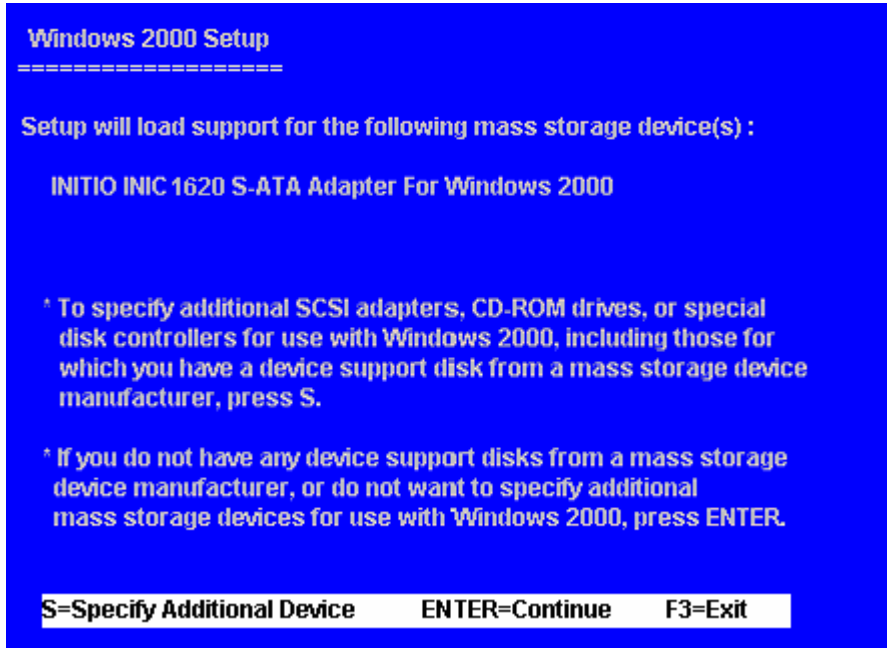
4. The content as below is the driver and index file for installation.



