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# ACS-2675C Box PC User Manual

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V1.0

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15F-1, No.186, Jian Yi Road, Zhonghe District, New Taipei City 235, Taiwan Tel: 886-2-82262881 Fax: 886-2-82262883 E-mail: <u>aplex@aplex.com.tw</u> URL: <u>www.aplex.com.tw</u> This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, it may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

Electric Shock Hazard – Do not operate the machine with its back cover removed. There are dangerous high voltages inside.

#### Disclaimer

This information in this document is subject to change without notice. In no event shall Aplex Technology Inc. be liable for damages of any kind, whether incidental or consequential, arising from either the use or misuse of information in this document or in any related materials.

# Packing List

Accessories (as ticked) included in this package are:	
AC power cable	
Driver & manual CD disc	
Other	_(please specify)

### **Safety Precautions**

Follow the messages below to prevent your systems from damage:

- Avoid your system from static electricity on all occasions.
- Prevent electric shock. Don't touch any components of this card when the card is power-on. Always disconnect power when the system is not in use.
- Disconnect power when you change any hardware devices. For instance, when you connect a jumper or install any cards, a surge of power may damage the electronic components or the whole system.

#### ACS-2675C User Manual

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# 1.1 Specifications

Specs	ACS-2675C	
CPU	Intel Socket P Core 2 Duo 45nm Processor, up to P8600 2.4GHz	
	FSB1066/800/667MHz	
System Chipset	Intel GM45 + Intel ICH9M-E	
System Memory	2 x 204 Pin DDR3 SO-DIMM slot, up to 8GB 800/1066 SDRAM	
External I/O Port	Rear Side:	
	• 2 x DB-9 RS-232 COM1/2	
	• 1 x DB-15 VGA	
	● 1 x HDMI	
	• 2 x RJ45 GbE LAN	
	• 4 x USB 2.0	
	• 1 x Mic-in, Line-Out	
	<ul> <li>1 x DC Power input 3 Pin terminal block connector</li> </ul>	
	<ul> <li>1 x Additional terminal block for switch</li> </ul>	
	• 2 x LED Indication	
	Front Side:	
	• 1 x Power on/off	
	<ul> <li>1 x 5 Pin terminal block for GPIO (option)</li> </ul>	
	• 1 x RS-232 COM4	
	<ul> <li>1 x RS-422/485 COM3, default RS-485</li> </ul>	
	• 2 x USB 2.0	
Expansion Slots	2 x PCI / 1 x PCI + 1 x PCIe x1 for option	
Storage	• 2 x 2.5" SATA HDD Space	
	• 1 x CF Slot (External)	
Power Supply	DC 9~32V	
Construction / Color	Aluminum Molding Heat sink + Steel Chassis / Silver	
Mounting	Wall mount	
Dimensions	268(W)x195(H)x125.7(D) mm	
Operating Temperature	0~50 °C	
Storage Temperature	-20~60 °C	
Storage Humidity	10%~90%@ 40°C, non-condensing	
Certificate	CE / FCC Class A	

# **1.2 Dimensions**

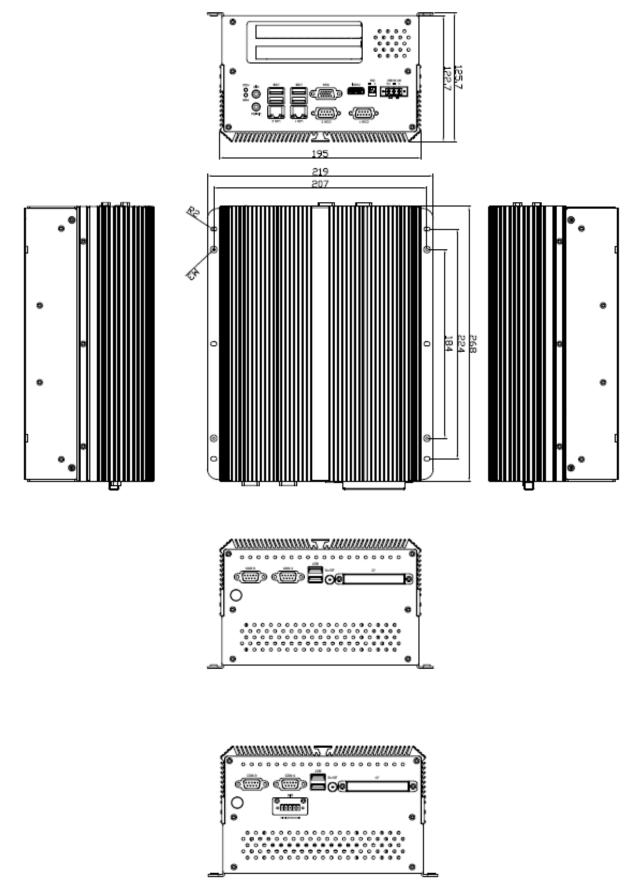


Figure 1.1: Dimensions of the ACS-2675C

# 1.3 Installation of HDD

#### Step 1

There are 9 screws to deal with when enclosing or removing the chassis.



#### Step 2

Get the HDD screwed to the bracket with the four screws as shown by the arrows in the picture.

Connect the cable to the HDD as shown in the picture, making sure the red stripe of the cable is rightly positioned





#### Step 3

That's how it should look after it has been installed.



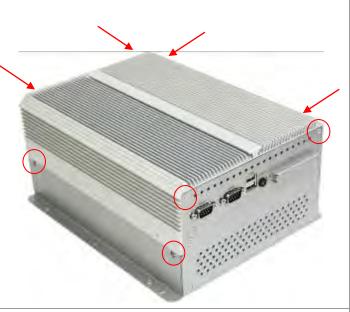


# 1.4 Installation of PCI Addon

#### Step 1

There are 2 screws to deal with when enclosing or removing the chassis.





#### Step 2

Now slide the addon into the PCI slot, making sure the golden part faces the slot. When the part that is interfaced together come into the right contact, slightly push the addon into the rail of the slot.

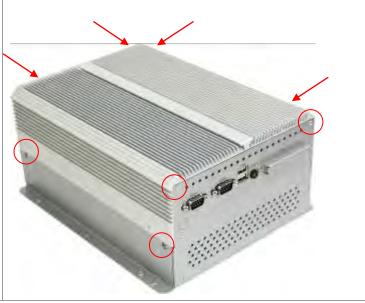
After sliding the addon into the PCI expansion slot, get the one screws as circled tightened to finish the connection.

#### Step 3

To finish the job, just fasten the 2 screws as shown in the picture.







# **1.5 Brief Description of the ACS-2675C**

The ACS-2675C is a Fan-less High-efficiency Thermal Solution and ultra-compact standalone Box PC, powered by an Intel Core 2 Duo with 45nm, up to P8600 2.4GHz, and supporting 6 x USB 2.0 ports, 4 x COM Ports, 1 x VGA, 1 x HDMI, support PCI or PCIe Expansion, 2 x SATA HDD space, 1 x external CF slot, 9-32V wide-ranging power input etc. It is ideal for kiosks, POS systems, airport terminal controllers, digital entertainments, etc. and running factory operations from small visual interface and maintenance applications to large control process applications. The ACS-2675C works very well along with any of our Display Monitor series and it absolutely can provide an easy way to perform control and field maintenance.



Figure 1.2: Front View of ACS-2675C



Figure 1.3: Rear View of ACS-2675C

# Chapter 2\_

### 2.1 Mainboard

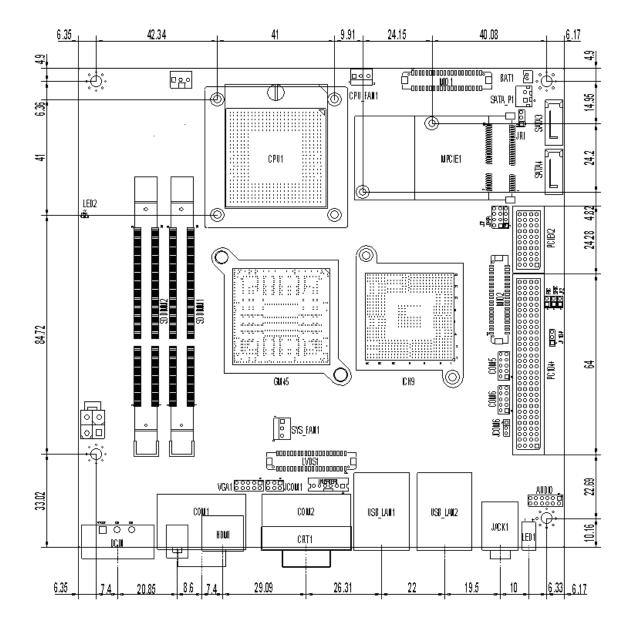


Figure 2.1: Mainboard Dimensions

### 2.2 Installations

ASB-M801 is a Mini-ITX industrial motherboard developed on the basis of Intel GM45 and ICH9M, which provides abundant peripheral interfaces to meet the needs of different customers. Also, it features dual 1000M LAN port, 6-COM port and one Mini PCIE configuration. To satisfy the special needs of high-end customers, PC104+ port (capable of adjusting IO voltage) richer extension functions. The product is widely used in various sectors of industrial control.



