HSB-CV1P

Intel[®] Atom[™] D2550/N2600 Processor 10/100/1000Base-TX Ethernet 2 SATA 3.0Gb/s PCI Interface Expansion 8 USB2.0, 4 COM 1 VGA, 1 LVDS

> HSB-CV1P Manual Rev. A 2nd Ed. July 2013

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Packing List

Before you begin installing your card, please make sure that the following materials have been shipped:

• 1 HSB-CV1P CPU Card with Active Cooler (Intel[®]

Atom[™] D2550 version) or Passive Heatsink (Intel[®]

Atom[™] N2600 version)

- 1 CD-ROM for manual (in PDF format) and drivers
- 1 Jumpers
- 1 Cable Kit for HSB series
- 1 SATA Cable

If any of these items should be missing or damaged, please contact your distributor or sales representative immediately.

Contents

Chapter 1 General Information

1.1 Introduction	1-2
1.2 Features	1-3
1.3 Specifications	1-4

Chapter 2 Quick Installation Guide

2.1 Safety Precautions	2-2
2.2 Location of Connectors and Jumpers	2-3
2.3 Mechanical Drawing	2-4
2.4 List of Jumpers	2-5
2.5 List of Connectors	2-5
2.6 Setting Jumpers	2-7
2.7 Clear CMOS (JP1)	2-8
2.8 LVDS Operating Voltage Selection (JP2)	2-8
2.9 LVDS Inverter/ Backlight Voltage Selection (JP3)	2-8
2.10 LVDS Inverter/ Backlight Bias/PWM Mode Selection	n
(JP4)	2-8
2.11 AT/ATX Power Mode Selection (JP5)	2-8
2.12 COM2 RI/+5V/+12V Selection (JP6)	2-9
2.13 LVDS Inverter/ Backlight Connector (CN1)	2-9
2.14 LVDS Connector (CN2)	2-9
2.15 Keyboard Connector (CN3)	2-10
2.16 PS2 Keyboard/Mouse Connector (CN4)	2-10
2.17 Digital I/O Connector (CN5)	2-11

2.18 RJ-45 Ethernet (CN6)	. 2-11
2.19 RJ-45 Ethernet (CN7)	. 2-11
2.20 External +5VSB Input Connector (CN8)	. 2-11
2.21 HD Audio Codec with Realtek ALC888 (Optional)	
Connector (CN9)	. 2-12
2.22 USB Port #7 Connector (CN10)	. 2-12
2.23 Front Panel Connector 1 (FP1)	. 2-13
2.24 Front Panel Connector 2 (FP2)	. 2-13
2.25 Analog CRT Display Connector (VGA1)	. 2-13
2.26 USB Port #0 and #1 Connector (USB1)	. 2-14
2.27 USB Port #2 and #3 Connector (USB2)	. 2-14
2.28 USB Port #4 and #5 Connector (USB3)	. 2-15
2.29 USB Port #6 Connector (USB4)	. 2-15
2.30 RS-232 Serial Port1 Connector (COM1)	. 2-15
2.31 RS-232/422/485 Serial Port2 Connector (COM2)	. 2-16
2.32 RS-232 Serial port3 Connector (COM3)	. 2-17
2.33 RS-232 Serial port4 Connector (COM4)	. 2-17
2.34 Infrared Connector (IR1)	. 2-17
2.35 Parallel Port Connector (LPT1)	. 2-18
2.36 SATA Port2 Connector (SATA1)	. 2-18
2.37 SATA Port1 Connector (SATA2)	. 2-19
2.38 BIOS Debug Port (SPI1)	. 2-19
2.39 3-Pin CPU Fan Connector (4-Pin Optional) (FAN1)) 2-20
2.40 4-Pin System FAN Connector (FAN2)	. 2-20
2.41 4-Pin ATX Power Connector (ATX1)	. 2-20

	Half-size SBC HSB-CV1P
	2.42 DDR3 SODIMM Slot (DIMM1) 2-21
С	hapter 3 AMI BIOS Setup
	3.1 System Test and Initialization
	3.2 AMI BIOS Setup 3-3
С	hapter 4 Driver Installation
	4.1 Installation4-3
A	ppendix A Programming The Watchdog Timer
	A.1 ProgrammingA-2
	A.2 F81866 Watchdog Timer Initial ProgramA-5
A	ppendix B I/O Information
	B.1 I/O Address MapB-2
	B.2 1 st MB Memory Address MapB-4
	B.3 IRQ Mapping ChartB-5
A	ppendix C Mating Connector
	C.1 List of Mating Connectors and Cables C-2
A	ppendix D AHCI Setting
	D.1 Setting AHCI D-2

Chapter

General Information

Chapter 1 General Information 1-1

1.1 Introduction

AAEON, a leading embedded boards manufacturer, is pleased to announce the debut of the new generation Half-size Single Board Computer—HSB-CV1P.

HSB-CV1P adopts Intel[®] Atom[™] D2550/ N2600 Processor. The system memory is deployed with 204-pin SODIMM DDR3 800/1066 up to 4 GB for Intel[®] Atom[™] D2550 processor and up to 2 GB for Intel[®] Atom[™] N2600 Processor. In addition, Realtek RTL8111E supports two 10/100/1000Base-TX that allow a faster network connection.

The display of HSB-CV1P supports CRT/LCD, LVDS/LCD simultaneous and dual view displays. Moreover, two SATA 3.0Gb/s provide a better storage. Eight USB2.0, four COM Ports (three RS-232, one RS-232/422/485) and 8-bit digital I/O are configured on the HSB-CV1P as well. Full functions make HSB-CV1P user friendly. This brand new slot CPU board is developed to suit the requirements of Industrial/Factory Automation, Transportation, banking machine, ITS, HMI and workstation applications.

1.2 Features

- Onboard Intel[®] Atom[™] D2550/ N2600 Processor
- Intel[®] NM10
- DDR3 800 / 1066 SODIMM x 1, max. 4GB (D2550), 2GB (N2600)
- Intel[®] Graphics Media Accelerator Supports DirectX 10, OpenGL 3.0
- HD Codec Audio Daughter Board (optional)
- Realtek RTL 8111E, Gigabit Ethernet, RJ-45 x 2
- USB 2.0 x 8 (Pin header x 3, 2 xOnboard Type A connector x 2,One for Nano USB)
- COM x 4 (RS-232 x 3, RS-232/422/485 x 1)
- SATA 3.0Gb/s x 2, Digital I/O, Parallel Port x 1, IrDA Port x 1*
- VGA Output Connector for Display
- Supports LVDS Up to 24-bit Single Channel (N2600 Supports 18-bit Single Channel Only)

<u>Note*</u>: The IrDA function will be disabled under Windows[®] 7 Operating System.

1.3 Specifications

System Intel[®] Atom™ Processor D2550/ N2600 processor, (1.86 GHz for D2550, 1.6 GHz for N2600) System Memory 204-pin DDR3 SODIMM x 1, Max. 4 GB (DDR3 800/1066) for Intel[®] Atom[™]D2550: Max. 2 GB (DDR3 800/1066) for Intel[®] Atom™N2600 Intel[®] NM10 Chipset I/O Chipset Fintek 81866F Ethernet Realtek RTL8111E, 10/100/1000Base-TX, RJ-45 x 2 AMI Plug & Play SPI BIOS -BIOS 8 MB Flash Wake On LAN Yes 1~255 steps by software Watchdog Timer program H/W Status Monitoring Supports Fan Speed, Voltages and Temperature Monitoring **Expansion Interface** PCI

Half-size SBC	HSB-CV1P
 Power Requirement 	+12V, ATX
 Battery 	Lithium battery
Board Size	7.3"(L) x 4.8"(W) (185mm x
	122mm)
 Gross Weight 	0.75 lb (0.35 Kg)
Operating Temperature	e 32°F~ 140°F (0°C ~ 60°C)
Storage Temperature	-4°F~ 158°F (-20°C ~ 70°C)
Operating Humidity	10%~80% relative humidity,
	non-condensing

