

GEC-CN260

Intel® Cedar Trail + NM10

COM-Express 模块

用户手册

版本 1.0



致谢

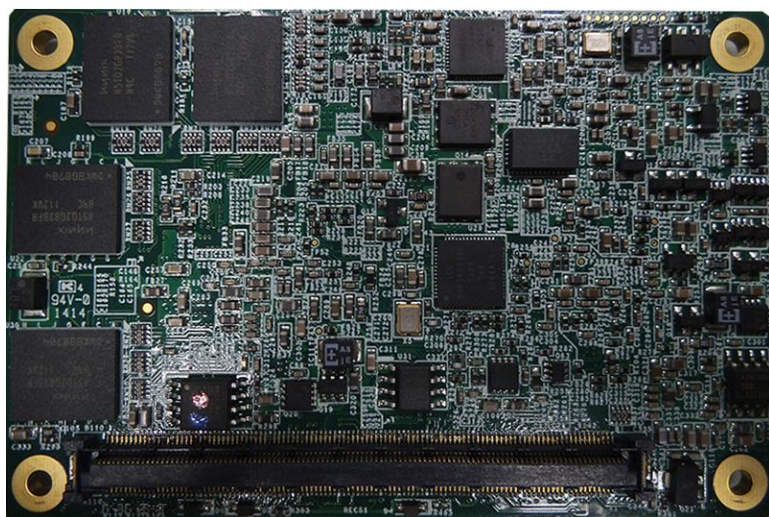
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介绍

产品描述

The GEC-CN260 COM-Express Module is based on the latest Intel® Atom N2600 chipset with pin-out Type 10 that fully complies with the PICMG (PCI Industrial Computer Manufacturers Group) COM.0 R2.0 specification. The platform supports 3rd generation Intel® Core processor family with BGA packing and feature an integrated dual-channel DDR3 memory controller as well as a graphics core.

The Intel Atom N2600 is made with 22-nanometer technology that unites the CPU and the graphics core on the transistor level. The latest Intel® processors provide advanced performance in both computing and graphics quality. This meets the requirement of customers in the gaming, POS, digital signage and server market segment.

Measuring 84mm x 55mm, the GEC-CN260 offers fast 6Gbps SATA, USB2.0 and DisplayPort.

GEC-CN260 FEATURES:

- 支持英特尔® 凌动处理器 N2000 系列
- 标配 2GB DDR3, 800/1066MHz 的内存
- 英特尔® PCI-Express 千兆网卡
- 集成显卡的 VGA / DisplayPort 的/ LVDS 显示器
- 2 个 SATA 2.0, 8 个 USB 2.0,
- 4X PCI-E X1

清单

您的 GEC-CN260 包装应包括下列物品。

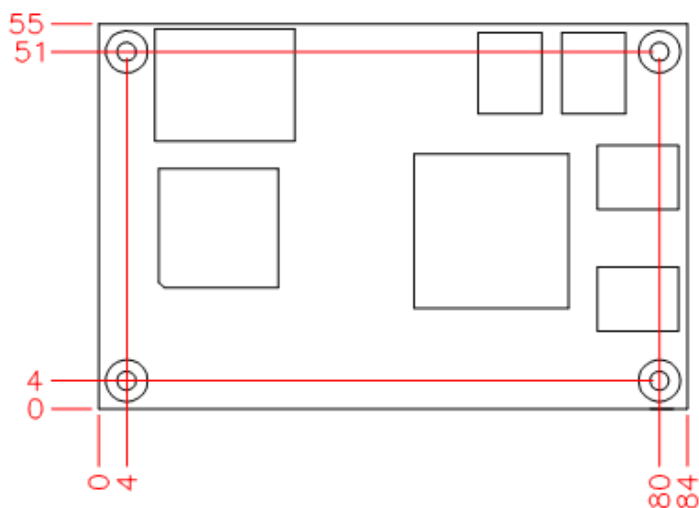
- 在 GEC-CN260 的 COM-Express 模块
- 本用户手册
- 1 张 CD 包含芯片组驱动程序和闪存程序

GEC-CN260规格

规格-主板	
Model	GEC-CN260
Form Factor	Nano ITX express Type10 (Compatible Type1)
PCB	High TG 170,2.0mm
Layer	12
CPU	
Model	Intel® Atom™ N2600
Speed	1.6Ghz
Cache	1MB
Socket	FCBGA559
TDP	3.5W
Chipset	
Model	- Intel® CG82NM10 PCH [TDP = 2.1W] Package = BGA360, 17x 17 mm - Intel®82574IT Giga Lan via PCIe x1 - DDR3 2GB on board, 256KBx8 - 8GB SSD Nand flash On Board (SMI SLC with Robust DATA Protection) via SATA interface
BIOS	
Model	AMI
SPI Flash	16MB for BIOS
Memory	
Configuration	Supports DDR3 800 /1066 MT/s data rates.
Max. Support	Max memory size 2 GB (-40 to + 85 degree C) onboard
Functionality	
Display	The Intel® Atom™ Processor N2600 CPU, integrated GMA3600 400MHz, supports DX9, OGL3.0, and MPEG2, AVC/H.264, VC-1 HW decode/acceleration. Support VGA & LVDS dual independent displays. VGA: 1920*1200,60Hz at 267MHz Max LVDS: 1366*768,60Hz at 112MHz Max(SC) DDI--- for Display port
LAN / PHY	Intel®82574IT(-40 to + 85 degree C) From 1*PClex1 Bus
Audio	Intel® NM10 Express Chipset build-in HD Audio Codec
USB	Intel® NM10 Express Chipset build-in , supports 8*USB2.0
LPC I / O	Intel® NM10 Express Chipset build-in LPC
Serial ATA	Intel® NM10 Express Chipset build-in SATAII supports 2*SATAII
SM Bus	Intel® NM10 Express Chipset build-in SMBus2.0
I2C	1xI2C
GPIO	0,1,2,3 to 220-pin connectors (A-B)
Hardware Monitor	Yes
Edge I/O	
Connector to Carrier Board	One 220-pin connectors (A-B) [COM Express 2.0 standard] P/N: C12282202202200A3P CN:B/M SMD 220P 180D 4H P-0.5mm [AMP 3-6318490-6] RoHS