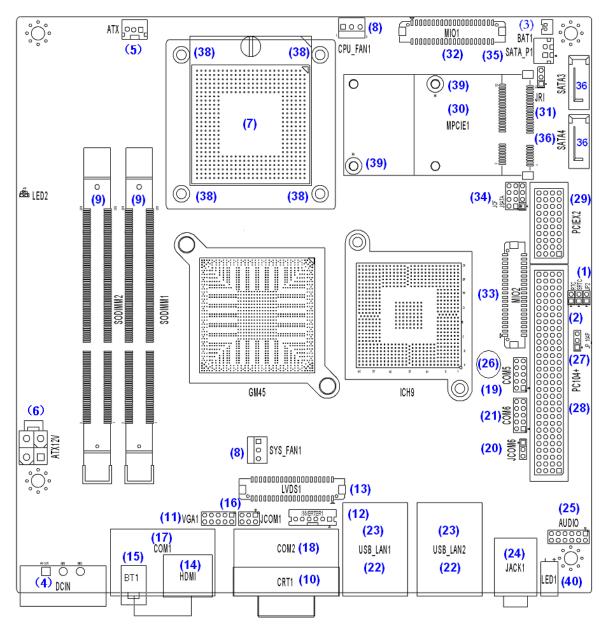


Figure 2.2: Jumpers and Connectors Location\_ Board Top

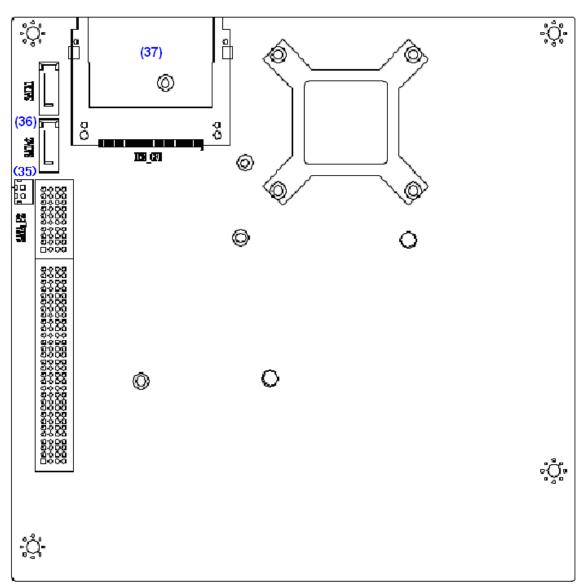


Figure 2.3: Jumpers and Connectors Location\_ Board Bottom

#### 1. JP2:

(2.0mm Pitch 1X2 Pin Header), ATX Power and Auto Power on jumper setting.

JP2	Mode
Open	ATX Power
Close	Auto Power on
	(Default)

#### 2. RTC/SRTC:

(2.0mm Pitch 1X2 Pin Header)CMOS clear jumper, CMOS clear operation will permanently reset old BIOS settings to factory defaults.

Open	NORMAL
	(Default)
Close 1-2	Clear CMOS



#### Procedures of CMOS clear:

- a) Turn off the system and unplug the power cord from the power outlet.
- b) To clear the CMOS settings, use the jumper cap to close pins1 and 2 for about 3 seconds then reinstall the jumper clip back to pins open.
- c) Power on the system again.
- d) When entering the POST screen, press the <F1> or <DEL> key to enter CMOS Setup Utility to load optimal defaults.
- e) After the above operations, save changes and exit BIOS Setup.

#### 3. BAT1:

(1.25mm Pitch 1X2 box Pin Header) 3.0V Li battery is embedded to provide power for CMOS.

Pin#	Signal
	Name
Pin1	VBAT
PIN2	Ground

#### 4. DCIN:

(5.08mm Pitch 1x3 Pin Connector), DC9V ~ DC32V System power input connector ·



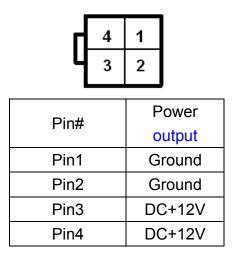
Pin#	Power
	Input
Din1	DC+9V~32
Pin1	V
Pin2	Ground
Pin3	Ground

	Location	Location	Location (5.4.6.)
Power Mode	(5.4.4.)	(5.4.5.)	ATX

	DCIN	ATX12V	
AT	input	output	
(Default)	DC9~32V	DC 12V	NC

#### 5. ATX12V:

(2x2 Pin Connector), DC12V System power output connector.



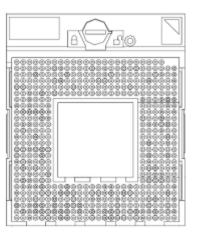
#### 6. ATX (option):

(2.0mm Pitch 1X3 box Pin Header), connect PSON and 5VSB and Ground signal, support ATX Power model. Reserved.

Pin#	Signal Name
Pin1	ATX PSON
PIN2	ATX Ground
PIN3	ATX 5VSB

#### 7. CPU1:

(Socket P), installing the CPU Socket.



#### 8. CPU\_FAN1/SYS\_FAN1:

(2.54mm Pitch 1x3 Pin Header), Fan connector, cooling fans can be connected directly for use. You may set the rotation condition of cooling fan in menu of BIOS CMOS Setup.



Pin#	Signal Name
1	Ground
2	VCC
3	Rotation
	detection

0	
6	

Note:

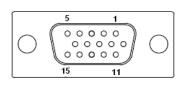
Output power of cooling fan must be limited under 5W.

#### 9. SODIMM1/SODIMM2:

(SO-DIMM 204Pin socket), DDRIII memory socket, the socket is located at the Top of the board and supports 204Pin 1.5V DDRIII 800/1066MHz FSB SO-DIMM memory module up to 8GB.

#### 10. CRT1:

(CRT DB15 Connector ),Video Graphic Array Port, provide high-quality video output. **they can not work at the same time for CRT1 and VGA1**.



#### 11. VGA1:

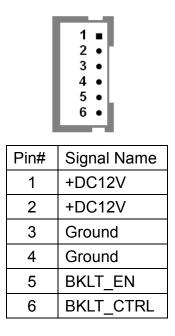
(CRT 2.0mm Pitch 2X5 Pin Header), Video Graphic Array Port, Provide 2x5Pin cable to VGA Port, **they can not work at the same time for CRT and VGA1**.

Signal Name	Pin#	Pin#	Signal Name
CRT_RED	1	2	Ground
CRT_GREEN	3	4	Ground
CRT_BLUE	5	6	VGA_EN
CRT_H_SYN	7	8	CRT_DDCDAT

С			A
CRT_V_SYNC	9	10	CRT_DDCCL
			К

#### **12.** INVERTER1:

(2.0mm Pitch 1x6 box Pin Header), Backlight control connector for LVDS1.





Note:

Pin6 is backlight control signal, support DC or PWM mode, mode select at BIOS CMOS menu.

#### **13.** LVDS1:

(1.25mm Pitch 2x20 Connector), For 18/24-bit LVDS output connector, Fully supported by Intel GM45 chipset, the interface features dual channel 18/24-bit output.

Signal Name	Pin#	Pin#	Signal Name
VDD5	2	1	VDD5
Ground	4	3	Ground
VDD33	6	5	VDD33
LB_D0_N	8	7	LA_D0_N
LB_D0_P	10	9	LA_D0_P
Ground	12	11	Ground
LB_D1_N	14	13	LA_D1_N
LA_D1_P	16	15	LA_D1_P
Ground	18	17	Ground
LB_D2_N	20	19	LA_D2_N

22	21	LA_D2_P
24	23	Ground
26	25	LA_CLK_N
28	27	LA_CLK_P
30	29	Ground
32	31	LVDS_DOC_CLK
34	33	Ground
36	35	LA_D3_N
38	37	LA_D3_P
40	39	NC
	24 26 28 30 32 34 36 38	24232625282730293231343336353837

#### **14. HDMI:**

(HDMI 19P Connector), High Definition Multimedia Interface connector.



#### **15.** BT1:

**POWER on/off Button**, They are used to connect power switch button. The two pins are disconnected under normal condition. You may short them temporarily to realize system startup & shutdown or awaken the system from sleep state.

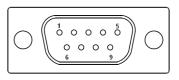
#### 16. JCOM1:

(2.0mm Pitch 2x3 Pin Header),COM1 jumper setting, pin 1~6 are used to select signal out of pin 9 of COM1 port.

JP3 Pin#	Function	
Close 1-2	COM1 RI (Ring Indicator)	
	(default)	
Close 3-4	COM1 Pin9=+5V	
	(option)	
Close 5-6	COM1 Pin9=+12V	
	(option)	

#### **17.** COM1:

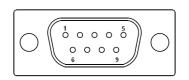
(**Type DB9**),Rear serial port, standard DB9 Male serial port is provided to make a direct connection to serial devices. COM1 port is controlled by pins No.1~6 of JCOM1,select output Signal RI or 5V or 12v, For details, please refer to description of JCOM1.



Pin#	Signal Name
1	DCD# (Data Carrier Detect)
2	RXD (Received Data)
3	TXD (Transmit Data)
4	DTR (Data Terminal Ready)
5	Ground
6	DSR (Data Set Ready)
7	RTS (Request To Send)
8	CTS (Clear To Send)
9	JCOM1 select Setting

#### **18.** COM2:

(**Type DB9**), Rear serial port, standard DB9 Male serial port is provided to make a direct connection to serial devices.



Pin#	Signal Name				
1	DCD# (Data Carrier Detect)				
2	RXD (Received Data)				
3	TXD (Transmit Data)				
4	DTR (Data Terminal Ready)				
5	Ground				
6	DSR (Data Set Ready)				
7	RTS (Request To Send)				
8	CTS (Clear To Send)				
9	RI (Ring Indicator)				

#### **19.** COM5:

(2.0mm Pitch 2X5 Pin Header),COM5 Port, standard RS232 ports are provided. They can be used directly via COM cable connection.