Display: Supports CRT/LCD, LVDS/LCD, simultaneous and dual view displays

•	Chipset	Intel [®] Graphics Media
		Accelerator supports DirectX 10,
		OpenGL 3.0
•	Resolution	Up to 1920x1200 for CRT;
		Up to 1440x900 for LVDS
		(D2550);
		Up to 1366x768 for LVDS
		(N2600)
•	LCD Interface	18/24-bit Single Channel LVDS
		LCD for Intel [®] Atom™D2550;
		18-bit Single Channel LVDS
		LCD for Intel [®] Atom™ N2600
•	Output Interface	VGA x 1, LVDS x 1

	Half-size SBC	HSB-CV1P
I/C	0	
	 Storage 	SATA 3.0Gb/s x 2
	 Serial Port 	COM x 4 (box header)
		COM2 : RS-232/422/485 (Box
		header 2.0mm)
		COM1, COM3, COM4 :RS-232
		(Box header 2.0mm)
	Parallel Port	SPP/EPP/ECP modes
	USB Port	USB2.0 x 8 (internal 5x2 pin
		header x 3, onboard Type A
		connector x 2)
	 PS/2 Port 	Mini-DIN PS/2 Keyboard and
		Mouse x 1
	 Digital I/O 	Supports 8-bit (Programmable)
	 Audio(daughter boar 	d) High definition codec audio
		daughter board (optional)



Quick Installation Guide

Chapter 2 Quick Installation Guide 2-1

2.1 Safety Precautions



Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Caution!



Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

2.2 Location of Connectors and Jumpers

Component Side





Solder side



Chapter 2 Quick Installation Guide 2-3

2.3 Mechanical Drawing

Component Side



Chapter 2 Quick Installation Guide 2-4

2.4 List of Jumpers

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's jumpers:

Label	Function
JP1	Clear CMOS
JP2	LVDS Operating Voltage Selection
JP3	LVDS Inverter/ Backlight Voltage Selection
JP4	LVDS Inverter/ Backlight Bias/PWM Mode Selection
JP5	AT/ATX Power Mode Selection
JP6	COM2 RI/+5/+12V Selection

2.5 List of Connectors

The board has a number of connectors that allow you to configure your system to suit your application. The table below shows the function of each board's connectors:

Label	Function
CN1	LVDS Inverter/ Backlight Connector
CN2	LVDS Connector (Single Channel18/24bit)
CN3	Keyboard Connector
CN4	PS2 Keyboard/Mouse Connector
CN5	Digital I/O Connector
CN6	RJ-45 Ethernet
CN7	RJ-45 Ethernet
CN8	External +5VSB Input Connector
CN9	HD Audio Codec with Realtek ALC888 (Optional) Connector
CN10	USB Port #7 Connector
FP1	Front Panel Connector 1

FP2	Front Panel Connector 2
VGA1	Analog CRT Display Connector
USB1	USB Port #0 and #1 Connector
USB2	USB Port #2 and #3 Connector
USB3	USB Port #4 and #5 Connector
USB4	USB Port #6 Connector
COM1	RS-232 Serial port1 Connector
COM2	RS-232/422/485 Serial port2 Connector
COM3	RS-232 Serial port3 Connector
COM4	RS-232 Serial port4 Connector
IR1	Infrared Connector
LPT1	Parallel Port Connector
SATA1	SATA Port 2 Connector
SATA2	SATA Port 1 Connector
SPI1	BIOS Debug Port
DIMM1	DDR3 SODIMM Slot
BAT1A1	Battery
FAN1	3-Pin CPU Fan Connector (4-Pin Optional)
FAN2	4-Pin System Fan Connector
ATX1	4-Pin ATX Power Connector



2.6 Setting Jumpers

You configure your card to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch. It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip.

To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2 and 3. In this case you would connect either pins 1 and 2 or 2 and 3.



A pair of needle-nose pliers may be helpful when working with jumpers.

If you have any doubts about the best hardware configuration for your application, contact your local distributor or sales representative before you make any change.

Generally, you simply need a standard cable to make most connections.

2.7 Clear CMOS (JP1)

JP1	Function	
1-2	Normal (Default)	
3-4	Clear CMOS	

2.8 LVDS Operating Voltage Selection (JP2)

JP2	Function	
1-2	+5V	
2-3	+3.3V (Default)	

2.9 LVDS Inverter/ Backlight Voltage Selection (JP3)

JP3	Function
1-2	+12V
2-3	+5V (Default)

2.10 LVDS Inverter/ Backlight Bias/PWM Mode Selection (JP4)

JP4	Function	
1-2	Bias (Default)	
2-3	PWM Control	

2.11 AT/ATX Power Mode Selection (JP5)

JP5	Function
1-2	ATX(Default)
2-3	AT

2.12 COM2 RI/+5V/+12V Selection (JP6)

JP6	Function	
1-2	+12V	
3-4	RI (Default)	
5-6	+5V	

2.13 LVDS Inverter/ Backlight Connector (CN1)



Pin	Signal	
1	12V / 5V	
2	VCON	
3	GND	
4	GND	
5	INV_EN	

2.14 LVDS Connector(CN2)

	1 2	₽	•	ê	•	:	÷	°	;	•	•	°	•	:	ê	Ŧ	29 30
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Pin	Signal	Pin	Signal
1	BKLT_EN	2	BKLT_CTRL
3	LVDSVCC	4	GND
5	LVDS1_CLK#	6	LVDS1_CLK
7	LVDSVCC	8	GND
9	LVDS1_DATA0#	10	LVDS1_DATA0
11	LVDS1_DATA1#	12	LVDS1_DATA1
13	LVDS1_DATA2#	14	LVDS1_DATA2

Chapter 2 Quick Installation Guide 2-9

	Half-Size SBC		HSB-CV1P
15	LVDS1_DATA3#	16	LVDS1_DATA3
17	LVDS_DDC_DATA	18	LVDS_DDC_CLK
19	LVDS2_DATA0#	20	LVDS2_DATA0
21	LVDS2_DATA1#	22	LVDS2_DATA1
23	LVDS2_DATA2#	24	LVDS2_DATA2
25	LVDS2_DATA3#	26	LVDS2_DATA3
27	LVDSVCC	28	GND
29	LVDS2_CLK#	30	LVDS2_CLK

2.15 Keyboard Connector (CN3)



Pin	Signal
1	KB_CLK
2	KB_DATA
3	N.C.
4	GND
5	+5V

2.16 PS2 Keyboard/Mouse Connector (CN4)

Pin	Signal	Pin	Signal
1	Keyboard DATA	2	Mouse Data
3	GND	4	+5V Volt
5	Keyboard clock	6	Mouse Clock

2.17 Digital I/O Connector (CN5)

2				10
Л	Π	Π	Π	Π
Т				Т
1				9

Pin	Signal	Pin	Signal
1	IN0	2	IN1
3	IN2	4	IN3
5	OUT0	6	OUT1
7	OUT2	8	OUT3
9	+3.3V	10	GND

2.18 RJ-45 Ethernet (CN6)

Standard specification

2.19 RJ-45 Ethernet (CN7)

Standard specification

2.20 External +5VSB Input Connector (CN8)

3	1

Pin	Signal	
1	PS_ON#	
2	GND	
3	+5VSB	

2.21 HD Audio Codec with Realtek ALC888 (Optional) Connector (CN9)

2 1 1 1		0 - - - - - - - 		
	Pin	Signal	Pin	Signal
	1	RST	2	SYNC
	3	SDIN	4	SDOUT
	5	DET	6	BCLK
	7	GND	8	+5V
	9	NC	10	+3.3V