Dimensions	
PCB Dimensions	84 mm x 55mm
Power	
Power	Supports power saving modes including Normal / Standby / Suspend modes. ACPI 2.0 compliant ● ATX: +12V and +5VSB (standby power) ● AT: 12V VIA 220-pin connectors
Add-On Feature	
Watch Dog	Yes (65536 level timer interval, from 0~65535 sec, multi-level, multi-option watchdog timer)
Other	
Environmental	
Temperature	Operating: -40°C to 85°C Storage: -55°C to 85°C
Humidity	3% ~ 95% (non-condensing)
Shock	standard Test
Vibration	BASE standard Test
Certification	RoHS
MTBF	≥100000h
OS Support	Windows XP, Windows XP Embedded, Windows Vista, Windows 7, Windows 8, Linux, VxWorks

主板尺寸



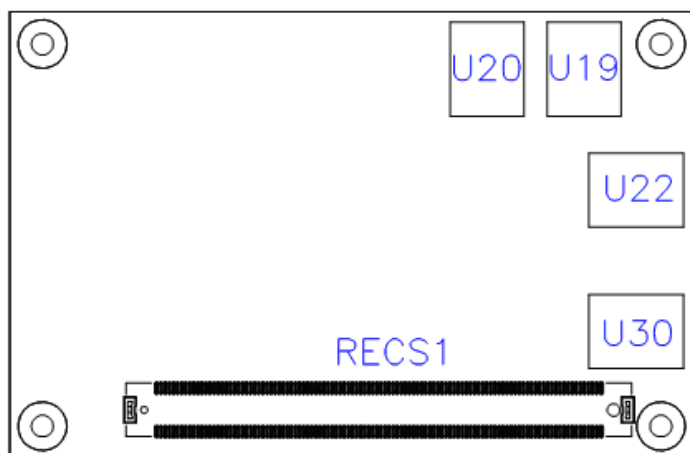
安装

节提供有关如何使用上的GEC-CN260跳线和连接器，以建立一个可行的系统信息。 涵盖的主题包括:

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GEC-CN260连接器位置



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Connector X1A Row A

Pin	Signal	Description	Comment
A1	GND_1	Power Ground	
A2	GBE0_MDI3-	Ethernet Receive Data-	
A3	GBE0_MDI3+	Ethernet Receive Data+	
A4	GBE0_LINK100#	Ethernet Speed LED 100Mbps	
A5	GBE0_LINK1000#	Ethernet Speed LED 1000Mbps	
A6	GBE0_MDI2-	Ethernet Receive Data-	
A7	GBE0_MDI2+	Ethernet Receive Data+	
A8	GBE0_LINK#	LAN Link LED	
A9	GBE0_MDI1-	Ethernet Receive Data-	
A10	GBE0_MDI1+	Ethernet Receive Data-	
A11	GND_2	Power Ground	
A12	GBE0_MDI0-	Ethernet Transmit Data-	
A13	GBE0_MDI0+	Ethernet Transmit Data+	
A14	GBE0_CTREF	LAN Reference Voltage	
A15	SUS_S3#	Indicates Suspend to RAM state	
A16	SATA0_TX+	SATA 0 Transmit Data+	
A17	SATA0_TX-	SATA 0 Transmit Data-	
A18	SUS_S4#	Indicates Suspend to Disk state	
A19	SATA0_RX+	SATA 0 Receive Data+	
A20	SATA0_RX-	SATA 0 Receive Data-	
A21	GND_3	Power Ground	
A22	SATA2_TX+	SATA 2 Transmit Data+(Not Connected)	NC
A23	SATA2_TX-	SATA 2 Transmit Data+(Not Connected)	NC
A24	SUS_S5#	Indicates Soft Off state; same function as SUS_S4#	
A25	SATA2_RX+	SATA 2 Receive Data+(Not Connected)	NC
A26	SATA2_RX-	SATA 2 Receive Data+(Not Connected)	NC
A27	BATLOW#	Indicates low external battery	
A28	ATA_ACT#	SATA Activity Indicator	
A29	AC_SYNC	HD Audio Sync	
A30	AC_RST#	HD Audio Reset	
A31	GND_4	Power Ground	

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A32	AC_BITCLK	HD Audio Clock	
A33	AC_SDOUT	HD Audio Data	
A34	BIOS_DISABLE#	Disable Module BIOS. Enables boot from a BIOS on Cayyrboard	
A35	THRMTRIP#	CPU thermal shutdown indicator	
A36	USB6-	USB Data- Port #6	
A37	USB6+	USB Data+ Port #6	
A38	USB_6_7_OC#	USB Over current Pair 6 / 7	
A39	USB4-	USB Data- Port #4	
A40	USB4+	USB Data+ Port #4	
A41	GND_5	Power Ground	
A42	USB2-	USB Data- Port #2	
A43	USB2+	USB Data+ Port #2	
A44	USB_2_3_OC#	USB Over current Pair 2 / 3	
A45	USB0-	USB Data- Port #0	
A46	USB0+	USB Data+ Port #0	
A47	V_RTC	RTC Power Supply +3V	
A48	EXCD0_PERST#	PCI Express Card 0 Reset	
A49	EXCD0_CPPE#	PCI Express Card 0 Request	
A50	LPC_SERIRQ	LPC Serial Interrupt Request	
A51	GND_6	Power Ground	
A52	PCIE_TX5+	PCle lane #5 Transmit+(Not Connected)	NC
A53	PCIE_TX5-	PCle lane #5 Transmit-(Not Connected)	NC
A54	SDIO_D0 / GPIO	SDIO#0 Data0 / General Purpose Input 0	GPIO
A55	PCIE_TX4+	PCle lane #4 Transmit+(Not Connected)	NC
A56	PCIE_TX4-	PCle lane #4 Transmit-(Not Connected)	NC
A57	GND_7	Power Ground	
A58	PCIE_TX3+	PCle lane #3 Transmit+(Not Connected)	
A59	PCIE_TX3-	PCle lane #3 Transmit-(Not Connected)	
A60	GND_8	Power Ground	
A61	PCIE_TX2+	PCle lane #2 Transmit+(Not Connected)	NC
A62	PCIE_TX2-	PCle lane #2 Transmit-(Not Connected)	NC
A63	SDIO_D1 / GPIO	SDIO#0 Data1 / General Purpose Input 1	GPIO
A64	PCIE_TX1+	PCle lane #1 Transmit+	
A65	PCIE_TX1-	PCle lane #1 Transmit-	