Signal	Pin#	Pin#	Signal Name
Name			

DCD	1	2	RXD
TXD	3	4	DTR
Ground	5	6	DSR
RTS	7	8	CTS
RI	9	10	NC

#### **20.** JCOM6:

(2.0mm Pitch 1x3 Pin Header) COM6 setting jumper, pin 1~3 are used to select signal out of pin 10 of COM6 port.

JP1 Pin#	Function			
Close 1-2	COM5 Pin10=+5V (default)			
Close 2-3	COM5 Pin10=+12V	(option)		

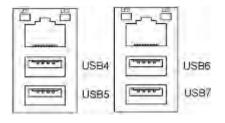
#### **21.** COM6:

(2.0mm Pitch 2X5 Pin Header), COM6 Port, standard RS232 ports are provided. They can be used directly via COM cable connection. COM6 port is controlled by pins No.1~3 of JCOM6, select output Signal 5V or 12v, For details, please refer to description of **JCOM6**.

Signal	Pin#	Pin#	Signal Name
Name			
DCD	1	2	RXD
TXD	3	4	DTR
Ground	5	6	DSR
RTS	7	8	CTS
RI	9	10	JCOM6
			select Setting

#### **22.** USB4/USB5/USB6/USB7:

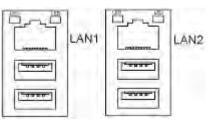
(Double stack USB type A), Rear USB connector, it provides up to 4 USB2.0 ports, speed up to 480Mb/s.



#### **23.** LAN1/LAN2:

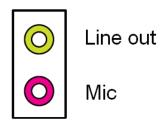
(RJ45 Connector), Rear LAN port, Two standard 10/100/1000M RJ-45 Ethernet ports are provided. Used Intel 82574L chipset, LINK LED (green) and ACTIVE LED (yellow)

respectively located at the left-hand and right-hand side of the Ethernet port indicate the activity and transmission state of LAN.



#### **24.** JACK1:

(Diameter 3.5mm Double stack Jack), HD Audio port, An onboard Realtek ALC662 codec is used to provide high quality audio I/O ports. Line Out can be connected to a headphone or amplifier, MIC is the port for microphone input audio.



#### **25.** AUDIO:

(2.0mm Pitch 2X6 Pin Header), Front Audio, An onboard Realtek ALC662 codec is used to provide high-quality audio I/O ports. Line Out can be connected to a headphone or amplifier. Line In is used for the connection of external audio source via a Line in cable. MIC is the port for microphone input audio.

Signal Name	Pin#	Pin#	Signal Name
FRONT_OUTP-L	1	2	FRONT_OUTP_
			R
FRONT_OUTN_	3	4	FRONT_OUTN_
L			R
FRONT_JD	5	6	LINE1_JD
LINE_IN_L	7	8	LINE1_IN_R
MIC2_IN_L	9	10	MIC2_IN_R
Ground	11	12	MIC2_JD

#### 26. BZ:

Onboard buzzer.

#### 27. JP\_104P:

(2.0mm Pitch 1X3 Pin Header) PC104+ port voltage selection jumper, select voltage

for PCI-104 Plus devices. The default for this jumper is "all open", meaning the user must select the voltage to be used.

JP_104P Pin#	PC104+ VIO Voltage
All Open	Default
Close 1-2	+3.3V PCI Card
Close 2-3	+5V PCI Card

#### **28. PC104**+ (option):

(4x30 Pin), PC104 plus connector, it conforms to standard PC104+ specification. Can expand support four PCI devices.

ASB-M801T/ET : PC104+ connector in the top.

ASB-M801B/EB : PC104+ connector in the Bottom.

#### **29. PCIEX2** (option):

(4x10 Pin), PCIe bus connector, it conforms to standard PCI Express x1 specification.

Ca n expand support two PCIe devices.

ASB-M801T/ET : PCIEX2 connector in the top.

ASB-M801B/EB : PCIEX2 connector in the Bottom.

MODEL	PC104+ / PCIEX2
ASB-M801T	Тор
ASB-M801ET	Тор
ASB-M801B	Bottom
ASB-M801EB	Bottom

#### **30.** MPCIE1:

(Socket 52Pin), mini PCIe socket, it is located at the top, it supports mini PCIe devices with USB2.0, SMBUS and PCIe signal. MPCIe card size is 30x30mm or 30x50.95mm.

#### **31.** JRI:

(2.0mm Pitch 1X3 Pin Header), Wake up setting jumper. pin 1~2 are used to select signal for COM4 Wake up, pin 2~3 are used to select signal for PCI devices Wake up,

JRI Pin#	Function
Close 1-2	PCI_PME for COM4
Close 2-3	PCI-PME for PCI

#### **32.** MIO1:

(1.25mm Pitch 2x20 Connector), For expand output connector, It provides two RS232

ports or one RS485 port, three USB ports, one power led, one power button, via a dedicated cable connected **to TB-522 MIO1.** 

Functio	Signal Name	Pin#	Pin#	Signal Name	Function
n	422RX+	1	2	485+ / 422TX+	
	422RX-	3	4	485- / 422TX-	COM3
COM3	Ground	5	6	NC	RS422 or
	NC	7	8	NC	RS485
	NC	9	10	5V_S5	
	DCD4-	11	12	RXD4	
	TXD4	13	14	DTR4-	
COM4	Ground	15	16	DSR4-	COM4
	RTS4-	17	18	CTS4-	
	RI4-	19	20	5V_S5	
	5V_USB_9	21	22	5V_USB_1011	
	USB9_N	23	24	USB10_N	
USB9	USB9_P	25	26	USB10_P	USB10
	Ground	27	28	Ground	
	Ground	29	30	Ground	
	5V_USB_101	31	32	PWR_LED+	Power
	1				LED
USB11	USB11_N	33	34	PWR_LED-	
	USB11_P	35	36	MIO_PSON	Power
	Ground	37	38	Ground	Button
	Ground	39	40	Ground	

#### **33.** MIO2:

(1.25mm Pitch 2x20 Connector), Front panel connector.

Function	Signal Name	Pin#	Pin#	Signal Name	Function
H_LED+	HDD_LED	1	2	PWR-LED	P_LED+
H_LED-	Ground	3	4	Ground	P_LED-
RESET-	Ground	5	6	MIO_PSON-	PSON+
RESET	RESET	7	8	Ground	PSON-
+					
BUZZER+	BUZZER+	9	10	BUZZER-	BUZZER-
	GPIO_IN_1	11	12	GPIO_OUT_1	
GPIO_I	GPIO_IN_2	13	14	GPIO_OUT_2	GPIO_OU
Ν	GPIO_IN_3	15	16	GPIO_OUT_3	Т

	GPIO_IN_4	17	18	GPIO_OUT_4	
	Ground	19	20	5V_S5	
PS2_K/	Ps2_KBDATA	21	22	PS2_MSDATA	PS2_Mous
В	PS2_KBCLK	23	24	PS2_MSCLK	е
	5V_USB_23	25	26	5V_USB_23	
USB2	USB2_N	27	28	USB3_N	USB3
	USB2_P	29	30	USB3_P	
	Ground	31	32	Ground	
	5V_USB_01	33	34	5V_USB_01	
USB0	USB0_N	35	36	USB1_N	USB1
	USB0_P	37	38	USB1_P	
	Ground	39	40	Ground	

- Pin1-3: **HDD LED**, They are used to connect hard disk activity LED. The LED blinks when the hard disk is reading or writing data.
- Pin2-4: **POWER LED**, They are used to connect power LED. When the system is powered on or under S0/S1 state, the LED is normally on, when the system is under S4/S5 state, the LED is off

under S4/S5 state, the LED is off.

- Pin5-7: **RESET Button**, They are used to connect reset button. The two pins are disconnected under normal condition. You may short them temporarily to realize system reset.
- Pin6-8: **POWER on/off Button**, They are used to connect power switch button. The two pins are disconnected under normal condition. You may short them temporarily to realize system startup & shutdown or awaken the system from sleep state.
- Pin9-10: **BUZZER**, They are used to connect an external buzzer.
- Pin11-18: **GPIO IN/GPIO OUT,** General-purpose input/output port, it provides a group of self-programming interfaces to customers for flexible use.
- Pin19-24: **PS2 KB/MS**, PS/2 keyboard and mouse port, the port can be connected to PS/2 keyboard and mouse via a dedicated cable for direct used.

Pin25-40: USB0/USB1/USB2/USB3, Front USB connector, it provides 4 USB ports

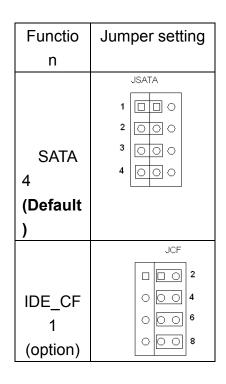


Note:

When connecting LEDs and buzzer and GPIO and USB, pay special attention to the signal polarity. Make sure that the connector pins have a one-to-one correspondence with chassis wiring, or it may cause boot up failure.

#### **34.** JCF/JSATA:

(2.0mm Pitch 3x4 Pin Header), it provides selectable IDE\_CF1 or SATA4 signal output control.



#### **35.** SATA\_P1/SATA\_P2:

(2.5mm Pitch 1x2 box Pin Header), Two onboard 5V output connectors are reserved to provide power for SATA devices.