2.22 USB Port #7 Connector (CN10)



Pin	Signal
1	+5VSB
2	USB7N
3	USB7P
4	GND
5	GND

2.23 Front Panel Connector 1 (FP1)

2	п	п	8
H			0
•	0		0
I	U	U	U
1			7

Pin	Signal	Pin	Signal
1	Power On Button (+)	2	Reset Switch (+)
3	Power On Button (-)	4	Reset Switch (-)
5	HDD LED (+)	6	Power LED (+)
7	HDD LED (-)	8	Power LED (-)

2.24 Front Panel Connector 2 (FP2)



Pin	Signal	Pin	Signal
1	External Speaker (+)	2	NC
3	NC	4	NC
5	Internal Buzzer (-)	6	I2C Bus SMB Clock
7	External Speaker (-)	8	I2C Bus SMB Data

2.25 Analog CRT Display Connector (VGA1)

Standard specification

2.26 USB Port #0 and #1 Connector (USB1)

2				10
Л	Π	Π	Π	Π
Т				
1				9

Pin	Signal	Pin	Signal
1	+5VSB	2	GND
3	USB0N	4	GND
5	USB0P	6	USB1P
7	GND	8	USB1N
9	GND	10	+5V_USB

2.27 USB Port #2 and #3 Connector (USB2)



Pin	Signal	Pin	Signal
1	+5VSB	2	GND
3	USB2N	4	GND
5	USB2P	6	USB3P
7	GND	8	USB3N
9	GND	10	+5V_USB

2.28 USB Port #4 and #5 Connector (USB3)

2				10
	Π	Π	Π	Π
Т				
1				9

Pin	Signal	Pin	Signal
1	+5VSB	2	GND
3	USB4N	4	GND
5	USB4P	6	USB5P
7	GND	8	USB5N
9	GND	10	+5V_USB

2.29 USB Port #6 Connector (USB4)



Pin	Signal
1	+5VSB
2	USB6N
3	USB6P
4	GND

2.30 RS-232 Serial port1 Connector (COM1)

9 -	-	•		81
10 -	•	•	•	•2

Half-Size	SBC
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HSB-CV1P

Pin	Signal	Pin	Signal
1	DCD1	2	RXD1
3	TXD1	4	DTR1
5	GND	6	DSR1
7	RTS1	8	CTS1
9	RI1	10	NC

2.31 RS-232/422/485 Serial port2 Connector (COM2)

9 -	-	•	-	81
10 -	•	•	•	•2

RS-232:

Pin	Signal	Pin	Signal
1	DCD2	2	RXD2
3	TXD2	4	DTR2
5	GND	6	DSR2
7	RTS2	8	CTS2
9	RI2/+5V/+12V	10	NC

RS-485:

Pin	Signal	Pin	Signal	
1	TXD-	2	NC	
3	TXD+	4	NC	
5	GND	6	NC	
7	NC	8	NC	
9	NC/+5V/+12V	10	NC	
RS-422:				
Pin	Signal	Pin	Signal	
1	TXD-	2	RXD+	
1	TXD-	2	RXD+	

Chapter 2 Quick Installation Guide 2-16

Half-Size SBC			HSB-CV1P		
3	TXD+	4	RXD-		
5	GND	6	NC		
7	NC	8	NC		
9	NC/+5V/+12V	10	NC		

2.32 RS-232 Serial port3 Connector (COM3)

9 10	9 · · · · · · · · · · · · · · · · · · ·					
	Pin	Signal	Pin	Signal		
	1	DCD3	2	RXD3		
	3	TXD3	4	DTR3		
	5	GND	6	DSR3		
	7	RTS3	8	CTS3		
	9	RI3	10	NC		

2.33 RS-232 Serial port4 Connector (COM4)

9 10	9 • • • • • • • • • • • • • • • • • • •					
	Pin	Signal	Pin	Signal		
	1	DCD4	2	RXD4		
	3	TXD4	4	DTR4		
	5	GND	6	DSR4		
	7	RTS4	8	CTS4		
-	9	RI4	10	NC		

2.34 Infrared Connector (IR1)



Pin	Signal
1	+5V
2	NC
3	IRRX
4	GND
5	IRTX
6	NC

2.35 Parallel Port Connector (LPT1)



Pin	Signal	Pin	Signal
1	STB#	2	AFD#
3	DATA0	4	ERR#
5	DATA1	6	INIT#
7	DATA2	8	SLIN#
9	DATA3	10	GND
11	DATA4	12	GND
13	DATA5	14	GND
15	DATA6	16	GND
17	DATA7	18	GND
19	ACK#	20	GND
21	BUSY	22	GND
23	PE	24	GND
25	SELECT	26	NC

2.36 SATA Port2 Connector (SATA1)



Pin	Signal
1	GND
2	SATA_TX+
3	SATA_TX-
4	GND
5	SATA_RX-
6	SATA_RX+
7	GND

2.37 SATA Port1 Connector (SATA2)

Pin 1 Pin 7	
Pin	Signal
1	GND
2	SATA_TX+
3	SATA_TX-

4	GND
5	SATA_RX-
6	SATA_RX+
7	GND

2.38 BIOS Debug Port (SPI1)

2			8
Π	Π	Π	Ш
			۵
Ι	I	Т	Т
1			7

Pin	Signal	Pin	Signal
1	+3.3V	2	GND
3	SPI_CE#	4	SPI_CLK
5	SPI_SO	6	SPI_SI
7	SPI_HOLD#	8	NC

2.39 3-Pin CPU Fan Connector (4-Pin Optional) (FAN1)

0 4	○ ○ Ŏ 1	
	Pin	Signal
	1	GND
	2	+12V
	3	FAN_TAC
	4	FAN_CTL (Optional)

2.40 4-Pin System FAN Connector (FAN2)

0 0 0 0 4 1		
Pin	Signal	
1	GND	

Chapter 2 Quick Installation Guide 2-20

	Half-Size SBC	HSB-CV1P
2	+12V	
3	FAN_TAC	
4	FAN_CTL	

2.41 4-Pin ATX Power Connector (ATX1)



Pin	Signal	Pin	Signal
1	GND	2	GND
3	+12V	4	+12V

2.42 DDR3 SODIMM Slot (DIMM1)

Standard specification

Below Table for China RoHS Requirements 产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

	有毒有害物质或元素					
部件名称	铅	汞	镉	六价铬	多溴联苯	多溴二苯醚
	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)
印刷电路板	~				0	0
及其电子组件		0	0	0	0	0
外部信号					0	0
连接器及线材		0	0	0	0	0
O: 表示该有毒有害物质在该部件所有均质材料中的含量均在						
SJ/III303-2000 标准规定的限重安米以下。						
X:表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 S.I/T 11363-2006 标准规定的限量要求。						
久沙 山立日底标示之 打 刀伸用期阻 <u>亥</u> 绝大 <u></u> 如元偿使用处况了						
备注: 此厂前州你小之小休使用别限,永泪任一取止吊使用扒洗下。						

Chapter 3

AMI BIOS Setup
3.1 System Test and Initialization

These routines test and initialize board hardware. If the routines encounter an error during the tests, you will either hear a few short beeps or see an error message on the screen. There are two kinds of errors: fatal and non-fatal. The system can usually continue the boot up sequence with non-fatal errors.

System configuration verification

These routines check the current system configuration stored in the CMOS memory and BIOS NVRAM. If system configuration is not found or system configuration data error is detected, system will load optimized default and re-boot with this default system configuration automatically.

There are four situations in which you will need to setup system configuration:

- 1. You are starting your system for the first time
- 2. You have changed the hardware attached to your system
- 3. The system configuration is reset by Clear-CMOS jumper
- 4. The CMOS memory has lost power and the configuration information has been erased.

The HSB-CV1P CMOS memory has an integral lithium battery backup for data retention. However, you will need to replace the complete unit when it finally runs down.

3.2 AMI BIOS Setup

AMI BIOS ROM has a built-in Setup program that allows users to modify the basic system configuration. This type of information is stored in battery-backed CMOS RAM and BIOS NVRAM so that it retains the Setup information when the power is turned off.