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A66	GND_9	Power Ground	
A67	SDIO_D2 / GPI2	SDIO#0 Data2 / General Purpose Input 2	GPI2
A68	PCIE_TX0+	PCle lane #0 Transmit+	
A69	PCIE_TX0-	PCle lane #0 Transmit+	
A70	GND_10	Power Ground	
A71	LVDS_A0+	LVDS Channel A (positive)	
A72	LVDS_A0-	LVDS Channel A (negative)	
A73	LVDS_A1+	LVDS Channel A (positive)	
A74	LVDS_A1-	LVDS Channel A (negative)	
A75	LVDS_A2+	LVDS Channel A (positive)	
A76	LVDS_A2-	LVDS Channel A (negative)	
A77	LVDS_VDD_EN	LVDS Panel Power Control	
A78	LVDS_A3+	LVDS Channel A (positive)	
A79	LVDS_A3-	LVDS Channel A (negative)	
A80	GND_11	Power Ground	
A81	LVDS_A_CK+	LVDS Channel A Clock+	
A82	LVDS_A_CK-	LVDS Channel A Clock-	
A83	LVDS_I2C_CK	LVDS I2C Clock (DDC)	
A84	LVDS_I2C_DAT	LVDS I2C Data (DDC)	
A85	SDIO_D3 / GPI3	SDIO#0 Data3 / General Purpose Input 3	GPI3
A86	KBD_RST#	Keyboard Reset	
A87	KBD_A20GATE	A20 gate	
A88	PCIE0_CK_REF+	PCle Clock (positive)	
A89	PCIE0_CK_REF-	PCle Clock (negative)	
A90	GND_12	Power Ground	
A91	RSVD1	Reserved	NC
A92	RSVD2	Reserved	NC
A93	SDIO_Clk / GPO0	SDIO#0 Clock / General Purpose Output 0	GPO0
A94	RSVD3	Reserved	NC
A95	RSVD4	Reserved	NC
A96	GND_13	Power Ground	
A97	V_12V_1	12V	
A98	V_12V_2	12V	
A99	V_12V_3	12V	

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A100	GND_14	Power Ground	
A101	V_12V_4	12V	
A102	V_12V_5	12V	
A103	V_12V_6	12V	
A104	V_12V_7	12V	
A105	V_12V_8	12V	
A106	V_12V_9	12V	
A107	V_12V_10	12V	
A108	V_12V_11	12V	
A109	V_12V_12	12V	
A110	GND_15	Power Ground	

Connector X1A Row B

Pin	Signal	Description	Comment
B1	GND_16	Power Ground	
B2	GBE0_ACT#	Ethernet Activity LED	
B3	LPC_FRAME#	LPC Frame Indicator	
B4	LPC_AD0	LPC Address / Data Bus	
B5	LPC_AD1	LPC Address / Data Bus	
B6	LPC_AD2	LPC Address / Data Bus	
B7	LPC_AD3	LPC Address / Data Bus	
B8	LPC_DRQ0#	LPC Data Request (Not Connected)	NC
B9	LPC_DRQ1#	LPC Data Request (Not Connected)	NC
B10	LPC_CLK	LPC Clock	
B11	GND_17	Power Ground	
B12	PWRBTN#	Power Button Input	
B13	SMB_CLK	SMBus Clock	
B14	SMB_DAT	SMBus Data	
B15	SMB_ALERT#	SMBus Interrupt	
B16	SATA1_TX+	SATA 1 Transmit Data+ (optional)	
B17	SATA1_TX-	SATA 1 Transmit Data- (optional)	
B18	SUS_STAT#	Indicates imminent suspend operation; used to notify LPC devices	
B19	SATA1_RX+	SATA 1 Receive Data+ (optional)	

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B20	SATA1_RX-	SATA 2 Receive Data- (optional)	
B21	GND_18	Power Ground	
B22	SATA3_TX+	SATA 3 Transmit Data+ (Not Connected)	NC
B23	SATA3_TX-	SATA 3 Transmit Data- (Not Connected)	NC
B24	PWR_OK	Power OK from power supply	
B25	SATA3_RX+	SATA 3 Receive Data+ (Not Connected)	NC
B26	SATA3_RX-	SATA 3 Receive Data- (Not Connected)	NC
B27	WTD	Indicator for Watchdog Timeout	
B28	AC_SDIN2	Audio Codec Serial Data in 2 (Not Connected)	NC
B29	AC_SDIN1	Audio Codec Serial Data in 1	
B30	AC_SDIN0	Audio Codec Serial Data in 0	
B31	GND_19	Power Ground	
B32	SPEKR	Speaker Interface	
B33	I2C_CK	General Purpose I2C Clock	
B34	I2C_DAT	General Purpose I2C Data	
B35	THRM#	Over Temperature Indicator	
B36	USB7-	USB Data- Port #7 (USB Mode) / USB Data- Client	
B37	USB7+	USB Data- Port #7 (USB Mode) / USB Data+ Client	
B38	USB_4_5_OC#	USB Over current Pair 4 / 5	
B39	USB5-	USB Data- Port #5	
B40	USB5+	USB Data+ Port #5	
B41	GND_20	Power Ground	
B42	USB3-	USB Data- Port #3	
B43	USB3+	USB Data+ Port #3	
B44	USB_2_3_OC#	USB Over current Pair 2 / 3	
B45	USB1-	USB Data- Port #1	
B46	USB1+	USB Data+ Port #1	
B47	EXCD1_PERST#	PCIe Express Card 1 Reset	
B48	EXCD1_CPPE#	PCIe Express Card 1 Request	
B49	SYS_RESET#	Reset button input	
B50	CB_RESET#	Carrier Board Reset	
B51	GND_21	Power Ground	
B52	PCIE_RX5+	PCIe lane #5 Receive+ (Not Connected)	NC
B53	PCIE_RX5-	PCIe lane #5 Receive- (Not Connected)	NC