Pin#	Signal
	Name
1	+DC5V
2	Ground



#### Output current of the connector must not be above 1A.

#### **36.** SATA1/SATA2/SATA3/SATA4:

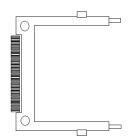
(SATA 7P), SATA Connectors, Four SATA connectors are provided, with transfer speed

up to 3.0Gb/s. (Option): ASB-M801ET/EB: SATA1/SATA2/SATA3 drives supporting RAID 0 or RAID 1 function.

MODEL	SATA Color	RAID
ASB-M801T	Black:	No
ASB-M801B	SATA1/SATA2/SATA3/SATA4	
ASB-M801ET	Blue: SATA1/SATA2/SATA3	Yes
ASB-M801EB	Black: SATA4	

#### **37.** IDE\_CF1 (Option):

<u>(CF\_Card socket)</u>, it is located at the bottom of the board and serves as an insert interface for Type I and Type II Compact Flash card. The operating voltage of CF card can be set as 3.3V or 5V,**The default setting of the product is 3.3V**. Please refer to description of JCF/JSATA Jumper setting.



#### **38.** CPU SCREW HOLES:

CPU FAN SCREW HOLES. Four screw holes for fixed CPU Cooler assemble.

#### **39.** H5/H6:

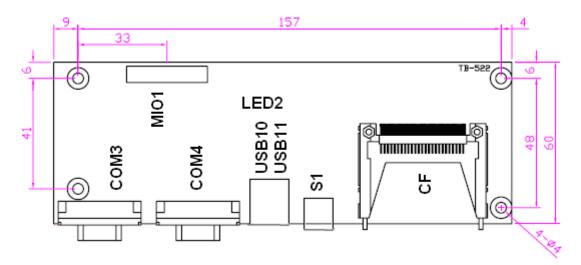
MPCIE1 SCREW HOLES, H5 for mini PCIE card (30mmx30mm) assemble. <u>H6 for</u> mini PCIE card (30mmx50.95mm) assemble.

#### **40.** LED1:

LED STATUS. Green LED for Motherboard Standby Power Good status, Yellow LED for HDD status.

#### 41. TB-522 (Option):

ASB-M801 I/O Card, via a dedicated cable connected to ASB-M801 MIO1.



#### LED2:

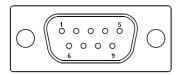
POWER LED status.

#### **S1**:

**PWR BT: POWER on/off Button**, They are used to connect power switch button. The two pins are disconnected under normal condition. You may short them temporarily to realize system startup & shutdown or awaken the system from sleep state. **PWR LED:** <u>POWER LED</u> status.

#### COM3:

(Type DB9),I/O serial port, it provides selectable RS422/RS485 serial signal output.



RS422 Type (0	option)	RS	485 Type (option)
Signal Name	Pin#	Pin#	Signal Name
422_RX+	1	1	NC
422_RX-	2	2	NC
422_TX-	3	3	485-
422_TX+	4	4	485+
Ground	5	5	Ground
NC	6	6	NC
NC	7	7	NC
NC	8	8	NC
NC	9	9	NC



Note:

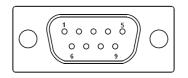
Use COM3 RS422 or RS485 Function, please enter BIOS CMOS Setup. Path: BIOS Setup Utility \ Advanced /Super IO Configuration \ Serial Port3 Type:

[RS-485]

[RS-422]

#### COM4:

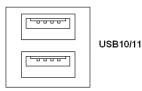
(**Type DB9**), Rear serial port, standard DB9 Male serial port is provided to make a direct connection to serial devices.



Pin#	Signal Name				
1	DCD# (Data Carrier Detect)				
2	RXD (Received Data)				
3	TXD (Transmit Data)				
4	DTR (Data Terminal Ready)				
5	Ground				
6	DSR (Data Set Ready)				
7	RTS (Request To Send)				
8	CTS (Clear To Send)				
9	RI (Ring Indicator)				

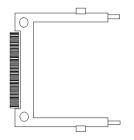
#### USB10,USB11:

(Double stack USB type A), I/O USB connector, it provides up to 2 USB2.0 ports, speed up to 480Mb/s.



CF:

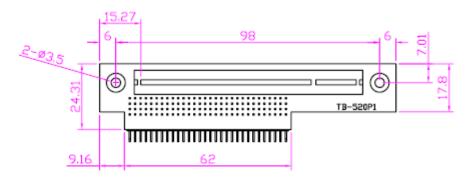
<u>(CF\_Card socket)</u>, it is located at TB-522 and serves as an insert interface for Type I and Type II Compact Flash card. The operating voltage of CF card can be set as 3.3V or 5V. **The default setting of the product is 3.3V**.



#### 42. TB-520P1(option):

TB-520P1 connect to ASB-M801T/ET PC104+ connector, PC104+ is located at the top,

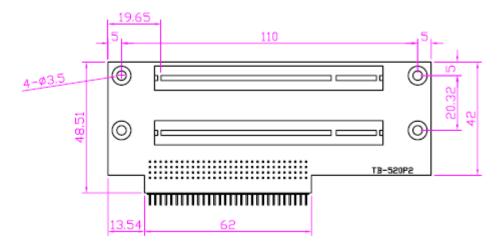
It provides one PCI slot.



#### 43. TB-520P2:

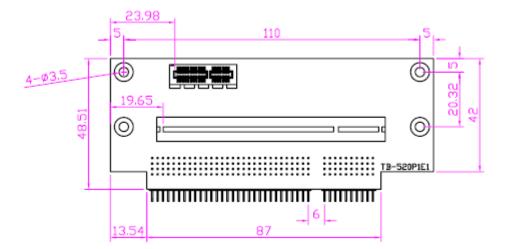
TB-520P1 connect to ASB-M801T/ET PC104+ connector, PC104+ is located at the top,

It provides two PCI slots.



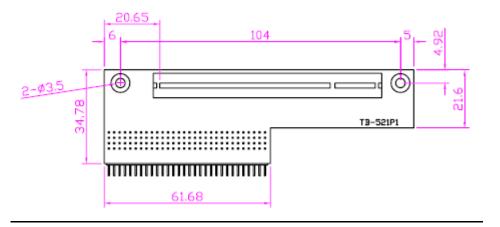
#### 44. TB-520P1E1:

TB-520P1E1 connect to ASB-M801T/ET PC104+ and PCIEX2 connector,PC104+ and PCIEX2 are located at the top, It provides one PCI slot and one PCIE slot.



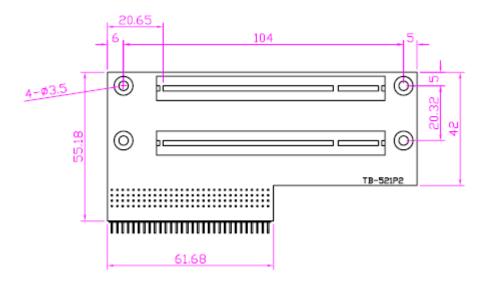
#### 45. TB-521P1:

TB-521P1 connect to ASB-M801B/EB PC104+ connector, PC104+ is located at the Bottom, It provides one PCI slot.



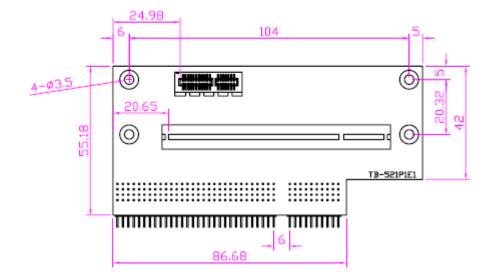
#### 46. TB-521P2:

TB-521P2 connect to ASB-M801B/EB PC104+ connector, PC104+ is located at the Bottom, It provides two PCI slots.



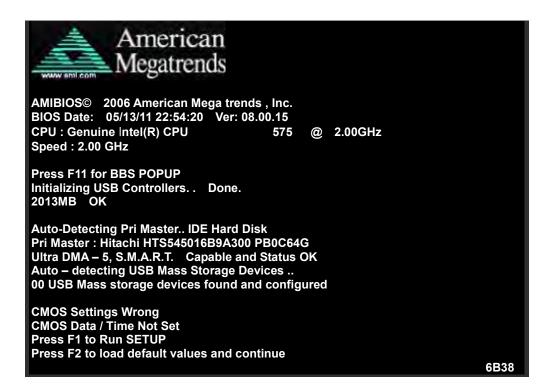
#### 47. TB-521P1E1:

TB-521P1E1 connect to ASB-M801B/EB PC104+ and PCIEX2 connector,PC104+ and PCIEX2 are located at the Bottom, It provides one PCI slot and one PCIE slot.



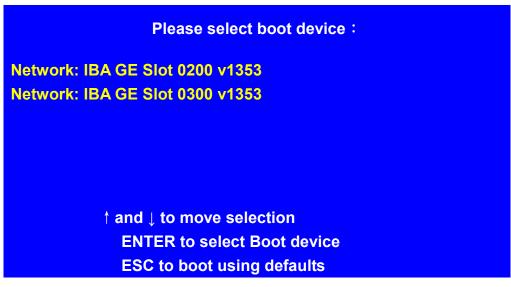
# 3.1 Operations after POST Screen

After CMOS discharge or BIOS flashing operation, the system will display the following screen for your further operation. Press F2 key to continue or F1 key to enter CMOS Setup.



After optimizing and exiting CMOS Setup, the POST screen displayed for the first time is as follows and includes basic information on BIOS, CPU, memory, and storage devices.

Press F11 key to enter Boot Menu during POST, as shown by the following figure.



# 3.2 BIOS SETUP UTILITY

Press [Del] key to enter BIOS Setup utility during POST, and then a main menu containing system summary information will appear.