5. Select the S-ATA Adapter you want from the following list and press ENTER key to continue.



6. Press the ENTER to continue the Windows setup process.

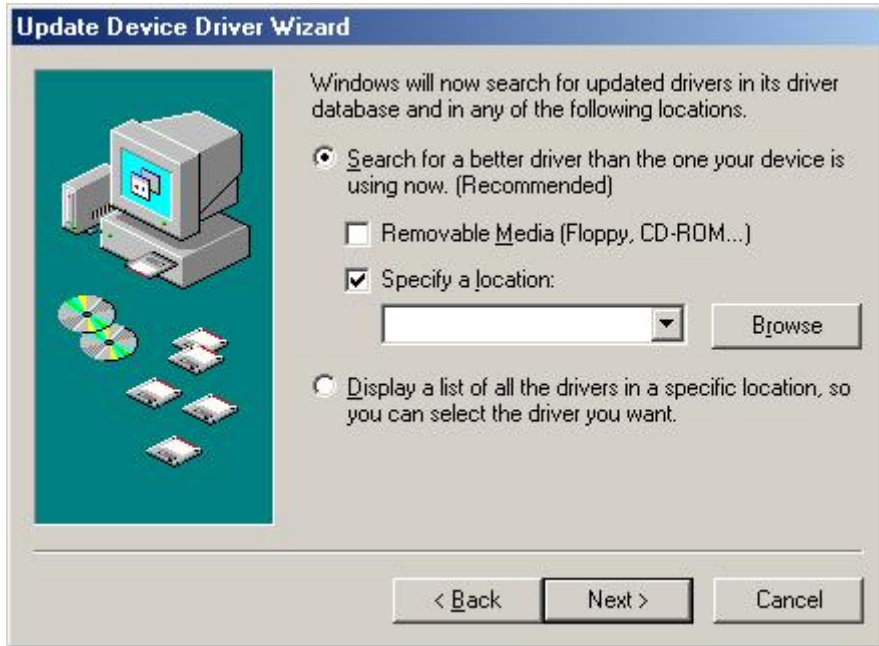


3.2 Windows* 98/ME Driver PnP method for Installation

1. Select the selection of “specify the location of the driver” and click the NEXT button.



2. Choose the “specify a location” and assign the 1620 driver’s location.



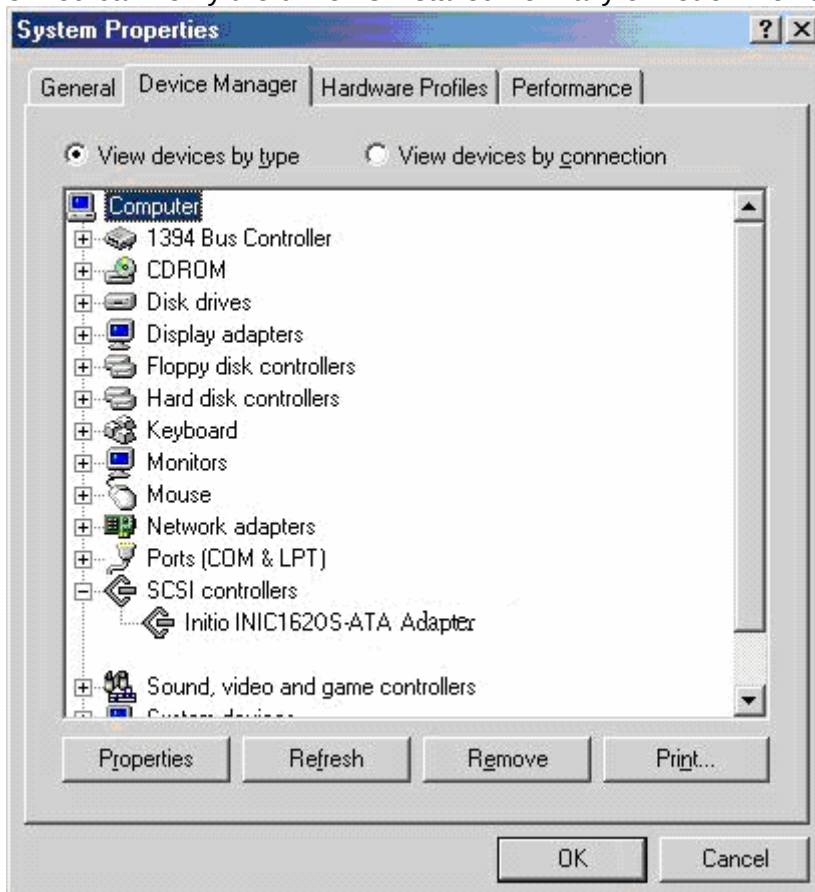
3. Press the "NEXT" button for installs the driver.



4. Press "Finish" button for finish the installing.



5. You can verify the driver is installed normally or not on Device Manager.



3.3 Windows* 2000/XP/2003 Driver PnP method for Installation

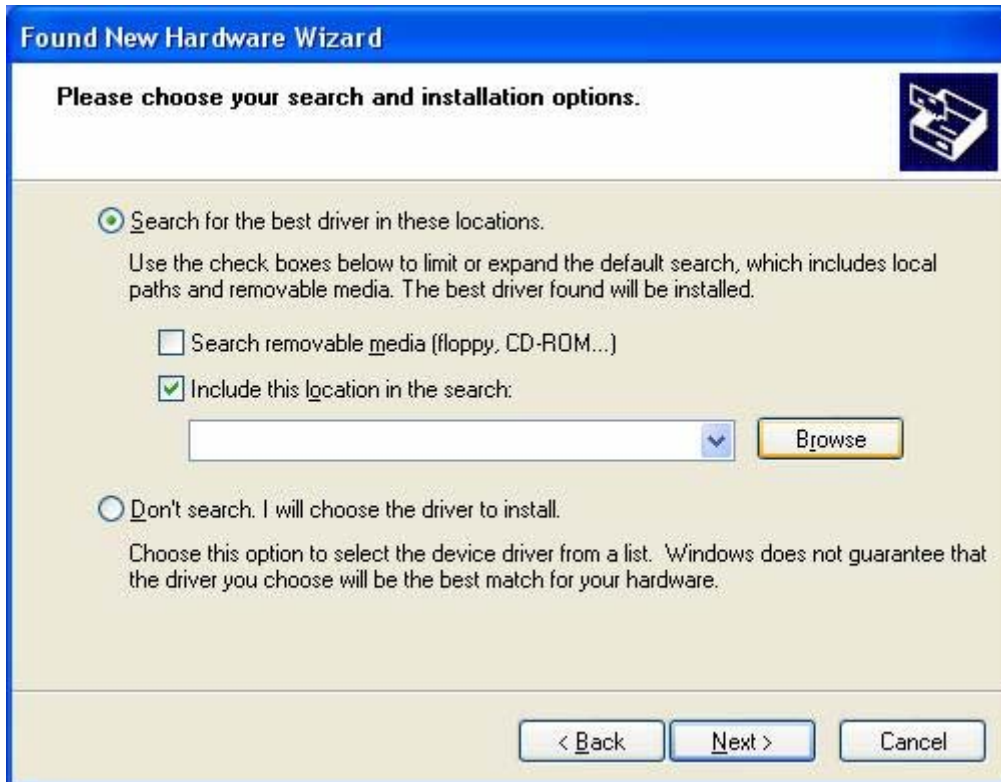
1. Choose the selection of "No, not this time" for don't connect to Windows Update and press "NEXT" button.