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B54	SDIO_CMD / GPO1	SDIO#0 Command / General Purpose Output 1	GPO1
B55	PCIE_RX4+	PCie lane #4 Receive+ (Not Connected)	NC
B56	PCIE_RX4-	PCie lane #4 Receive- (Not Connected)	NC
B57	SDIO_CMD / GPO2	SDIO#0 Command / General Purpose Output 2	GPO2
B58	PCIE_RX3+	PCie lane #3 Receive+ (Not Connected)	NC
B59	PCIE_RX3-	PCie lane #3 Receive- (Not Connected)	NC
B60	GND_22	Power Ground	
B61	PCIE_RX2+	PCie lane #2 Receive+ (Not Connected)	NC
B62	PCIE_RX2-	PCie lane #2 Receive- (Not Connected)	NC
B63	SDIO_CMD / GPO3	SDIO#0 Command / General Purpose Output 3	GPO3
B64	PCIE_RX1+	PCie lane #1 Receive+	
B65	PCIE_RX1-	PCie lane #1 Receive-	
B66	WAKE0#	PCI Express Wake Event	
B67	WAKE1#	General Purpose Wake Event	
B68	PCIE_RX0+	PCie lane #0 Receive+	
B69	PCIE_RX0-	PCie lane #0 Receive-	
B70	GND_23	Power Ground	
B71	LVDS_B0+	LVDS Channel B (positive) (Not Connected)	NC
B72	LVDS_B0-	LVDS Channel B (negative) (Not Connected)	NC
B73	LVDS_B1+	LVDS Channel B (positive) (Not Connected)	NC
B74	LVDS_B1-	LVDS Channel B (negative) (Not Connected)	NC
B75	LVDS_B2+	LVDS Channel B (positive) (Not Connected)	NC
B76	LVDS_B2-	LVDS Channel B (negative) (Not Connected)	NC
B77	LVDS_B3+	LVDS Channel B (positive) (Not Connected)	NC
B78	LVDS_B3-	LVDS Channel B (negative) (Not Connected)	NC
B79	LVDS_BKLT_EN	Backlight Enable	
B80	GND_24	Power Ground	
B81	LVDS_B_CK+	LVDS Channel B Clock+ (Not Connected)	NC
B82	LVDS_B_CK-	LVDS Channel B Clock- (Not Connected)	NC
B83	LVDS_BKLT_CTRL	Backlight Brightness Control	
B84	V_5V_SBY	5V Standby	
B85	V_5V_SBY	5V Standby	
B86	V_5V_SBY	5V Standby	
B87	V_5V_SBY	5V Standby	

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B88	RSVD5	Reserved	
B89	VGA_RED	VGA Red (Not Connected)	NC
B90	GND_25	Power Ground	
B91	VGA_GRN	VGA Green (Not Connected)	NC
B92	VGA_BLU	VGA Blue (Not Connected)	NC
B93	VGA_HSYNC	VGA Horizontal Synchronization (Not Connected)	NC
B94	VGA_VSYNC	VGA Vertical Synchronization (Not Connected)	NC
B95	VGA_I2C_CK	VGA I2C Clock (Not Connected)	NC
B96	VGA_I2C_DAT	VGA I2C Data (Not Connected)	NC
B97	TV_DAC_A	TV DAC Channel A (Not Connected)	NC
B98	TV_DAC_B	TV DAC Channel B (Not Connected)	NC
B99	TV_DAC_C	TV DAC Channel C (Not Connected)	NC
B100	GND_26	Power Ground	
B101	V_12V_12	12V	
B102	V_12V_13	12V	
B103	V_12V_14	12V	
B104	V_12V_15	12V	
B105	V_12V_16	12V	
B106	V_12V_17	12V	
B107	V_12V_18	12V	
B108	V_12V_19	12V	
B109	V_12V_20	12V	
B110	GND_27	Power Ground	

BIOS设置

此章节更易描述板卡附带的可供选择的AMI BIOS设置。 在本章中的主题如下:

- BIOS 功能介绍 16
- BIOS 设置 16
- 高级设置 18
- 芯片组设置 26
- 引导设置 错误!未定义书签。
- 安全设置 31
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BIOS 功能介绍

安装在您的电脑系统ROM BIOS（基本输入/输出系统）支持英特尔处理器。 该BIOS提供了一个标准的设备，如磁盘驱动器，串行端口和并行端口至关重要的低级别支持。 它还具有密码保护功能，以及详细的微调芯片组控制整个系统的特殊支持。 .

BIOS 设置

BIOS可对指定的系统配置和设置的安装实用程序。该系统的BIOS ROM中储存有设置程序。当你打开电脑时，BIOS 会立即启动。按键马上让你进入设置程序。如果你是一个有点晚按键，POST（加电自检）将继续常规的检测，从而阻止您调用安装程序。如果您仍需要进入 Setup，按“复位”按钮或同时按<Ctrl>，<Alt>与<Delete>键重新启动系统。您也可以通过再次关闭系统，然后再打开重新启动。 将出现在屏幕上显示以下消息：

按进入 Setup

一般情况下，您按下箭头键突出显示的项目，回车选择，Page Up 和 Page Down 改变条目，<F1>寻求帮助，<Esc>退出。

当您进入设置实用程序，在主菜单屏幕上会出现在屏幕上。主菜单可以让你从不同的设置功能和退出选择。

警告： 强烈建议您不要进行任何更改芯片组默认值。这些默认设置都经过精心挑选双方AMI 和系统制造商提供的绝对最大的性能和可靠性。

系统日期

设置日期。 使用 Tab 键数据元素之间进行切换。

系统时间

设置时间。 使用 Tab 键数据元素之间进行切换。

高级设置

本部分允许您配置和改善你的系统，并允许您根据您的喜好设置一些系统功能。

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Legacy OpROM Support					→ ← Select Screen ↑ ↓ Select Item Enter: Select + - Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit
Launch PXE OpROM				Disabled	
Launch Storage OpROM				Enabled	
▶ PCI Subsystem Settings					
▶ Wake up event setting					
▶ CPU Configuration					
▶ SATA Configuration					
▶ USB Configuration					
▶ Super IO Configuration					
▶ NCT5523D Second Super IO Configuration					
▶ PPM Configuration					

Launch PXE OpROM

启用或禁用对传统网络德维CES引导选项。

Launch Storage OpROM

启用或禁用对传统大容量存储设备与选项ROM引导选项。

PCI 子系统设置

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
PCI Bus Driver Version			V 2.05.01		→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit
PCI ROM Priority			Legacy ROM		
PCI Common Settings					
PCI Latency Timer			32 PCI Bus Clocks		
VGA Palette Snoop			Disabled		
PERR# Generation			Disabled		
SERR# Generation			Disabled		

PCI ROM Priority

如果有多个选项ROM（传统和EFI兼容），指定了PCI选件ROM启动。。

PCI Latency Timer

值被编入PCI延时定时器寄存器。。

VGA Palette Snoop

启用或禁用VGA调色板寄存器Snooping功能。

PERR# Generation

启用或禁用PCI设备生成PERR #。。

SERR# Generation

启用或禁用PCI设备产生SERR #。

唤醒事件设置

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Wake system with Fixed Time			Disabled		→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit
Wake up by PCIE WAKE#			Disabled		