BIOS SETUP UTILITY								
Main	Advanced	PCIPnP	Boot	Security	Chi	pset	Exit	
System	n Overview	7				User	[ENTER] , [	TAB]
AMIB	IOS					or [8	SHIFT-TAB]	to
Version	: 08.00.	15				Selec	t a field	
Buil	d Date : 0	5/13/11						
ID	:N	1801V001				Use[+	-] or [-] to	
						config	gure system	Time.
Proc	cessor							
Gen	uine Intel(R	) CPU	575	@ 2.00G	Hz			
Spee	ed :200	OMHz				←	Select Scree	en
						$\uparrow \downarrow$	Select Item	
Syst	em Memor	y				+-	Charge Field	d
Size	:19	81MB				Tab	Select Field	
						F1	General He	lp
Syst	em Time		[0(	):01:18]		F10	Save and E	ixit
Syst	em Date			]	Tue	ESC	Exit	
05/15/20	)11]							
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# 3.3 System Overview

		B		JP UTILITY			
Main	Advanced	PCIPnP	Boot	Security	Ch	ipset	Exit
Syste	em Overvie	W				User	[ENTER] <sup>,</sup> [TAB]
AMI	BIOS					or [	SHIFT-TAB] to
Version	n : 08.0	0.15				Seleo	ct a field
Build I	Date : 05/2	13/11					
ID	: M8	01V001				Use[·	+] or [-] to
Proc	essor					confi	gure system Time.
Genuin	e Intel(R) (	CPU	575	@ 2.00GHz	z		
Speed	:2000M	ſHz					
						←	Select Screen
Syste	em Memory	y				$\uparrow \downarrow$	Select Item
Size	:1981	MB				+-	Charge Field
						Tab	Select Field

System Time	[00: <b>0</b> ]	2:28]	F1	General Help	
System Date	[Tue	05/13/2011]	F10	Save and Exit	
			ESC	Exit	
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#### System Time:

Set the system time, the time format is:

Hour : 0 to 23

Minute : 0 to 59

Second: 0 to 59

#### System Date:

Set the system date, the date format is:

**Day**: Note that the 'Day' automatically changes when you set the date.

Month:01 to 12Date:01 to 31Year:2009 to 2099

### 3.4 Advanced Settings

		BI	OS SETUR	UTILITY			
Main	Advanced	PCIPnP	Boot	Security	Ch	ipset	Exit
Adva	nced Setti	ngs				Config	gure CPU
WAR	NING: S	etting wro	ong valu	ies In be	elow		
section	S						
	ma	ay cause sy	stem to	malfunction	on.		
► CPU	J Configura	ition					
► IDE	Configurat	tion					
► Sup	er IO Confi	guration					
► Har	dware Heal	th Configu	ation				
► ACI	PI Configur	ation					
► AHO	CI Configur	cation					
► MPS	S Configura	ation					
► PCI	Express Co	onfiguration	1				
► Smb	oios Config	uration					
► USH	3 Configura	tion				<del>~</del>	Select Screen

	↑↓	Select Item			
	Enter	Charge Field			
	F1	General Help			
	F10	Save and Exit			
	ESC	Exit			
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#### 3.4.1 CPU Configuration

BIOS SETUP UTILITY	
Advanced	
Configure advanced CPU settings	For UP platforms,
Module Version: 3F.10	Leave it enabled.
Manufacturer : Intel	For DP/MP serves,
Genuine Intel(R) CPU 575 @ 2.00GHz	It may use to tune
Frequency :2.00GHz	Performance to the
FSB Speed : 668MHz	Specific application.
Cache L1 :32 KB	
Cache L2 :1024 KB	
Ratio Actual Value :L2	
Hardware Prefetcher [Enabled]	
Adjacent Cache Line Prefetch [Enabled]	
Max CPUID Value Limit [Disabled]	← Select Screen
Execute-Disable Bit Capability [Enabled]	↑↓ Select Item
Intel(R) C-SATAE tech [Disabled]	+- Charge Field
	F1 General Help
	F10 Save and Exit
	ESC Exit
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#### Hardware Prefetcher:

[Enabled] [Disabled]

#### Adjacent Cache Line Prefetch:

# [Enabled]

[Disabled]

## Max CPUID Value Limit:

[Disabled] [Enabled]

# Execute-Disable Bit Capability: [Enabled]

[Disabled]

# Intel(R) C-STATE tech:

[Disabled]

[Enabled]

# 3.4.2 IDE Configuration

BIOS SET		
Advanced		
IDE Configuration		Disabled
SATA#1 Configuration	[Compatible]	Compatible
Configure SATA as	[IDE]	Enhanced
SATA#1 Configuration	[Enhanced]	
► Primary IDE Master	: [Not	
Detected]		
► Primary IDE Slaver	: [Not	
Detected]		
<ul> <li>Secondary IDE Master</li> </ul>	: [Not	
Detected]		
<ul> <li>Secondary IDE Slaver</li> </ul>	: [Not	
Detected]		↑↓ Select Item
► Third IDE Master	: [Not	+- Charge Field
Detected]		F1 General Help
► Fourth IDE Master	: [Hard	F10 Save and Exit ESC Exit
Disk]		ESC EXIL
Hard Disk Write Protect	[Disabled]	
IDE Detect Time Out (Sec)	[35]	

ATA(PI)	80Pin	Cable	Detection	[Host &	
Device]					
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# SATA#1 Configuration:

[Compatible] [Disabled] [Enhanced]

## Configure SATA as:

[IDE] [RAID] [AHCI]

## SATA#2 Configuration:

[Enhanced]

[Disabled]

Hard Disk Write Protect:

[Disabled]

[Enabled]

IDE Detect Time Out :

[35]
[0]
[5]
[10]
[15]
[20]
[25]

[30]

## ATA(PI) 80Pin Cable Detection:

[Host & Device] [Host] [Device]

# 3.4.3 Super IO Configuration

BIOS SETUP UTILITY				
Advanced				
Configure Win627UHG Sup	er IO Chipset	Allow BIOS to Select		
Serial Port1 Address	[3F8]	Serial Port Base		
Serial Port2 Address	[2F8]	Address.		
Serial Port3 Address	[3E8]			
Serial Port3 IRQ	[IRQ4]			
Serial Port3 Mode	[RS-485]			
Serial Port4 Address	[2E8]			
Serial Port4 IRQ				
Serial Port5 Address	[238]			
Serial Port5 IRQ	[IRQ5]			
Serial Port6 Address	[228]			
Serial Port6 IRQ	[IRQ7]			
		← Select Screen		
		↑↓ Select Item		
		+- Charge Field		
		F1 General Help		
		F10 Save and Exit		
		ESC Exit		
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#### Serial Port3 Mode:

COM3 Options:	[RS485]	
	[RS422]	
	[RS422]	for RS422 Mode
	[RS485]	for RS485 Mode

# 3.4.4 Hardware Health Configuration

E	BIOS SETUP UTILITY	
Advanced		
Hardware Health Config		
System Temperature	:33℃/91℉	55℃/131 <b>℃</b>
<b>CPU Temperature</b>	<b>:30°C/86°</b> F	60℃/140℉
<b>CPUFAN Speed</b>	:4800 RPM	<b>65℃/149</b> Ƴ

		<b>70℃/158</b> ℉	
Vcore	:1.064V		
AVCC	:5.058V		
5VCC	:5.067 V		
3.3V	:3.264 V		
5.0V	:5.029 V		
12V	:12.042 V		
VSB	:5.058 V		
VBAT	:3.366 V	← Select Screen	
		↑↓ Select Item	
Smart Fan Configuration	Smart Fan Configuration		
Maximum CPU Temperature	[60°C/140°F]	F1 General Help	
	Maximum PWM Duty for CPU Fan [60%]		
		ESC Exit	
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#### System Temperature:

Show you the current system temperature.

#### **CPU Temperature:**

Show you the current CPU temperature.

#### **CPUFAN Speed:**

Show you the current CPU Fan operating speed.

#### Maximum CPU Temperature:

- **[60℃/140**℃]
  - [55℃/131°F] [65℃/149°F] [70℃/158°F]

#### Minimum PWM Duty for CPU Fan:

[**60%**] [50%] [70%] [80%]

## 3.4.5 ACPI Configuration

ACPI Setting:

[Advanced ACPI Configuration]

**ACPI Version Features:** 

[ACPI	V1.0]
[ACPI	V2.0]
[ACPI	V3.0]

ACPI APIC support:

[Enabled]

[Disabled]

AMI OEMB table:

# [Enabled] [Disabled]

Headless mode:

[Disabled] [Enabled]

[Chipset ACPI Configuration]: APIC ACPI SCI IRQ:

[Disabled]

[Enabled]

High Performance Event Timer:

[Disabled]

[Enabled]

## **3.4.6 AHCI Configuration**

	BIOS SETUP UTILITY			
	Advanced	1		
AHC	I Setting			Enables For supporting
AHC	T BIOS S	Support	[Enabled]	
AHCI	CD/DVD	Boot Time out	[35]	
► AHO	CI Port0	[Not Detected]		
► AHO	CI Port1	[Not Detected]		

► AHCI Port2	[Not Detected]		
► AHCI Port3	[Not Detected]		
► AHCI Port4	[Not Detected]	-	Select Screen
► AHCI Port5	[Not Detected]	↑↓	Select Item
		Enter	Go to sub screen
		F1	General Help
		F10	Save and Exit
		ESC	Exit
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While entering setup, BIOS auto detects the presence of IDE devices. This displays the status of auto detecting of IDE devices