Entering Setup

Power on the computer and press or <F2> immediately. This will allow you to enter Setup.

Main

Set the date, use tab to switch between date elements.

Advanced

Enable disable boot option for legacy network devices.

Chipset

Host bridge parameters.

Boot

Enables/disable quiet boot option.

Security

Set setup administrator password.

Save&Exit

Exit system setup after saving the changes.

HSB-CV1P

<u>Setup Menu</u>

Setup submenu: Main

Ap Main Advanced	n <mark>tio Setup Utili</mark> Chipset Boot	ty – Copyright (C) 2011 Ameri Security Save & Exit	can Megatrends, Inc.
BIOS Information HSB-CV1P-A12	R1.2(HCVPCM12)	(08/09/2013)	Set the Date. Use Tab to switch between Date elements.
BIOS Vendor Core Version Compliancy		American Megatrends 4.6.5.3 UEFI 2.3; PI 1.2	
System Date System Time		[Tue 01/06/2009] [04:25:15]	
Access Level		Administrator	
			<pre>++: Select Screen fl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
1	ersion 2,14,121	9. Conuright (C) 2011 America	an Megatrends, Inc.

H S B - C V 1 P

Setup submenu: Advanced

Aptio Setup Util Main Advanced Chipset Boot	ity – Copyright (C) 2011 American Security Save & Exit	Megatrends, Inc.
 ACPI Settings SS RTC Wake Settings CPU Configuration IDE Configuration USB Configuration F81866 Super IO Configuration F81866 H/W Monitor Digital IO 		System ACPI Parameters. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
	l9. Copyright (C) 2011 American M	egatrends, Inc.

ACPI Settings

Aptio Setup U Advanced	tility – Copyright (C) 2011 America	an Megatrends, Inc.
ACPI Settings		Select the highest ACPI sleep state the system will enter when the SUSPEND button is
ACPI Sleep State	[S3 (Suspend to RAM)]	<pre>+*: Select Screen 14: Select Item Enter: Select Item Enter: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.14	.1219. Copyright (C) 2011 American	Megatrends, Inc.

ACPI Sleep State	S3 Only (Suspend to RAM)	Default
	Suspend Disabled	
Select ACPI sleep state the system will enter when the SUSPEND button is pressed.		

S5 RTC Wake Settings

Aptio Setup Utility – Advanced	Copyright (C) 2011 American	Megatrends, Inc.
Hake system with Fixed Time Make up day Wake up hour Wake up minute Wake up second	[Enabled] 0 0 0 0	Enable or disable System wake on alarm event. When enabled, System will wake on the hr::min::sec specified
Wake system with Dynamic Time	[Disabled]	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help
Version 2.14.1219. Co	pyright (C) 2011 American M	F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit egatrends, Inc.

Wake system with	Disabled	Default		
Fixed Time	Enabled			
Enable or disable System wake on alarm event. When enabled, System will wake				
on the hr::min::sec specified.				
Wake system with	Disabled	Default		
Dynamic Time	Enabled			
Enable or disable System wake on alarm event. When enabled, System will wake				
on the current time + Increase minute(s).				

H S B - C V 1 P

CPU Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2011 American	Megatrends, Inc.
Advanced CPU Configuration Processor Type EMT64 Processor Speed System Bus Speed Ratio Status Actual Ratio System Bus Speed Processor Stepping	Intel(R) Atom(TM) CPU Not Supported 1865 MHz 533 MHz 14 533 MHz 5361 (B3 Stepping)	Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology).
Microcode Revision L1 Cache RAM	269 2x56 k	
L2 Cache RAM Processon Core	2x512 K	++. Salart Screen
Hyper-Threading	Supported	↑↓: Select Item Enter: Select
Hyper-Threading	[Enabled]	+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219. Co	pyright (C) 2011 American M	egatrends, Inc.

Hyper-Threading	Disabled			
	Enabled	Default		
Enabled for Windows XP and Linux (OS optimized for Hyper-Threading				
Technology) and Disabled for other OS (OS not optimized for Hyper-Threading				
Technology).				
When Disabled only one thread per enabled core is enabled.				

SATA Configuration (IDE)

Aptio Setup Util Advanced	lity – Copyright (C) 2011 Ame	erican Megatrends, Inc.
SATA Port0 SATA Port1	Not Present Not Present	SATA Ports (0–3) Device Names if Present and Enabled.
SATA Controller(s)		
Configure SATA as	[IDE]	
		++: Select Screen 11: Select Item
		+/-: Change Opt. F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.12	219. Copyright (C) 2011 Ameri	ican Megatrends, Inc.

SATA Controller(s)	Enabled	Default	
	Disabled		
Enable or disable SATA device.			
SATA Mode Selection	IDE Default		
	AHCI		
Determines how SATA controller(s) operate.			

SATA Configuration (AHCI)

Aptio Setup Util Advanced	ity – Copyright (C) 2011 A	merican Megatrends, Inc.
SATA PortO SATA Port1	Not Present Not Present	SATA Ports (0–3) Device Names if Present and Enabled.
SATA Controller(s)		
Configure SATA as	[AHCI]	
SATA Port 0 SATA Port 0 Hot Plug SATA Port 1 SATA Port 1 Hot Plug	[Enabled] [Enabled] [Enabled] [Enabled]	
		++: Select Screen ↑↓: Select Item Enter: Select
		+/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit
		ESC: Exit
Version 2.14.12	19. Copyright (C) 2011 Ame	rican Megatrends, Inc.

SATA Port 0	Disable		
	Enabled	Default	
Enable or Disable SATA Por	ť.		
SATA Port 0 Hot Plug	Disable		
	Enabled	Default	
Designates this port as Hot Pluggable.			
SATA Port 1	Disable		
	Enabled	Default	
Enable or Disable SATA Port.			
SATA Port 1 Hot Plug	Disable		
	Enabled	Default	
Designates this port as Hot Pluggable.			

USB Configuration

Aptio Setup Uti Advanced	ility – Copyright (C) 2011 An	merican Megatrends, Inc.
USB Configuration		Enables Legacy USB support.
USB Devices: 1 Drive		AUTO option disables legacy support if no USB devices are connected. DISABLE option will keen USB devices available
Legacy USB Support		only for EFI applications.
Mass Storage Devices:	[0.4.1	
TUSHIBH Transmemory PMHP	[Huto]	
		++: Select Screen
		↑↓: Select Item Enter: Select
		+/-: Change Opt.
		F2: Previous Values
		F3: Uptimized Defaults F4: Save & Exit
		ESC: Exit
Version 2.14.1	1219. Copyright (C) 2011 Amer	rican Megatrends, Inc.

Legacy USB Support	Enabled	Default
	Disabled	
	Auto	
Enable Legacy USB support. Auto option disables legacy support if no USB		
devices are connected. DISABLE option will keep USB devices available only for		
EFI applications.		

F81866 Super IO Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2011 American	Megatrends, Inc.
F81866 Super IO Configuration		Set Parameters of Serial Port 1
F81866 Super IO Chip > Serial Port 1 Configuration > Serial Port 2 Configuration > Serial Port 3 Configuration > Serial Port 4 Configuration > IrOA Configuration > Parallel Port Configuration	F81866	
Power Failure	[Always off]	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219. Co	pyright (C) 2011 American M	egatrends, Inc.

Serial Port 1 Configuration	Set Parameters of Serial Port 1 (COMA)		
Serial Port 2 Configuration	Set Parameters of Serial Port 2 (COMB)		
Serial Port 3 Configuration	Set Parameters o	Set Parameters of Serial Port 3 (COMC)	
Serial Port 4 Configuration	Set Parameters o	f Serial Port 4 (COMD)	
IrDA Configuration	Set Parameters of IrDA		
Parallel Port Configuration	Set Parameters of Parallel Port (LPT)		
Power Failure	Power Off	Default	
	Power On		
	Last State		
Select AC power state when power is re-applied after a power failure.			