Wake system with Fixed Time

启用或禁用系统唤醒报警事件。当启用时，系统将被唤醒的小时::分钟::秒指定

Wake up by PCIE WAKE#

该选项被禁用，启用

CPU 配置

本节显示了CPU的配置参数

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
CPU Configuration					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit
Processor Type		Intel(R) Atom(TM) CPU N2600			
EMT64		Supported			
Processor Speed		1600 MHz			
System Bus Speed		400 MHz			
Ratio Status		16			
Actual Ratio		16			
System Bus Speed		400 MHz			
Processor Stepping		30661			
Microcode Revision		269			
L1 Cache RAM		2x56 k			
L2 Cache RAM		2x512 k			
Processor Core		Dual			
Hyper-Threading		Supported			
Hyper-Threading		Enabled			
Execute Disable Bit		Enabled			
Limit CPUID Maximum		Disabled			

Hyper-threading

启用Windows XP和Linux（操作系统使超线程技术最优化），并禁用其他OS（操作系统不能使超线程技术最优化）。。

Execute Disable Bit

XD可以防止某些恶意的缓冲区溢出攻击，当与支持的操作系统结合（在Windows Server 2003 SP1，Windows XP SP2中的SuSE Linux 9.2，RedHat企业3更新3。）

Limit CPUID Maximum

禁用Windows XP中。

SATA 控制器

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
SATA Port0		Not Present		→ ← Select Screen ↑ ↓ Select Item Enter: Select + - Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit	
SATA Port1		SM651GE8 BA (7.9GB)			
SATA Controller(s)		Enabled			
Configure SATA as		AHCI			
SATA Port 0 Hot Plug		Disabled			
SATA Port 1 Hot Plug		Disabled			

SATA Controller(s)

SATA Ports (0-3) Device Names if Present and Enabled.

Configure SATA as

Select a configuration for SATA Controller.

- (1) IDE 模式.
- (2) AHCI 模式.

SATA Port 0/1 Hot Plug

指定此端口热插拔。

USB Configuration

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
USB Configuration				→ ← Select Screen ↑ ↓ Select Item Enter: Select + - Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit	
USB Devices:					
None					
Legacy USB Support		Enabled			
EHCI Hand-off		Enabled			
USB hardware delays and time-outs:					
USB Transfer time-out		20 sec			
Device reset time-out		20 sec			
Device power-up delay		Auto			

Legacy USB Support

启用传统USB支持。
AUTO选项禁用传统支持，如果没有USB设备连接。
禁用选项将保持USB设备仅适用于EFI应用程序。

EHCI Hand-off

启用/禁用。 这是一个解决操作系统没有EHCI手动断路支持。 应
声称EHCI驱动程序EHCI归属变动。

USB Transfer time-out

超时值的控制，批量和中断传输。

Device reset time-out

USB大容量存储设备启动单元命令超时。

Device power-up delay

Maximum time the device will take before it properly reports itself to the Host Controller. ‘Auto’ uses default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.

串行端口配置

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Super IO Configuration					
Super IO Chip			SMSC SCH3116		
▶ Serial Port 0 Configuration					
▶ Serial Port 1 Configuration					
▶ Serial Port 2 Configuration					
▶ Serial Port 3 Configuration					
▶ Serial Port 4 Configuration					
▶ Serial Port 5 Configuration					
▶ Parallel Port Configuration					
			→ ← Select Screen		
			↑ ↓ Select Item		
			Enter: Select		
			+- Change Opt		
			F1: General Help		
			F2: Previous Values		
			F3: Optimized Default		
			F4: Save & EXIT		
			ESC: Exit		

Serial Port Configuration

设置串口参数。 用户可以启用/禁用串行端口和选择超级IO设备的最佳设置。

Parallel Port Configuration

设置帕拉米并口。 用户可以启用/禁用并行端口，选择超级IO设备的最佳设置。

NCT5523D Second Super IO Configuration

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
NCT5523D Second Super IO Configuration					
NCT5523D Second Super IO Chip			NCT5523D SecondIo		
▶ Panel Brightness			Percentage-1 (100%)		
			→ ← Select Screen		
			↑ ↓ Select Item		
			Enter: Select		
			+- Change Opt		
			F1: General Help		
			F2: Previous Values		
			F3: Optimized Default		
			F4: Save & EXIT		
			ESC: Exit		

Panel Brightness

面板亮度控制。

PPM 配置

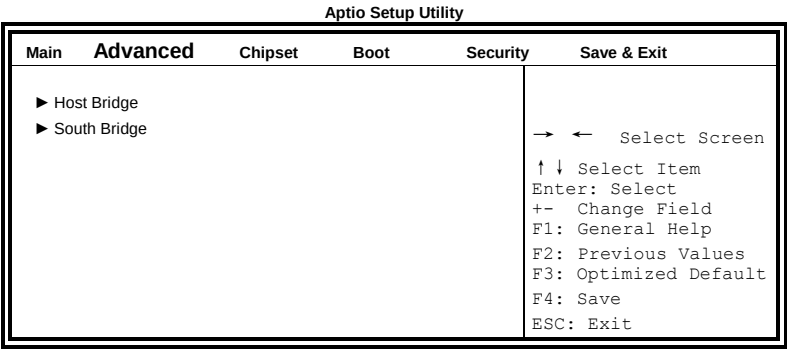
Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
PPM Configuration					
EIST		Disabled		→ ← Select Screen	
				↑ ↓ Select Item	
				Enter: Select	
				+- Change Opt	
				F1: General Help	
				F2: Previous Values	
				F3: Optimized Default	
				F4: Save & EXIT	
				ESC: Exit	

EIST

启用/禁用英特尔SpeedStep。

芯片组 设置

本部分允许您配置和改善你的系统，并允许您根据您的喜好设置一些系统功能。



Host Bridge

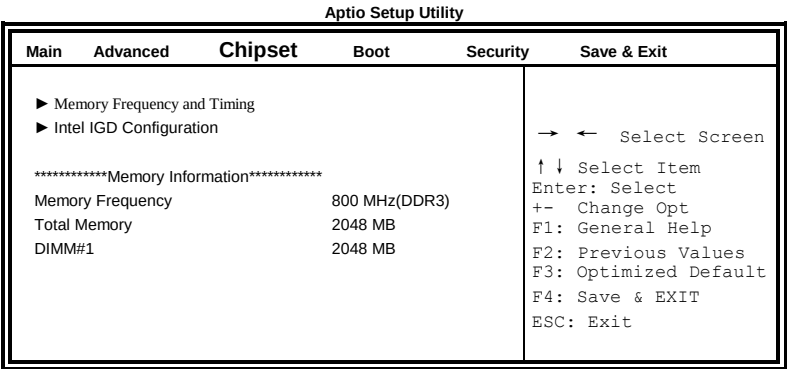
资料显示主桥参数.