# 3.4.7 MPS Configuration

BIOS SETUP UTILITY				
Advanced				
MPS Configuration		Select MPS		
MPS Revision	[1.1]	Revision		
		← Select Screen		
		↑↓ Select Item		
		+- Charge Field		
		F1 General Help		
		F10 Save and Exit		
		ECS Exit		
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MPS Revision:

[1	.1]
[1	.4]

# 3.4.8 PCI Express Configuration

BIOS SETUP UTILITY					
Advanced					
PCI Express Configuration Enables/Disables					

Active	State	Power	-Management	PCI Express L0s and		
[Disabled]				L1 Link Power		
				States.		
				← Select Screen		
				1 ♦ 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
				+- Charge Field		
				F1 General Help		
				F10 Save and Exit		
				ESC Exit		
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Active State Power Management:

[Disabled]

[Enabled]

# 3.4.9 Smbios Configuration

BIOSS	BIOS SETUP UTILITY							
Advanced								
Smbios Configuration	SMBIOS SMI Wrappe	r						
Smbios Smi Support	[Enabled] Support for PnP Func							
	50h-54h							
	← Select Screen							
	↑↓ Select Item							
	+- Charge Field							
	F1 General Help							
	F10 Save and Exit							
	ESC Exit							
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Smbios Smi Support:

[Enabled] [Disabled]

## 3.4.10 USB Configuration

BIOS SET						
Advanced						
USB Configuration		Enables support for				
Module Version – 2.24.3-13.4		legacy USB.ATUO				
		option disables legacy				
USB Devices Enabled :		support if no USB				
1Keyboard	1Keyboard					
Legacy USB Support	[Enabled]					
USB2.0 Controller Mode	[Fullspeed]					
BIOS EHCI Hand-Off	[Enabled]	← Select Screen				
		↑↓ Select Item				
		+- Charge Field				
		F1 General Help				
		F10 Save and Exit				
		ESC Exit				
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Legacy USB Support:

[Enabled] [Disabled]

**USB2.0** Controller Mode:

[FullSpeed] [HiSpeed]

#### **BIOS EHCI Hand-Off:**

[Enabled] [Disabled]

# 3.5 Advanced PCI/PnP Settings

This part describes configurations to be made on PCI bus system. PCI, namely Personal Computer Interconnect, is a computer bus that allows I/O device to operate nearly as fast as CPU in its own way. Some technical terms will be mentioned here. **We recommend that non-professional users not make changes from factory default settings.** 

BIOS SETUP UTILITY	
Main Advanced PCIPNP Boot Security C	hipset Exit
Advanced PCI/PnP Settings	Clear NURAM during
WARNING: Setting wrong values In below	y System Boot.
sections	
may cause system to malfunction.	
Clear NVRAM [No]	
Plug & Play O/S [No]	
PCI Latency Timer [64]	
Allocate IRQ to PCI VGA [Yes]	
Palette Snooping [Disabled]	
PCI IDE BusMaster [Disabled]	
OffBoard PCI/ISA IDE Card [Auto]	
IRQ3 [Available] IRQ4 [Available] IRQ5 [Available] IRQ7 [Available] IRQ9 [Available] IRQ9 [Available] IRQ10 [Available] IRQ10 [Available]	<ul> <li>← Select Screen</li> <li>↑↓ Select Item</li> <li>+- Charge Field</li> <li>F1 General Help</li> <li>F10 Save and Exit</li> <li>ESC Exit</li> </ul>

## **Clear NVRAM:**

[No]

[Yes]

# Plug & Play OS:

[No]

[Yes]

# PCI Latency Timer:

[32]
[96]
[128]
[160]
[192]
[224]
[248]

# Allocate IRQ to PCI VGA:

[Yes]

[No]

**Palette Snooping:** 

[Disabled]

[Enabled]

#### PCI IDE BusMaster:

#### [Disabled]

[Enabled]

#### OffBoard PCI/ISA IDE Card:

Some PCI IDE cards may require this to be set to the PCI slot number that is holding the card. Auto:Works for most PCI IDE Cards.

[Auto] [PCI Slot1] [PCI Slot2] [PCI Slot3] [PCI Slot4] [PCI Slot5] [PCI Slot6]

#### IRQ3/4/5/7/9/10/11/14/15:

#### [Available]

[Reserved]

Available: Specified IRQ is available to be used by PCI/PnP devices. Reserved: Specified IRQ is reserved for use by legacy ISA devices.

#### DMA Channel 0/1/3/5/6/7:

[Available]

[Reserved]

Available: Specified DMA is available to be used by PCI/PnP devices.

Reserved: Specified DMA is reserved for use by legacy ISA devices.

# **Reserved Memory Size:**

Size of memory block to reserve for legacy ISA devices.

[Disabled]
[16k]
[32k]
[64k]

# 3.6 Boot Settings

Main	Advanced	PCIPnP	Boot	Security	Ch	ipset	Exit
Boot	Settings					Config	gure Settings
						During	g System Boot
► B	Boot Setting	Configurat	tion				
► Boc	ot Device Pr	iority					
► Har	d Disk Driv	es					
						← S	elect Screen
						↑↓ S	elect Item
						Enter	Go to sub screen
						F1 6	General Help
						F10	Save and Exit
						ESC	Exit
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# **Boot Setting Configuration :**

Configure Settings during System Boot.

Quick Boot:

#### [Enabled]

[Disabled]

Allows BIOS to skip certain tests while booting .This will decrease the time needed to boot the system.

Quiet Boot:

[Disabled]

[Enabled]

Disabled: Displays normal POST messages.

Enabled: Displays OEM logo instead of POST messages.

AddOn ROM Display Mode:

Set display mode for Option ROM.

## [Force BIOS]

[Keep Current]

Bootup Num-Lock:

Select Power-on state for Numlock.

[**On]** [Off]

Wait For 'F1' If Error:

Wait for F1 key to be pressed if error occurs.

# [Enabled]

[Disabled]

Hit 'DEL'Messgae Display :

Displays "press" DEL to run Setup in POST.

# [Enabled]

[Disabled]

Interrupt 19 Capture:

Enabled: Allows option ROMs to trap interrupt 19.

# [Disabled]

[Enabled]

**Boot Device Priority:** 

Specifies the Boot Device Priority sequence.

#### Hard Disk Devices :

Specifies the Boot Device Priority sequence from available Hard Drives.

# 3.7 Security Settings

Main	Advanced	PCIPnP	Boot	Security	Ch	ipset	Exit
Secu	rity Setting	;s				Insta	I or Change the
Supe	ervisor Pass	word :Ne	ot Instal	led		pass	word.
User	Password	:N	ot Insta	lled			
Chang	e Superviso	r Password					
Chang	e User Passy	word					
Boot S	Sector Virus	Protection	[Disabl	ed]			
						←	Select Screen
						↑↓	Select Item
						Enter	Charge
						F1	General Help
						F10	Save and Exit
						ESC	Exit
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Change Supervisor Password:

Install or Change the password.

Change User Password:

Install or Change the password.

Password Check:

[Setup] [Always] Setup: Check password while invoking setup. Always: Check password while invoking setup a well as on each boot.

Boot Sector Virus Protection: [Disabled]

[Enabled]

Enabled / Disabled Boot Sector Virus Protection.

Type the password with up to 6 characters and then press ∢Enter≻ key. This will

clear all previously typed CMOS passwords. You will be requested to confirm the password. Type the password again and press ∢Enter > key. You may press ∢Esc > key to abandon password entry operation.

To clear the password, just press *<*Enter key when password input window pops up. A confirmation message will be shown on the screen as to whether the password will be disabled. You will have direct access to BIOS setup without typing any password after system reboot once the password is disabled.

Once the password feature is used, you will be requested to type the password each time you enter BIOS setup. This will prevent unauthorized persons from changing your system configurations.

Also, the feature is capable of requesting users to enter the password prior to system boot to control unauthorized access to your computer. Users may enable the feature in Security Option of Advanced BIOS Features. If Security Option is set to System, you will be requested to enter the password before system boot and when entering BIOS setup; if Security Option is set to Setup, you will be requested for password for entering BIOS setup.

# 3.8 Advanced Chipset Settings

Main	Advanced	PCIPnP	Boot	Security	Ch	ipset	Exit
Adva	anced Chij	oset Setting	<u></u> gs			Confi	gure North Bridge
WAF	RNING: S	Setting wr	ong valu	ues in be	low	featu	re
section	ıs						
	m	ay cause sy	stem to	malfunctio	n		
► Nor	th Bridge (	Configuratio	on				
► S	outh Bridg	e Configura	ation				
							Colort Correct
						← ◆↓	Select Screen
						1↓ Enter	Select Item
						F1	Go to sub screen
						F10	General Help
						ESC	Exit
	V02 61 (	© Copyright '	1985-2006	American M		ronde	Inc
	V02.01	s oopyngin	1303-2000		egai	renus	, me.

BIOS SETUP UTILITY							
	Chipset						
North Bridge Chipset Configuration	ENABLE: Allow						
Memory Remap	Feature	Remapping of					
[Enabled]		Over lapped PCI Memory					
PCI MMIO Allocation: 4Gb To 30	72MB	Above the total					
Memory	Hole	Physical memory					
[Disabled]							
		DISABLE: Do not allow					
Initate Graphic Adapter	[PCI/IGD]	remapping of memory					
IGD Graphics Mode	Select						
[Enabled ,64MB]							
IGD GTI Graphic smemory size	[No VT						
mode,2MB]		← Select Screen					
		↑↓ Select Item					
PEG Port Configuration		+- Charge Field					
		F1 General Help					
► Video Function Configuration		F10 Save and Exit					
		ESC Exit					
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# 3.8.1 North Bridge Configuration

#### Memory Remap Feature:

[Enabled] [Disabled]

# Memory Hole:

[Disabled]

[15MB-16MB]

# Initate Graphic Adapter:

Select which graphics controller to use as the primary boot device.