Serial Port 1 Configuration

Aptio Setup Utility Advanced	– Copyright (C) 2011 Americ	an Megatrends, Inc.
Serial Port 1 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=3F8h; IRQ=4;	(604)
Change Settings	[Auto]	
		++: Select Screen
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values
		F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219.	Copyright (C) 2011 American	Megatrends, Inc.

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Po	ort (COM)	
Change Settings	Auto	Default
	IO=3F8h; IRQ=4	
	IO=3F8h;	
	IRQ=3, 4	
	IO=2F8h;	
	IRQ=3, 4	
Select an optimal setting for Super IO device.		

Serial Port 2 Configuration



Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Por	rt (COM)	
Change Settings	Auto	Default
	IO=2F8h; IRQ=3	
	IO=3F8h; IRQ=3,	
	4	
	IO=2F8h; IRQ=3,	
	4	

Select an optimal setting for Super IO device.		
Device Mode	RS-232	Default
	RS-422	
	RS-485	
Change the Serial Port mode. Select <rs-232> or <rs-422> or <rs-485> mode.</rs-485></rs-422></rs-232>		

Serial Port 3 Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2011 American	Megatrends, Inc.
Serial Port 3 Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] IO=3E8h; IRQ=10;	(667)
Change Settings	[Auto]	
		++: Select Screen 11: Select Item
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values F3: Optimized Defaults
		F4: Save & Exit ESC: Exit
Version 2.14.1219. Dr	ppyright (C) 2011 American M	egatrends. Inc.

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Po	ort (COM)	
Change Settings	Auto	Default
	IO=3E8h;	
	IRQ=11	
	IO=2E8h;	
	IRQ=11	
Select an optimal setting for Super IO device.		

Serial Port 4 Configuration

Aptio Setup Utility Advanced	– Copyright (C) 2011 Americ	an Megatrends, Inc.
Serial Port 4 Configuration		Enable or Disable Serial Port
Serial Port		(0011)
Device Settings	TO=2F8h: TRO=11:	
501100 000000	10 22011) 1110 111)	
Change Settings	[Auto]	
	[
		↔: Select Screen
		t↓: Select Item
		Enter: Select
		+/-: Change Opt.
		F1: General Help
		F2: Previous Values
		F3: Optimized Defaults
		F4: Save & Exit
		ESC: Exit
Version 2.14.1219.	Copyright (C) 2011 American	

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Po	ort (COM)	
Change Settings	Auto	Default
	IO=2E8h;	
	IRQ=11	
	IO=3E8h;	
	IRQ=11	
Select an optimal setting for Super IO device.		

IrDA Configuration

Aptio Setup Utility – Advanced	Copyright (C) 2011 American	Megatrends, Inc.
IrDA Configuration		Enable or Disable Serial Port
Serial Port Device Settings	[Enabled] Reset Required	(601)
Change Settings Device Mode	[Auto] [Enable IR1 functio]	
		++: Select Screen f↓: Select Item
		Enter: Select +/−: Change Opt. E1: Ceneral Help
		F2: Previous Values
		F4: Save & Exit ESC: Exit
Version 2.14.1219. C	opyright (C) 2011 American M	legatrends, Inc.

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Serial Po	ort (COM)	
Change Settings	Auto	Default
	IO=2C0h;	
	IRQ=11	
	IO=2C8h;	
	IRQ=11	
Select an optimal setting for Super IO device.		

H S B - C V 1 P

Device Mode	Disable IR1	
	function	
	Enable IR1	Default
	function, active	
	pulse 1.6uS	
	Enable IR1	
	function, active	
	pulse 3/16 bit	
	time	
Select an optimal setting fo	r Super IO device.	

Parallel Port Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2011 Americar	n Megatrends, Inc.
Parallel Port Configuration		Enable or Disable Parallel
Parallel Port Device Settings	[Enabled] IO=378h; IRQ=5;	FURT (LETZETE)
Change Settings Device Mode	[Auto] [STD Printer Mode]	
		↔: Select Screen ↑↓: Select Item
		Enter: Select +/-: Change Opt.
		F1: General Help F2: Previous Values
		F3: Uptimized Defaults F4: Save & Exit
Version 2.14.1219. C	opyright (C) 2011 American ⊨	legatrends, Inc.

Serial Port	Disabled	
	Enabled	Default
Enable or Disable Para	allel Port (LPT/LPTE)	
Change Settings	Auto	Default
	IO=378h; IRQ=5	
	IO=378h; IRQ=5,6,7,10,11,12	
	IO=278h; IRQ=5,6,7,10,11,12	
	IO=3BCh; IRQ=5,6,7,10,11,12	
Select an optimal setting for Super IO device.		
Change Settings	Auto	Default

	IO=378h; IRQ=5 ; DMA=3	
IO=378h; IRQ=5,6,7,10,11,12;DMA=1,3		
	IO=278h; IRQ=5,6,7,10,11,12;DMA=1,3	
IO=3BCh; IRQ=5,6,7,10,11,12;DMA=1,3		
Select an optimal setti	ng for Super IO device.	
Change Settings	Auto	Default
	IO=378h; IRQ=5 ; DMA=3	
	IO=378h; IRQ=5,6,7,10,11,12;DMA=1,3	
	IO=278h; IRQ=5,6,7,10,11,12;DMA=1,3	
	IO=3BCh; IRQ=5,6,7,10,11,12;DMA=1,3	
Select an optimal setti	ng for Super IO device.	·
Device Mode	STD Printer Mode	Default
	SPP Mode	
	EPP-1.9 and SPP Mode	
	EPP-1.7 and SPP Mode	
	ECP Mode	
	ECP and EPP 1.9 Mode	
	ECP and EPP 1.7 Mode	
Change the Printer Po	rt Mode.	

F81866 H/W Monitor

Aptio Setup Utility Advanced	ı – Copyright (C) 2011 America	n Megatrends, Inc.
Pc Health Status		Smart Fan Mode Select
 Smart Fan Mode Configuration CPU temperature System temperature Fan1 Speed Fan2 Speed Vcore 1.5V 5V 12V VSB5V VCC3V VSB5V VBAT 	: +29 % : +34 % : 5050 RPM : N/A : +1.216 V : +1.593 V : +4.977 V : +12.009 V : +5.064 V : +3.424 V : +3.424 V : +3.184 V	++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219.	Copyright (C) 2011 American	Megatrends, Inc.

Smart Fan Mode Configuration

Aptio Setup Utility – Copyright (C) 2011 American Advanced	Megatrends, Inc.
Smart Fan Mode Configuration	Smart FAN Configuration
▶ FAN 1 Configuration ▶ FAN 2 Configuration	
	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219. Copyright (C) 2011 American M	

Fan 1 Confinguration	Set Parameters of Fan 1
Fan 2 Confinguration	Set Parameters of Fan 2

CPU Fan Confinguration

Aptio Setup Utility Advanced	– Copyright (C) 2011 Americ	an Megatrends, Inc.
Pc Health Status CPU Smart Fan control Target Temp. Sensor Temperature Bound 1 Temperature Bound 3 Temperature Bound 4 Segment 1 Speed (%) Segment 2 Speed (%) Segment 4 Speed (%) Full Speed Count	[Auto by RPM] [CPU Temperature] 50 40 30 100 85 70 60 3000	++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219.	Copyright (C) 2011 American	Megatrends, Inc.