South Bridge

显示南桥参数.

Host Bridge

本部分允许您配置主桥芯片组.



内存频率和时序

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Memory Frequency and Timing					→ ← Select Screen
MRC Fast Boot			Enabled		↑ ↓ Select Item
Max TOLUD			Dynamic		Enter: Select
					+ - Change Opt
					F1: General Help
					F2: Previous Values
					F3: Optimized Default
					F4: Save & EXIT
					ESC: Exit

MRC Fast Boot

启用或禁用MRC快速开机。.

Max TOLUD

TOLUD的最大值。 动态分配会根据安装的图形控制器的最大MMIO长度自动调整TOLUD

Intel IGD 配置

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Intel IGD Configuration			Enabled	→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit	
Auto Disable IGD			VBIOS Default		
IGFX-Boot Type			640x480 LVDS		
LCD Panel Type			Auto		
Panel Scalling			Int-LVDS		
Active LFP			256MB		
Fixed Graphics Memory Size					

Auto Disable IGD

在外部GFX自动禁用IGD检测。。

IGFX-Boot Type

选择将POST过程中被激活的视频设备。 这有没有，如果外部图形呈现效果。

LCD Panel Type

选择使用内部图形设备通过选择适当的设置项液晶面板。

Panel Scalling

选择所使用的内部图形设备的LCD面板缩放选项。

Active LFP

选择活动 LFP 配置。

没有 LVDS: VBIOS 不启用 LVDS。

INT-LVDS: VBIOS 使 LVDS 驱动器由集成的编码器。

SDVO 的 LVDS: VBIOS 使 LVDS 驱动器通过 SDVO 编码器。

端口的 eDP-A: LFP 驱动从端口 A 诠释 DisplayPort 的编码器。

Fixed Graphics Memory Size

配置固定的图形内存大小。

South Bridge

本部分允许您配置南桥芯片组。

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
▶ TPT Device ▶ PCI Express Root Port0 ▶ PCI Express Root Port1 ▶ PCI Express Root Port2 ▶ PCI Express Root Port3					
DMI Link ASPM Control			Disabled		→ ← Select Screen ↑ ↓ Select Item Enter: Select + - Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit
PCI-Exp. High Priority Port			Disabled		
High Precision Event Timer Configuration					
High Precision Timer			Enabled		
SLP_SP4 Assertion Width			1-2 Seconds		
Restore AC Power Loss			Power On		

DMI Clink ASPM Control

The control of Active State Power Management on both NB side and SB side of the DMI Link.

PCI-Exp. High Priority Port

The options are Disabled, Port1, Port2, Port3, and Port4.

High Precision Event Timer Configuration

Enable/or Disable the High Precision Event Timer.

SLP_S4 Assertion Stretch Enable

Select a minimum assertion width of the SLP_S4# signal.

Restore AC Power Loss

Select AC power state when power is re-applied after a power failure.

Boot 设置

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Boot Configuration					
Setup Prompt Timeout		1			
Bootup NumLock State		On			
Quiet Boot		Disabled			
Fast Boot		Disabled			
CSM16 Module Version		07.68			→ ← Select Screen
GateA20 Active		Upon Request			↑ ↓ Select Item
Option ROM Messages		Force BIOS			Enter: Select
Interrupt 19 Capture		Enabled			+ - Change Opt
CSM Support		Enabled			F1: General Help
Boot Option Priorities					F2: Previous Values
Boot Option #1			SATA SM: SM651GE8 ...		F3: Optimized Default
					F4: Save & EXIT
					ESC: Exit

Setup Prompt Timeout

Number of seconds to wait for setup activation key.
65535(0xFFFF) means indefinite waiting.

Bootup NumLock State

Select the keyboard NumLock state.

Quiet Boot

Enables/Disables Quiet Boot option.

Fast Boot

Enables/Disables boot with initialization of a minimal set of devices required to launch active boot option. Has no effect for BBS boot options.

GateA20 Active

UPON REQUEST – GA20 can be disabled using BIOS services.
ALWAYS – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

Option ROM Messages

Set display mode for Option ROM. Options: Force BIOS; Keep Current.

Interrupt 19 Capture

Enable: Allows Option ROMs to trap Int 19.

CSM Support

Enables/Disables/Auto CSM Support.

Security 设置

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Password Description If ONLY the Administrator's password is set, then this only limits access to Setup and is only asked for when entering Setup. If ONLY the User's password is set, then this is a power on password and must be entered to boot or enter Setup. In Setup the User will have Administrator rights Administrator Password User Password HDD Security Configuration: HDD 0: SM651GE8 BA				→ ← Select Screen ↑ ↓ Select Item Enter: Select + - Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit	

Administrator Password

Set Setup Administrator Password.

User Password

Set User Password.

保存并退出 设置

Aptio Setup Utility					
Main	Advanced	Chipset	Boot	Security	Save & Exit
Save Changes and Exit Discard Changes and Exit Save Changes and Reset Discard Changes and Reset Save Options Save Changes Discard Changes Restore Defaults Save as User Defaults Restore User Defaults Boot Override SATA SM: SM651GE8 BA					→ ← Select Screen ↑ ↓ Select Item Enter: Select +- Change Opt F1: General Help F2: Previous Values F3: Optimized Default F4: Save & EXIT ESC: Exit

Save Changes and Exit

Exit system setup after saving the changes.

Discard Changes and Exit

Exit system setup without saving any changes.

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Reset

Reset system setup without saving any changes.

Save Changes

Save Changes done so far to any of the setup options.

Discard Changes

Discard Changes done so far to any of the setup options.

Restore Defaults

Restore/Load Defaults values for all the setup options.

Save as User Defaults

Save the changes done so far as User Defaults.

Restore User Defaults

Restore the User Defaults to all the setup options.