# [PCI/IGD]

[IGD]

# IGD Graphics Mode Select:

[**Enabled**, **64MB**] [Disabled] [Enabled, 32MB] [Enabled, 128MB]

# Video Function Configuration:

BIOS SETUP UTILITY							
	ipset						
Video Function Co	Options						
DVMT Mode Selec	t	[DVMT	Fixed Mode				
Mode]			DVMT Mode				
DVMT/FIXED	)	Memory					
[256MB]							
Boot	Display	Device					
[VBIOS-Default]							
Flat Panel Type		[1024x768					
18bit 1c]							
Backlight	Control	Support	← Select Screen				
[VBIOS-Default]			1↓ Select Item				
Backlight Control Le	evel	[Level 8]	+- Charge option				
Backlight Control Me	ode	[DC]	F1 General Help				
Backlight	Image	Adaptation	F10 Save and Exit				
[VBIOS-Default]			ESC Exit				
V02.61 © C	opyright 1985-2006	American Mega	trends , Inc.				

**DVMT Mode Select:** 

#### [DVMT Mode]

[FIXED Mode]

## DVMT/FIXED Memory Size:

[**256MB**] [128MB] [Maximum DVMT]

## **Boot Display Device:**

[VBIOS-Default] [CRT] [HDMI] [CRT + HDMI] [LVDS] [CRT + LVDS]

## Flat Panel Type:

[1024x 768 18bit 1ch] [640x480 18bit 1ch] [800x480 18bit 1ch]

[800x600 18bit 1ch] [1280x800 18bit 1ch] [1366x768 18bit 1ch] [1024x768 24bit 2ch] [1280x1024 24bit 2ch] [1440x900 24bit 2ch] [1600x900 24bit 2ch] [1680x1050 24bit 2ch] [1920x1080 24bit 2ch]

#### **Backlight Control Support**

[VBIOS-Default] [Both BLC & BIA Disabled] [BLC Enabled]

#### **Backlight Control Control:**

# [Level8]

[Level0] [Level1] [Level2] [Level3] [Level4] [Level6] [Level7] [Level9] [Level10] [Level11] [Level12] [Level13] [Level14] [Level15]



Note: Panel support PWM Function.

## Backlight Control Mode:

**[DC]** [PWM]

# **Backlight Image Adaptation:**

[VBIOS-Default] [BIA Disabled] [BIA Enabled at Level1] [BIA Enabled at Level2] [BIA Enabled at Level3] [BIA Enabled at Level4] [BIA Enabled at Level5]

## 3.8.2 South Bridge Configuration:

BIOS SETUP UTILITY							
	hipset						
South Bridge Chipset Confi	iguration	Options					
USB Functions	[12 USF	B Disabled					
Ports]		2 USB Ports					
USB2.0 Controller	[Enabled]	4 USB Ports					
Keep USB Power at S5	[Enabled]	6 USB Ports					
Wireless Controller	[Enabled]	8 USB Ports					
HAD Controller	[Enabled]	10 USB Ports					
SMBUS Controller	[Enabled]	12 USB Ports					

SLP_S4# Min. Assertion Width	h [4 to 5		
Seconds]			
Restore on AC Power loss	[Power off]		
PCIE Ports Configuration			
PCIE Port 0	[Auto]	← Select Screen	
PCIE Port 1	[Auto]	1↓ Select Item	
PCIE Port 2	[Auto]	+- Charge Field	
PCIE Port 3	[Auto]	F1 General Help	
PCIE Port 4	[Auto]	F10 Save and Exit	
PCIE High Priority Port	[Disabled]	ESC Exit	
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#### **USB Functions:**

# [12 USB Ports] [Disabled] ,

[2 USB Ports] [4 USB Ports] [6 USB Ports] [8 USB Ports] [10 USB Ports]

**USB 2.0 Controller:** 

[Enabled]

#### Keep USB Power at S5:

[Enabled]

[Disabled]

#### **Wireless Controller**

[Enabled] [Disabled]

#### **HDA Controller:**

[Enabled] [Disabled]

#### **SMBUS Controller:**

[Enabled] [Disabled]

#### SLP\_S4# Min. Assertion Width:

[4 to 5 Seconds] [3 to 4 Seconds] [2 to 3 Seconds] [1 to 2 Seconds]

#### **Restore on AC Power Loss:**

[Power Off] [Power On] [Last Status]

#### **PCIE Ports Configuration:**

PCIE Port 0:

[Auto] [Enabled] [Disabled]

PCIE Port 1:

#### [Auto]

[Enabled] [Disabled]

PCIE Port 2:

# [Auto]

[Enabled] [Disabled]

PCIE Port 3:

# [Auto]

[Enabled] [Disabled]

PCIE Port 4:

#### [Auto]

[Enabled] [Disabled]

#### PCIE High priority Port:

[Disabled] [Port 0] [Port1] [Port2] [Port3] [Port4] [Port5]

PCIE Port 0 IOxAPIC Enabled: PCIE Port 1 IOxAPIC Enabled: PCIE Port 2 IOxAPIC Enabled: PCIE Port3 IOxAPIC Enabled: PCIE Port4 IOxAPIC Enabled: PCIE Port5 IOxAPIC Enabled:

# [Disabled] [Enabled]

# 3.9 Exit Options

		BIC	OS SETUR	UTILITY				
Main	Advanced	PCIPnP	Boot	Security	Ch	ipset	Exit	
Exit	Options					Exit s	system setu	c
Save C	Changes and	Exit				after	saving the	
Disc	ard Change	s and Exit				chan	ges	
Discar	d Changes							
						F10 k	key can be ι	ised
Load C	Optimal Defa	aults				For th	nis operation	ו
Load F	ailsafe Defa	ults						
							Select Scree	en
						↑↓ S	Select Item	
						Enter	Go to sub s	screen
						F1	General He	elp
						F10	Save and I	Exit
						ESC	Exit	
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Save Changes and Exit:

Save configuration changes and exit setup?

(F10 key can be used for this operation)

[OK] [Cancel]

#### **Discard Changes and Exit:**

Discard Changes and Exit setup?

(ESC key can be used for this operation)

[OK]

[Cancel]

## **Discard Changes:**

**Discard changes?** 

(F7 key can be used for this operation)

[OK]

[Cancel]

#### Load Optimal Defaults:

Load Optimal Defaults? (F9 key can be used for this operation) [OK] [Cancel]

#### Load FailSafe Defaults:

Load FailSafe Defaults? (F9 key can be used for this operation)

[OK] [Cancel]

# Chapter 4\_\_\_\_\_

# **Installation of Drivers**

This chapter describes the installation procedures for software and drivers under the windows XP. The software and drivers are included with the motherboard. The contents include Intel chipset driver VGA driver LAN drivers Audio driver .NET framework 3.5 driver Installation instructions are given below.

#### **Important Note:**

After installing your Windows operating system (Windows XP), you must install first the Intel Chipset Software Installation Utility before proceeding with the installation of drivers.



# 4.1 Intel Chipset Driver

To install the Intel chipset driver, please follow the steps below. Step 1: Select Chipset from the list

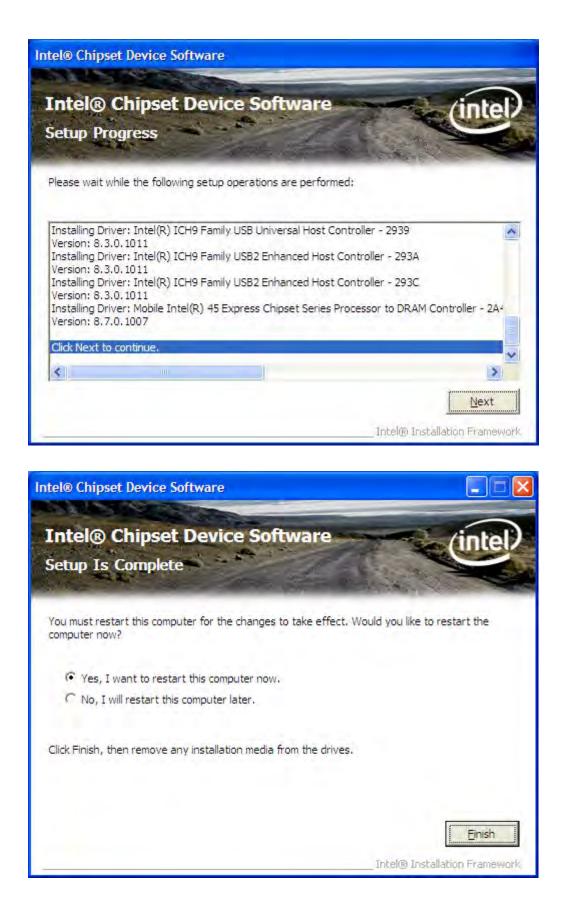


Follow the step-by-step installation process to install the driver.





itel® Chipset Device Software	
Intel® Chipset Device Software Readme File Information	(intel
Refer to the Readme file below to view the system requirements an Press the Page Down key to view the rest of the file. * Product: Intel (R) Chipset Device Soft * Release: Production Version * Version: 9.0.0.1008 * Target Chipset#: Intel (R) 4 Series Chi * Date: May 01 2008	ware
<	2
< <u>B</u> ack	Next > Cancel



Click Finish, when the installation process is complete, the Setup Complete screen appears. See as picture.