Options Summary :

CPU Smart Fan Control	Auto by RPM	Default
	Auto by Duty-Cycle	
	Manual by RPM	
	Manual by Duty-Cycle	
Smart Fan Mode settting		
Target Temp. Sensor	CPU Temperature	Default
	SYS Temperature	
Select the target temperature sensor.		
Temperature Bound 1	Default 60	

Chapter 3 AMI BIOS Setup 3-24

H S B - C V 1 P

Temperature Bound 2	Default 50
Temperature Bound 3	Default 40
Temperature Bound 4	Default 30
Segment 1 Speed (%)	Default 100
Segment 2 Speed (%)	Default 85
Segment 3 Speed (%)	Default 70
Segment 4 Speed (%)	Default 60
Full Speed Count	Default 3000
Segment 1 Speed (PWM)	Default 100
Segment 2 Speed (PWM)	Default 85
Segment 3 Speed (PWM)	Default 70
Segment 4 Speed (PWM)	Default 60

SYS Fan Confinguration

Advanced	copyright (c) zoli American	Megatrends, Inc.
Advanced Pc Health Status SVS Smart Fan control Target Temp. Sensor Temperature Bound 1 Temperature Bound 2 Temperature Bound 3 Temperature Bound 4 Segment 1 Speed (PKM) Segment 2 Speed (PKM) Segment 3 Speed (PKM) Segment 4 Speed (PKM)	[Auto by Duty-Cycle] [CPU Temperature] 60 50 40 30 100 85 70 60	++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Vension 2, 14, 1919, Pa	supidit (C) 2011 American M	arathanda. Tas

Options Summary :

SYS Smart Fan Control	Auto by RPM	
	Auto by Duty-Cycle	Default
	Manual by RPM	
	Manual by Duty-Cycle	
Smart Fan Mode settting		
Target Temp. Sensor	CPU Temperature	Default
	SYS Temperature	
Select the target temperature sensor.		
Temperature Bound 1	Default 60	

Chapter 3 AMI BIOS Setup 3-26

Temperature Bound 2	Default 50
Temperature Bound 3	Default 40
Temperature Bound 4	Default 30
Segment 1 Speed (%)	Default 100
Segment 2 Speed (%)	Default 85
Segment 3 Speed (%)	Default 70
Segment 4 Speed (%)	Default 60
Full Speed Count	Default 3000
Segment 1 Speed (PWM)	Default 100
Segment 2 Speed (PWM)	Default 85
Segment 3 Speed (PWM)	Default 70
Segment 4 Speed (PWM)	Default 60

HSB-CV1P

Digital IO

DI0_P#1 [Input] DI0_P#2 [Input] DI0_P#3 [Input] DI0_P#4 [Input] DI0_P#5 [Output] DI0_P#6 Direction [Hi] DI0_P#7 [Output] DI0_P#8 Direction [Hi] DI0_P#8 [Output] [Output] DI0_P#7 Infection [Hi] DI0_P#8 [Output] [Output] DI0_P#8 Direction [Hi] F1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F2: Previous Values	Aptio Setu Advanced	p Utility – Copyright (C) 2011 Ame	rican Megatrends, Inc.
++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values	DIO_P#1 DIO_P#2 DIO_P#3 DIO_P#4 DIO_P#5 DIO_P#5 Direction DIO_P#6 DIO_P#7 DIO_P#7 DIO_P#7 DIO_P#8 DIO_P#8 Direction	[Input] [Input] [Input] [Output] [Hi] [Output] [Hi] [Output] [Hi] [Output] [Hi]	Set GPIO as Input or Output
F3: Optimized Defaults F4: Save & Exit ESC: Exit			++: Select Screen 1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit

DIO_P#1	Input	Default	
	Output		
Set Digital IO as Input or Output			
DIO_P#1 Direction	Low	Default	
	Hi		
Set Digital IO Level as Low or Hi			
DIO_P#2	Input	Default	
	Output		
Set Digital IO as Input or Output			

HSB-CV1P

DIO_P#2 Direction	Low	Default	
	Hi		
Set Digital IO Level as Low	or Hi		
DIO_P#3	Input	Default	
	Output		
Set Digital IO as Input or Ou	utput		
DIO_P#3 Direction	Low	Default	
	Hi		
Set Digital IO Level as Low	or Hi		
DIO_P#4	Input	Default	
	Output		
Set Digital IO as Input or Output			
DIO_P#4 Direction	Low	Default	
	Hi		
Set Digital IO Level as Low or Hi			
DIO_P#5	Input		
	Output	Default	
Set Digital IO as Input or Output			
DIO_P#5 Direction	Low		
	Hi	Default	
Set Digital IO Level as Low or Hi			
DIO_P#6	Input		
	Output	Default	
Set Digital IO as Input or Output			

HSB-CV1P

DIO_P#6 Direction	Low	
	Hi	Default
Set Digital IO Level as Low	or Hi	
DIO_P#7	Input	
	Output	Default
Set Digital IO as Input or Output		
DIO_P#7 Direction	Low	
	Hi	Default
Set Digital IO Level as Low or Hi		
DIO_P#8	Input	
	Output	Default
Set Digital IO as Input or Output		
DIO_P#8 Direction	Low	
	Hi	Default
Set Digital IO Level as Low or Hi		

Setup submenu: Chipset

Aptio Setup Utility – Copyright (C) 2011 American Main Advanced <mark>Chipset</mark> Boot Security Save & Exit	Megatrends, Inc.
▶ Host Bridge ▶ South Bridge	Host Bridge Parameters
	<pre>++: Select Screen t1: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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HSB-CV1P

Host Bridge

Aptio Setup Utility - Chipset	Copyright (C) 2011 American	Megatrends, Inc.
Intel IGD Configuration ******** Memory Information ******* Memory Frequency Total Memory DIMM#1	1067 MH2(DDR3) 2048 MB 2048 MB	Config Intel IGD Settings. ++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.14.1219. Co	opyright (C) 2011 American M	egatrends, Inc.

Intel IGD Configuration

Aptio Se Chips	tup Utility – Copyright (C) 2011 American at	Megatrends, Inc.
Intel IGD Configuratio IGFX - Boot Type LCD Panel Type Active LFP LVDS Backlight Level Backlight Control Fixed Graphics Memory	T (VBIOS Default) [VDIOS Default] [LVOS] [80%] [PHM Normal] Size [256MB]	Select the Video Device which will be activated during POST. This has no effect if external graphics present.
Version	2.14.1219. Copyright (C) 2011 American M	legatrends, Inc.

IGFX – Boot Type	VBIOS Default	Default
	CRT	
	LVDS	
Select the Video Device w	hich will be activated o	during POST. This has no effect if
external graphics present.		
LCD Panel Type	VBIOS Default	Default
	640x480,18bit,60Hz	
	800x480,18bit,60Hz	
	800x600,18bit,60Hz	

H S B - C V 1 P

1024x600,18bit,60Hz	
1024v768 18bit 60Hz	
10242700,10011,00112	
1024x768,24bit,60Hz	
1280x768,24bit,60Hz	
1366x768,24bit,60Hz	

Select LCD panel used by Internal Graphics Device by selecting the appropriate setup item.

Active LFP No LVDS LVDS Default

Select the Active LFP Configuration.

No LVDS:VBIOS does not enable LVDS.

Int-LVDS:VBIOS enables LVDS driver by Integrated encoder.

SDVO LVDS:VBIOS enables LVDS driver by SDVO encoder.

eDP Port-A:LFP Driven by Int-DisplayPort encoder from Port-A.

eDP Port-D:LFP Driven by Int-DisplayPort encoder from Port-D(through PCH).

LVDS Backlight Level	100%	
	90%	
	80%	Default
	70%	
	60%	
	50%	
	40%	
	30%	

H S B - C V 1 P

	20%	
	10%	
	0%	
Select Backlight brightness of LVDS.		
Backlight Control	PWM Inverted	
	PWM Normal	Default
Back Light Control Setting		
Fixed Graphics Memory	128MB	
Size	256MB	Default
Configure Fixed Graphics Memory Size.		