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驱动程序安装

本节介绍的软件和驱动程序的安装程序。 软件和驱动程序都包含在主板上。 如果您发现缺少物品，请与您购买产品的供应商。 本节的内容包括以下内容：

英特尔芯片组软件安装实用程序.....	35
VGA驱动程序安装.....	36
Realtek HD音频驱动程序的安装.....	37
网卡驱动程序安装	38
其他设备安装.....	40

重要注意事项:

如何将你的硬盘上安装 Windows XP:

- 1, 假设驱动程序光盘是在 D 盘，为相关文件的路径为 D: \ 英特尔\Cedarview\sataahci， p 租赁将文件复制到软盘上。
- 2, Windows XP 的安装需要 s 到使用 USB 软盘驱动器。
- 3, 当在 W INDOWS XP 的安装画面出现时，按 F6 键并按照程序的指示。
- 4, 当INDOWS XP 的安装画面在 W 停止时，按 S(指定其他设备)，然后插入 SATA 设备驱动程序插入软盘驱动器。 按 Enter 键，然后选择驱动程序---英特尔 (R) NM10 Express 芯片组。 按 Enter 键，并按照程序的指示。

英特尔芯片组软件安装实用程序

The Intel Chipset Drivers should be installed first before the software drivers to enable Plug & Play INF support for Intel chipset components. Follow the instructions below to complete the installation.

1. Insert the disc that comes with the board. Click **Intel** and then **Intel(R) Cedarview Chipset Drivers**. Click **Intel(R) Chipset Software Installation Utility**.



2. When the Welcome screen to the Intel® Chipset Device Software appears, click **Next** to continue.

3. Click **Yes** to accept the software license agreement and proceed with the installation process.

4. On the Readme File Information screen, click **Next** to continue the installation.

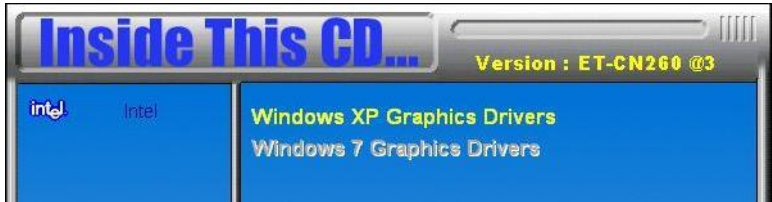
5. The Setup process is now complete. Click **Finish** to restart the computer and for changes to take effect.

VGA驱动程序安装

1. Click **Intel(R) Cedarview Graphics Driver**.



2. Click **Windows XP Graphics Drivers**.



3. When the Intel Embedded Media and Graphics Driver Setup appears, click Installs driver and application files and **Next** to continue.



4. Click **I Agree** and **Yes** to to agree with the license agreement and continue the installation.
5. Then click 2 times **Continue Anyway** to continue the installation.
6. Setup complete. Click **Yes** to restart the computer and for changes to take effect.

Realtek HD 音频驱动程序的安装

1. Click **Realtek High Definition Audio Driver**.



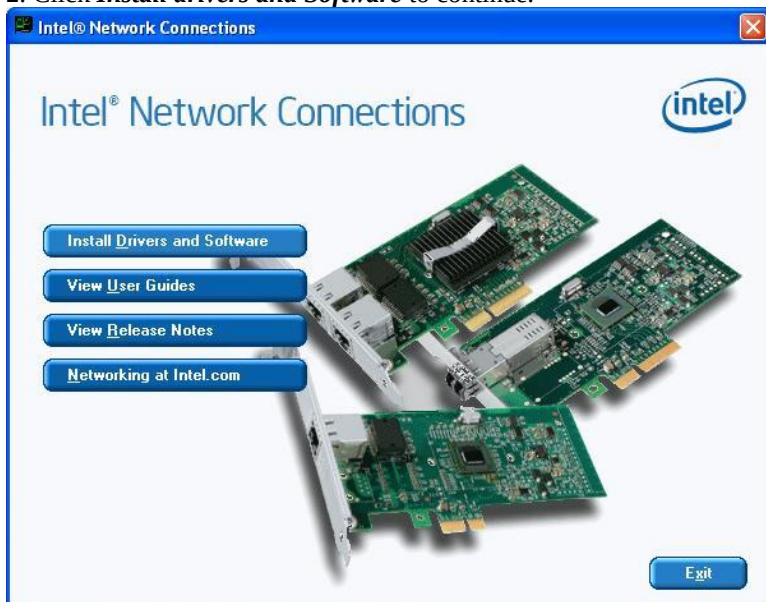
2. On the Welcome to the InstallShield Wizard screen, click **Next** to proceed with and complete the installation process.
3. Restart the computer when prompted.

网卡驱动程序安装

1. Click **Intel(R) PRO LAN Network Drivers**.



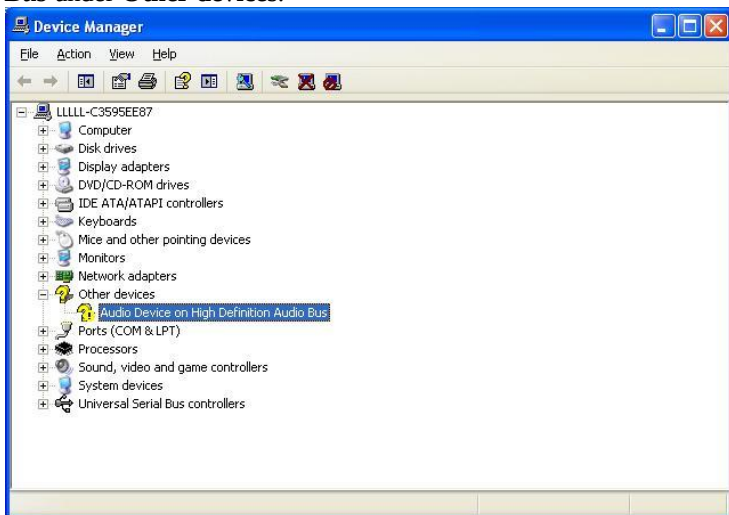
2. Click **Install drivers and Software** to continue.



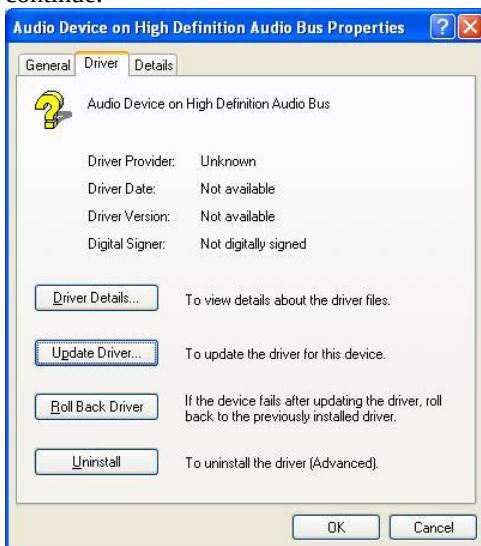
3. In the Welcome screen, click **Next**.
4. In the License Agreement screen, click ***I accept the terms in license agreement*** and **Next** to accept the software license agreement and proceed with the installation process.
5. Click the checkbox for **Drivers** in the Setup Options screen to select it and click **Next** to continue.
6. When the Ready to Install the Program screen appears, click **Install** to continue.
7. When InstallShield Wizard is complete, click **Finish**.