# 4.2 Intel Graphics Media Accelerator driver

To install the VGA drivers, follow the steps below to proceed with the installation.

1. Click Intel(R) GM45 Chipset Family Graphics Driver.



Follow the step-by-step installation process to install the Graphics Media Accelerator driver.

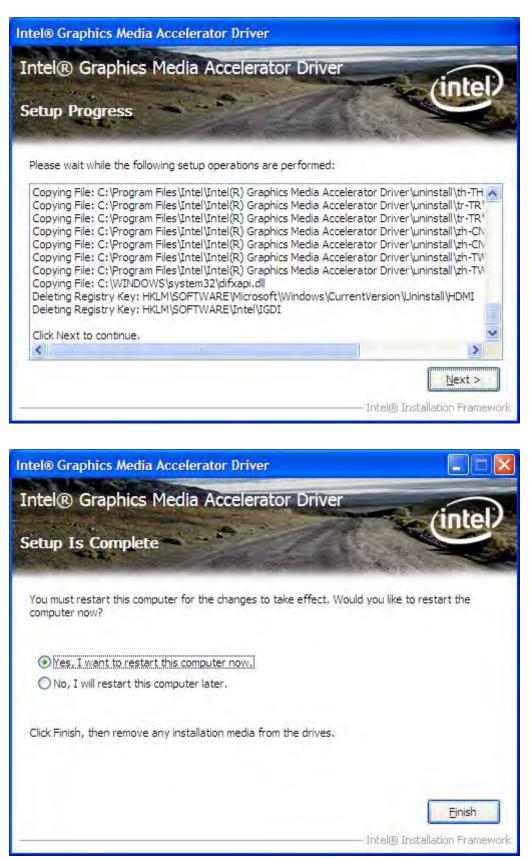
<pre>* Production Version Releases * * * Microsoft Windows* XP * Package: 107289 * * * * Graphics: 6.14, 10.5303 * Display Audio Driver: 5.12.0.3069 * Legacy Audio: 5.10.0.1049 * * *</pre>
October 06, 2010 * NOTE: This document refers to systems containing the * following Intel chipsets/processors: * Intel(R) Pentium(R) Processor <

Warnin	g 🛛 🕅
♪	Please install the latest version of Microsoft .NET Framework from Microsoft Download Center to run this application correctly.
	Are you sure you want to continue?

Intel® Graphics Media Accelerator Driver	
Intel® Graphics Media Accelerator Driver	(intal)
Welcome to the Setup Program	Clincely
This setup program will install the following components: - Intel® Graphics Media Accelerator Driver - Intel® High Definition Audio HDMI Driver It is strongly recommended that you exit all programs before continuing. (	Click Next to continue.
land the second s	xt > Cancel



Intel® Graphics Media Accelerator Dr	iver	
Intel® Graphics Media Accel	erator Driver	(intel)
Readme File Information		
Refer to the Readme file below to view the s	ystem requirements and ins	tallation information.
* Production Version Releases *		
* Microsoft Windows*XP * Package: 107289 *		
* Graphics: 6.14.10.5303 * Display Audio Driver: 5.12.0.3069 * Legacy Audio: 5.10.0.1049 *		<b>X</b>
		xt > Cancel
	10	tel® Installation Framework



Click FINISH; A Driver Installation Complete.

# 4.3 Intel 82574L LAN Device Driver

To install the Intel R 82574L Gigabit LAN connect device driver, please follow the steps below. Select LAN from the list



Follow the step-by-step installation process to install the LAN driver.

	e to the InstallShield Wizard for Network Connections	(intel)
	Installs drivers, Intel(R) PROSet for Windows* Device Manager, and Advanced Networking Services.	
	WARNING: This program is protected by copyright law and international treaties.	
stallShield -		

🙀 Intel(R) Network Connections - InstallShield Wizard		
License Agreement Please read the following license agreement carefully.	(intel)	
INTEL SOFTWARE LICENSE AGREEMENT (Final, License) <u>IMPORTANT - READ BEFORE COPYING, INSTALLING OR</u> <u>USING</u> . Do not use or load this software and any associated materials (collectively, the "Software") until you have carefully read the following terms and conditions. By loading or using the Software, you agree to the terms of this version		
I accept the terms in the license agreement     O I do not accept the terms in the license agreement     InstallShield	Print	
< Back	lext > Cancel	

Intel(R) Network Connections	
Select the program features you want installed.	(intel)
Install:	
Drivers     Intel(R) PROSet for Windows* Device Manager     Advanced Network Services     Intel(R) Network Connections SNMP Agent	
Feature Description	
< Back Nex	t > Cancel

😽 Intel(R) Network Connections - InstallShield Wizard	d 🛛 🔀
Ready to Install the Program The wizard is ready to begin installation.	(intel)
Click Install to begin the installation.	
If you want to review or change any of your installation settings exit the wizard.	s, click Back. Click Cancel to
InstallShield	Install Cancel

🙀 Intel(R) Network Connections - InstallShield Wizard	
InstallShield Wizard Completed	(intel)
To access new features, open Device Manager, and v properties of the network adapters.	iew the
InstallShield	h (Cancel

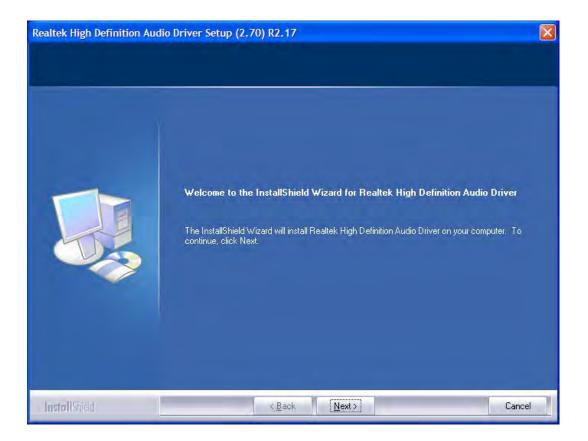
Click FINISH; A Driver Installation Complete.

# 4.4 Realtek ALC662 HD Audio Driver Installation

To install the Realtek High Definition (HD) Audio driver, please follow the steps below. Select Audio from the list



Follow the step-by-step installation process to install the Realtek HD Audio driver.



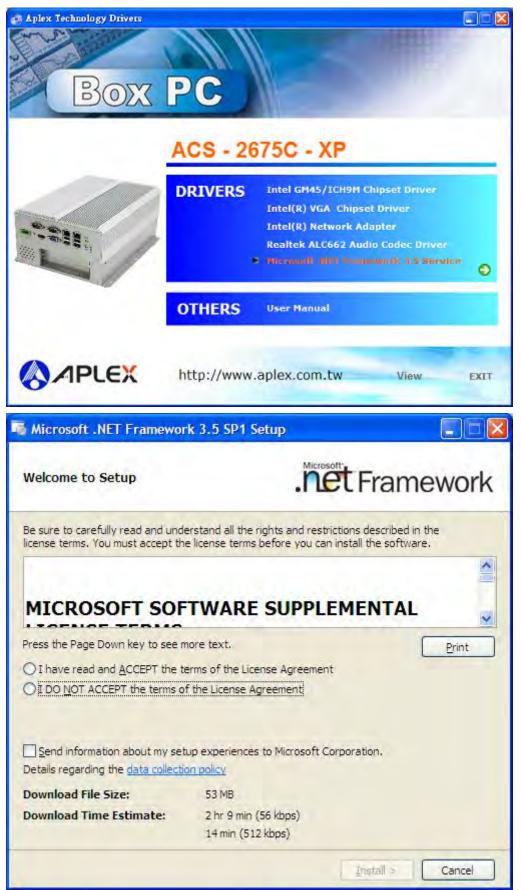
Realtek High Definition Audio Driver Setup (2.70) R2.17				
Setup Status				
	Realtek High Definition Audio Driver is configuring your new software installation.			
	Installing			
InstallShiet	Cancel	1		

Realtek High Definition Audio	Driver Setup (2.70) R2.17
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Realtek High Definition Audio Driver. Before you can use the program, you must restart your computer. • Yes, I want to restart my computer now. • No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete setup.
InstallShield	K Back Finish Cancel

Click FINISH; A Driver Installation Complete.

# 4.5 Microsoft .NET Framework 3.5 Service Installation

To install the Microsoft .NET Framework 3.5 Service, please follow the steps below.



Microsoft .NET Framewor	k 3.5 SP1 Setup	
Welcome to Setup	Micros	Framework
Be sure to carefully read and unde license terms. You must accept the		
MICROSOFT SOF	TWARE SUPPLI	EMENTAL
Press the Page Down key to see m	nore text.	Print
● I have read and ACCEPT the terms of ● I DO NOT ACCEPT the terms of		
Send information about my set Details regarding the <u>data collection</u>		prporation.
Download File Size:	53 MB	
Download Time Estimate:	2 hr 9 min (56 kbps) 14 min (512 kbps)	
		Install > Cancel
Microsoft .NET Framewor	k 3.5 SP1 Setup	
Microsoft .NET Framewor		Framework
Download and Install Prog		Framework
		TFramework
Download and Install Prog		]

🗟 Mi	crosoft .NET Framework 3.5	SP1 Setup	
Set	up Complete	.net Fra	amework
Mic	rosoft .NET Framework 3.5 SP1 h	as been installed successfully	
÷	It is highly recommended that you do updates for this product. For more information, see <u>Windows</u>		ce packs and security
			Exit