South Bridge

Aptio Setup Uti Chipset	lity – Copyright (C) 2011 Am	erican Megatrends, Inc.
Azalia Controller	[HD Audio]	Azalia Controller
Select USB Mode UHCI #1 (ports 0 and 1) UHCI #2 (ports 2 and 3) UHCI #3 (ports 4 and 5) UHCI #4 (ports 6 and 7) USB 2.0(EHCI) Support	[By Controllers] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	++: Select Screen
		<pre>tl: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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Azalia Controller	Disabled	
	HD Audio	Default
Azalia Controller.		
Select USB Mode	By Port	
	By Controller	Default
Select USB mode to control USB ports.		
USB Function	Disabled	
	1 USB Ports	
	2 USB Ports	

H S B - C V 1 P

	3 USB Ports	
	4 USB Ports	
	5 USB Ports	
	6 USB Ports	
	7 USB Ports	
	8 USB Ports	Default
Enable / Disable USB Fund	tion.	
UHCI #1 (ports 0 and 1)	Disabled	
	Enabled	Default
Control the USB UHCI (USB 1.1) functions.		
Disable from highest to lowest controller.		
UHCI #1 (ports 2 and 3)	Disabled	
	Enabled	Default
Control the USB UHCI (US	B 1.1) functions.	
Disable from highest to low	est controller.	
UHCI #1 (ports 4 and 5)	Disabled	
	Enabled	Default
Control the USB UHCI (US	B 1.1) functions.	
Disable from highest to lowest controller.		
UHCI #1 (ports 6 and 7)	Disabled	
	Enabled	Default
Control the USB UHCI (USB 1.1) functions.		
Disable from highest to lowest controller.		
USB 2.0(EHCI) Support	Disabled	
Half-size SBC		HSB-CV1P
---	---------	----------
	Enabled	Default
Enable or Disable USB 2.0 (EHCI) Support.		

Setup submenu: Boot

Aptio Setup Utili Main Advanced Chipset Boot	t <mark>y – Copyright (C) 2011 Americ</mark> a Security Save & Exit	an Megatrends, Inc.
Boot Configuration Bootup NumLock State	[0n]	Select the keyboard NumLock state
Quiet Boot Launch RTL8111E PXE OpROM	[Enabled] [Disabled]	
Boot Option Priorities Boot Option #1 Boot Option #2 Hand Drive BBS Priorities	[UEFI: TOSHIBA Tran] [TOSHIBA TransMemor]	
		<pre>++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
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Options summary :

Bootup NumLock State	On	
	Off	
Select keyboard NumLock	state.	
Quiet Boot	Disabled	
	Enabled	Default
Enables or disables Quiet	Boot option.	
Launch RTL8111E PXE	Disabled	Default
OpROM	Enabled	
En/Disable PXE boot for RTL8111E LAN		

Boot Option Priorities

Aptio Setup	Utility – Copyright Boot	(C) 2011 American	Megatrends, Inc.
Boot Option #1	[TOSHIBA	TransMemor]	Sets the system boot order ++: Select Screen 11: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit
Version 2.1	14.1219. Copyright (C	:) 2011 American Mu	egatrends, Inc.

Options Summary :

Boot Option #X	Your device	
	Your device	
Sets the system boot order		

Setup submenu: Security

Aptio Setup Utilit Main Advanced Chipset Boot	y – Copyright (C) 2011 American Security Save & Exit	Megatrends, Inc.		
Password Description		Set Administrator Password		
If ONLY the Administrator's pass then this only limits access to only asked for when entering Set If ONLY the User's password is s is a power on password and must boot or enter Setup. In Setup th have Administrator rights. The password length must be in the following range: Minimum length	sword is set, Setup and is up. set, then this be entered to he User will 3			
Maximum length	20			
		++: Select Screen		
		↑↓: Select Item		
Administrator Password		Enter: Select		
User Password	+/-: Change Opt.			
		F1: General Help		
		F2: Previous Values		
		F3: Optimized Defaults		
		F4: Save & Exit		
		ESU: EXIT		
Version 2.14.1219	9. Copyright (C) 2011 American M	egatrends, Inc.		

Change User/Supervisor Password

You can install a Supervisor password, and if you install a supervisor password, you can then install a user password. A user password does not provide access to many of the features in the Setup utility.

If you highlight these items and press Enter, a dialog box appears which lets you enter a password. You can enter no more than six letters or numbers. Press Enter after you have typed in the password. A second dialog box asks you to retype the password for confirmation. Press Enter after you have retyped it correctly. The password is required at boot time, or when the user enters the Setup utility.

Removing the Password

Highlight this item and type in the current password. At the next dialog box press Enter to disable password protection.

HSB-CV1P

Setup submenu: Exit

Aptio Setup Utility – Copyright (C) 2011 American Main Advanced Chipset Boot Security Save & Exit	Megatrends, Inc.
Save Changes and Reset Discard Changes and Reset	Reset the system after saving the changes.
Restore Defaults Save as User Defaults Restore User Defaults	
Boot Override UEFI: TOSHIBA TransMemory PMAP TOSHIBA TransMemory PMAP	
	<pre>++: Select Screen 14: Select Item Enter: Select +/-: Change Opt. F1: General Help F2: Previous Values F3: Optimized Defaults F4: Save & Exit ESC: Exit</pre>
Version 2.14.1219. Copyright (C) 2011 American Me	egatrends, Inc.

Chapter

Driver Installation

Chapter 4 Driver Installation 4 - 1

The HSB-CV1P comes with a CD-ROM that contains all drivers and utilities that meet your needs.

Follow the sequence below to install the drivers:

Step 1 – Install Chipset Driver
Step 2 – Install VGA Driver
Step 3 – Install LAN Driver
Step 4 – Install Audio Driver
Step 5 – Install Serial Port Driver (Optional)
Step 6 – Install AHCI Driver
Step 7 – Install Rapid Storage Technology Driver

Please read instructions below for further detailed installations.

4.1 Installation:

Insert the HSB-CV1P CD-ROM into the CD-ROM Drive. And install the drivers from Step 1 to Step 7 in order.

Step 1 – Install Chipset Driver

- 1. Click on the **STEP1 CHIPSET** folder and double click on the *infinst_autol.exe* file
- 2. Follow the instructions that the window shows
- 3. The system will help you install the driver automatically
- Step 2 Install VGA Driver
 - 1. Click on the **STEP2 VGA** folder and select the OS folder your system is
 - 2. Double click on the .exe file located in each OS folder
 - 3. Follow the instructions that the window shows
 - 4. The system will help you install the driver automatically

For Windows[®] XP

Install Framework 3.5

- Double click on the *dotnetfx35.exe*
- Follow the instructions that the window shows
- The system will help you install the driver automatically

Install IEMGD

- Double click on the *IEMGDInstall.exe*
- Select the configuration

- Follow the instructions that the window shows
- The system will help you install the driver automatically

] Document	8	Dn Dr	ver
] License		sdl	0
J Utilities			4GDInstall 4GDInstall
	IEMGD Default Pane	el Type	
	Panel Resolution Setting		
	GCV5 n3 1024x768x	18bit	~
	GCV5_n1_640x480x10	Bhit	
	GCV5_n2_800x600x18	Bbit	<u></u>
	GCV5 n3 1024x768x1	18bit	
	$GCV5_n4_{000x480x16}$ GCV5_n5_1366x768x	5011 18bit	
	GCV5_n6_1280x768x	18bit	
	GCV5_n7_640x480x24	4bit	
	10010_00000000000000000000000000000000		
Documents	(Driver	
	(alk alk	
License	1		

Installs driver and application files
 Uninstalls driver and application files

Next

HSB-CV1P

telR Embedded Media and Graphics Driver Setup
INTEL SOFTWARE LICENSE AGREEMENT (DEM / IHV / ISV Distribution & Single
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.
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 Agreement. If you do not wish to so agree, do not install or use the Software.
Please Also Note:
^a If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;
* If you are an End-User, then only Exhibit A, the INTEL END-USER SOFTWARE LICENSE AGREEMENT, applies.
G I disagree Install Close

The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (<u>Tell me why</u> <u>this testing is important.</u>)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has
passed Windows Logo testing.
passed Windows Logo testing.
 passed Windows Logo testing.

If you want to update driver, please uninstall driver first.