其他设备安装

1. In the Windows operating system, go to the Device Manager.
2. As shown below, click the **Audio Device on High Definition Audio Bus** under **Other devices**.

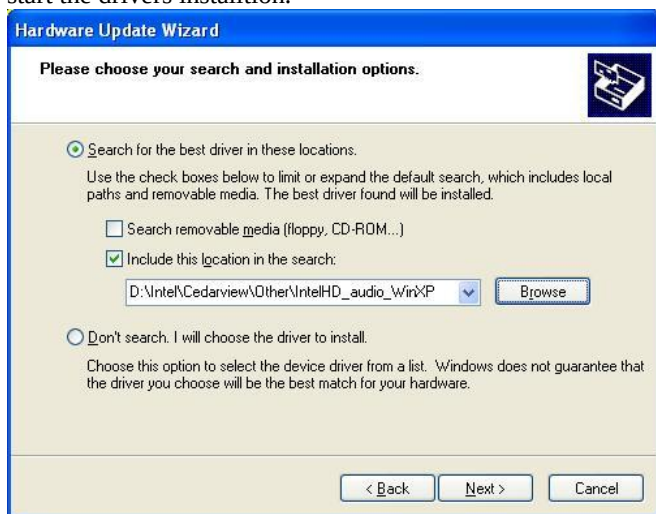


3. In the following window, click the **Update Driver** and click **OK** to continue.



4. In the Hardware Update Wizard, select **No, not this time** and click **Next** to continue. Then select **Install from a list of specific location (Advanced)** and click **Next** to continue.

5. Click **Browse** to find the driver's path in the CD provided - **Intel\Cedarview\Other\IntelHD_audio_WinXP**. Then click **Next** to start the drivers installation.



6. Then click **Finish** after the wizard has finished installing the software for Intel HD Audio device.

附录

A. I/O端口地址映像

系统中的每个外设分配的一组I/O端口地址，这也成为设备的身份。下表列出了使用的I/O端口地址

Address	Device Description
0000h-0CF7h	PCI bus
0000h-0CF7h	Direct memory access controller
0020h-0021h	Programmable interrupt controller
0024h-0025h	Programmable interrupt controller
0028h-0029h	Programmable interrupt controller
002Ch-002Dh	Programmable interrupt controller
0030h-0031h	Programmable interrupt controller
0034h-0035h	Programmable interrupt controller
0038h-0039h	Programmable interrupt controller
003Ch-003Dh	Programmable interrupt controller
0040h-0043h	System timer
0050h-0053h	System timer
0060h-0060h	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
0064h-0064h	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
0070h-0070h	System CMOS/real time clock
0081h-0091h	Direct memory access controller
0093h-009Fh	Direct memory access controller
00A0h-00A1h	Programmable interrupt controller
00A4h-00A5h	Programmable interrupt controller
00A8h-00A9h	Programmable interrupt controller
00ACh-00ADh	Programmable interrupt controller
00B0h-00B1h	Programmable interrupt controller
00B4h-00B5h	Programmable interrupt controller
00B8h-00B9h	Programmable interrupt controller
00BCh-00BDh	Programmable interrupt controller
00C0h-00DFh	Direct memory access controller
00F0h-00F0h	Numeric data processor
0274h-0277h	ISAPNP Read Data Port
0279h-0279h	ISAPNP Read Data Port

Address	Device Description
02E0h-02E7h	Communications Port (COM6)
02E8h-02EFh	Communications Port (COM4)
02F0h-02F7h	Communications Port (COM5)
02F8h-02FFh	Communications Port (COM2)
0378h-037Fh	Printer Port (LPT1)
03B0h-03BBh	Intel Corporation Atom? N2000/D2000 Series Embedded Media and Graphics Driver
03C0h-03DFh	Intel Corporation Atom? N2000/D2000 Series Embedded Media and Graphics Driver
03E8h-03EFh	Communications Port (COM3)
03F8h-03FFh	Communications Port (COM1)
04D0h-04D1h	Programmable interrupt controller
0A79h-0A79h	ISAPNP Read Data Port
0D00h-FFFFh	PCI bus
E000h-EFFFh	Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
E000h-EFFFh	Intel(R) 82574L Gigabit Network Connection
F000h-F01Fh	Intel(R) N10/ICH7 Family SMBus Controller - 27DA
F020h-F02Fh	Intel(R) NM10 Express Chipset
F040h-F05Fh	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
F060h-F07Fh	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
F080h-F09Fh	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
F0A0h-F0BFh	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
F0C0h-F0C3h	Intel(R) NM10 Express Chipset
F0D0h-F0D7h	Intel(R) NM10 Express Chipset
F0E0h-F0E3h	Intel(R) NM10 Express Chipset
F0F0h-F0F7h	Intel(R) NM10 Express Chipset
F100h-F107h	Intel Corporation Atom? N2000/D2000 Series Embedded Media and Graphics Driver

B. 中断请求线（IRQ）

外围设备使用的中断请求线所需的服务通知CPU。下表显示了所使用的设备的IRQ。.

Level	Function
IRQ 0	System timer
IRQ 1	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
IRQ 3	Intel(R) N10/ICH7 Family SMBus Controller - 27DA
IRQ 4	Communications Port (COM1)
IRQ 4	Communications Port (COM2)
IRQ 4	Communications Port (COM3)
IRQ 4	Communications Port (COM4)
IRQ 4	Communications Port (COM6)
IRQ 4	Communications Port (COM5)
IRQ 8	System CMOS/real time clock
IRQ 9	Microsoft ACPI-Compliant System
IRQ 12	Microsoft PS/2 Mouse
IRQ 13	Numeric data processor
IRQ 16	Intel Corporation Atom? N2000/D2000 Series Embedded Media and Graphics Driver
IRQ 16	Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
IRQ 16	Intel(R) 82574L Gigabit Network Connection
IRQ 16	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CB
IRQ 18	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27CA
IRQ 19	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C9
IRQ 19	Intel(R) NM10 Express Chipset
IRQ 22	Microsoft UAA Bus Driver for High Definition Audio
IRQ 23	Intel(R) N10/ICH7 Family USB Universal Host Controller - 27C8
IRQ 23	Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC