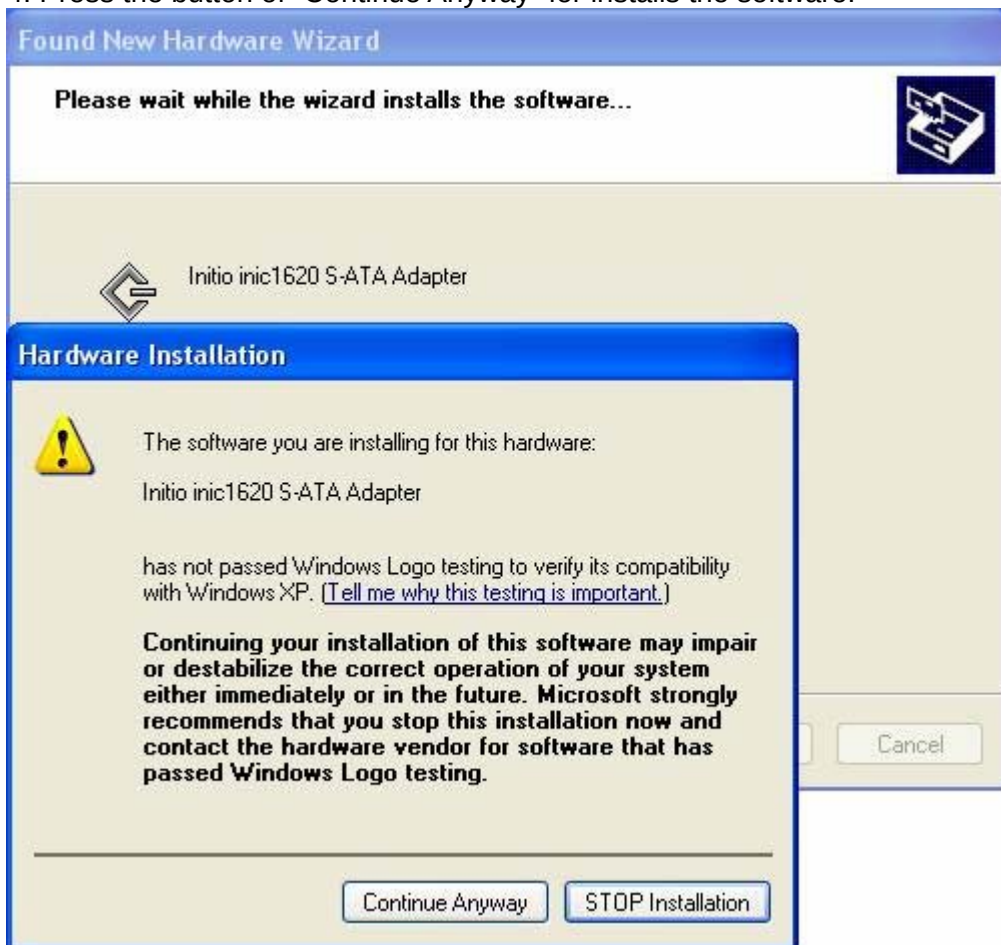
2. Choose the item of "Install from a list or specific location" and click "NEXT" button to continue.



3. Select the "Include this location in the search" and assign the 1620 driver's location for which system by "Browse" key.



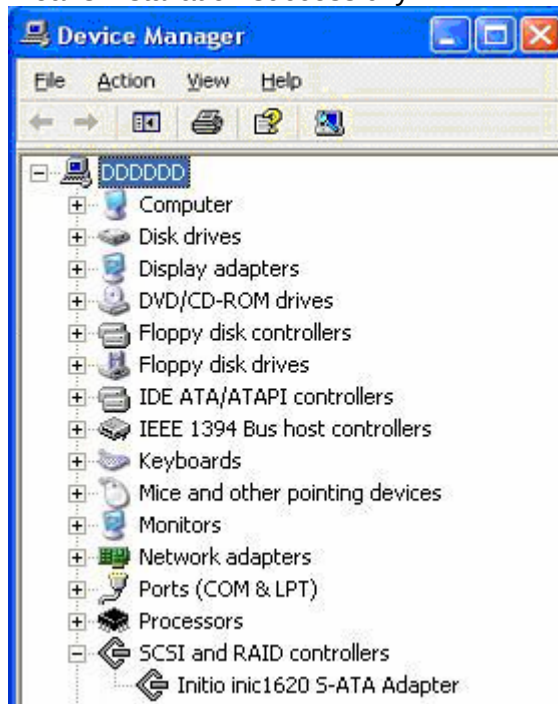
4. Press the button of "Continue Anyway" for installs the software.



5. Click “Finish” button to finish the installing.



6. You can see “Initio INIC1620 S-ATA Adapter” list in “SCSI and RAID Controllers” on Device Manager that means installation successfully.



4 Troubleshooting

The following table describes problems you might encounter, along with suggested solutions.

Problem	Recommend solution
Drives aren't detected.	Change cables or change the drives if everything fails.
BIOS system will hang during booting.	Disable the SATA Host controller of embedded motherboard on main board's BIOS setup.
Bootting function fail with SATA optical drive from SATA host controller.	Update the motherboard's BIOS.
Update the windows service patch file that will show warning message during the upgrading action.	Remember to unplug the SATA host card when you update the service patch file of windows 2000.