Uninstall IEMGD

- 1. Double click on the *IEMGDInstall.exe*
- 2. Follow the instructions that the window shows
- 3. The system will help you uninstall the driver automatically

Docume	nts Driver
License	sdk
Utilities	IEMGDInstall IEMGDInstall
	🔄 IntelR Embedded Media and Graphics Driver Setup 🛛 🔀
	 Installs driver and application files Uninstalls driver and application files

Step 3 – Install LAN Driver

- 1. Click on the **STEP3 LAN** folder and select the OS folder your system is
- 2. Double click on the **setup.exe** file located in each OS folder
- 3. Follow the instructions that the window shows
- 4. The system will help you install the driver automatically

Step 4 – Install Audio Driver

1. Click on the **STEP4 - AUDIO** folder and select the OS folder your system is

- 2. Double click on the .exe file located in each OS folder
- 3. Follow the instructions that the window shows
- 4. The system will help you install the driver automatically

Step 5 – Install Serial Port Driver (Optional)

For Windows XP 32-bit

- 1. Click on the **STEP5 Serial Port Driver (Optional)** folder and click on the folder of **WINXP_32**
- 2. Double click on the patch.bat file
- 3. Follow the instructions that the window shows
- 4. The system will help you install the driver automatically

For Windows 7 32-bit/ 64-bit

1. Create a password for Administrator account.



2. Change User Account Control Settings to [Never notify]



3. Reboot and Administrator login.



Chapter 4 Driver Installation 4 - 8

4. To run patch.bat with [Run as administrator].



You also can install the serial port driver for Windows 7 by the

Installation Procedure 2 below:

-Win7 32-bit

Copy the Driver CD\Serial Port Driver (Optional)\WIN7_32\win7_X86\serial.sys to C:\WINDOWS\system32\drivers\

-Win7 64-bit

Copy the Driver CD\Serial Port Driver (Optional)\WIN7_64\win7_amd64\serial.sys to C:\WINDOWS\system32\drivers\

HSB-CV1P

Computer Management		
File Action View Help Computer Management (Loc System Tools Carl System Tools Carl Sy	Communications Port (COM4) Properties General Port Settings Driver Details Communications Port (COM4) Driver Provider: Microsoft Driver Date: 6/21/2006 Driver Version: 6.1.7600.16 Digital Signer: Microsoft W Driver Details To view details Update Driver	Driver File Details
	Noil Back Litter back to the pre- Disable Disables the se Uninstall To uninstall the	File version: 6.1.7600.16385 built by: WinDDK Copyright: © Microsoft Corporation. All rights reserved. Digital Signer: Not digitally signed
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Step 6 – Install AHCI Driver

Please refer to Appendix D AHCI Setting

Step 7 – Install Rapid Storage Technology Driver

- 1. Click on the **STEP7 Rapid Storage Technology** folder and select the OS folder your system is
- 2. Double click on the **setup.exe** file located in each OS folder
- 3. Follow the instructions that the window shows
- 4. The system will help you install the driver automatically

Appendix A

Programming the Watchdog Timer

A.1 Programming

HSB-CV1P utilizes FINTEK 81866 chipset as its watchdog timer controller. Below are the procedures to complete its configuration and the AAEON initial watchdog timer program is also attached based on which you can develop customized program to fit your application.

Configuring Sequence Description

After the hardware reset or power-on reset, the FINTEK 81866 enters the normal mode with all logical devices disabled except KBC. The initial state (enable bit) of this logical device (KBC) is determined by the state of pin 121 (DTR1#) at the falling edge of the system reset during power-on reset.



Appendix A Programming the Watchdog Timer A-2

There are three steps to complete the configuration setup: (1) Enter the MB PnP Mode; (2) Modify the data of configuration registers; (3) Exit the MB PnP Mode. Undesired result may occur if the MB PnP Mode is not exited normally.

(1) Enter the MB PnP Mode

To enter the MB PnP Mode, four special I/O write operations are to be performed during Wait for Key state. To ensure the initial state of the key-check logic, it is necessary to perform four write opera-tions to the Special Address port (2EH). Two different enter keys are provided to select configuration ports (2Eh/2Fh) of the next step.

-o 4e 87 -o 4e 87 (enable configuration)

(2) Modify the Data of the Registers

All configuration registers can be accessed after entering the MB PnP Mode. Before accessing a selected register, the content of Index 07h must be changed to the LDN to which the register belongs, except some Global registers.

(3) Exit the MB PnP Mode

Write exit key 0xAA to the index port.

-o 4e aa (disable configuration)

Watch Dog Timer 1, 2, 3 Control Register (Index=F5h,F6h,FAh Default=00h)

Bit	Name	R/W	Reset	Default	Description	
7	Reserved	R		0	Reserved	
6	WDTMOUT_STS	R/W	5VSB	0	watchdog timeout event occurred, this bit will be set to 1. Write a 1 to this t will clear it to 0.	
5	WD_EN	R/W	5VSB	0	If this bit is set to 1, the counting of watchdog time is enabled.	
4	WD_PULSE	R/W	5VSB	0	Select output mode (0: level, 1: pulse) of RSTOUT# by setting this bit.	
3	WD_UNIT	R/W	5VSB	0	Select time unit (0: 1sec, 1: 60 sec) of watchdog timer by setting this bit.	
2	WD_HACTIVE	R/W	5VSB	0	Select output polarity of RSTOUT# (1: high active, 0: low active) by setting this bit.	
1-0	WD_PSWIDTH	R/W	5VSB	0	Select output pulse width of RSTOUT# 0: 1 ms 1: 25 ms 2: 125 ms 3: 5 sec	

7.8.4 Watchdog Control Configuration Register 1 — Index F5h

7.8.5 Watchdog Timer Configuration Re	gister 2 — Index F6h
---------------------------------------	----------------------

Bit	Name	R/W	Reset	Default	Description
7-0	WD_TIME	R/W	5VSB	0	Time of watchdog timer (0~255)

7.8.6 Watchdog PME Enable Configuration Register 2 — Index FAh

Bit	Name	R/W	Reset	Default	Description
					0: No WDT PME occurred.
7	WDT_PME	R	5VSB	0	1: WDT PME occurred.
					The WDT PME is occurred one unit before WDT timeout.
6		BAA	EVCD	0	0: Disable Watchdog PME.
0	WDI_PME_EN	PC/VV	5056	0	1: enable Watchdog PME.
5	Reserved	R	-	0	Reserved
					WDT Clock Source Select
4	WDT_CLK_SEL	R/W	5VSB	1	0: Internal 1KHz clock.
					1: 1KHZ clock driven by CLKIN.
3-1	Reserved	R	-	0	Reserved
0	WDOUT_EN	_EN R/W	V 5VSB	0	0: disable Watchdog time out output via WDTRST#.
0				0	1: enable Watchdog time out output via WDTRST#.

A.2 F81866 Watchdog Timer Initial Program

Main(){

```
aaeonSuperlOOpen();
```

aaeonWdtSetCountMode(BOOL bMinute); // Set wdt count mode

aaeonWdtSetTimeoutCount(BYTE tTimeout); // Set wdt timer

aaeonWdtSetEnable(BOOL bEnable); // Enable wdt

```
aaeonSuperIOClose();
```

```
}
```

Void aaeonSuperIOOpen(){ // Config F81866 Entry key aaeonioWritePortByte(F81866_INDEX, 0x87); aaeonioWritePortByte(F81866_INDEX, 0x87);

}

```
Void aaeonWdtSetCountMode(BOOL bMinute){
```

```
BYTE WDT_CONTROL = f81866ReadByte(F81866_WDT_CONTROL_REG);
```

if(bMinute)

```
f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_CONTROL | 0x08);
```

else

```
f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_CONTROL & 0xF7);
```

}

```
Void aaeonWdtSetTimeoutCount(BYTE tTimeout){
```

f81866SetLdn(0x07);

f81866WriteByte(F81866_WDT_TIME_REG, tTimeout);

}

Void aaeonWdtSetEnable(BOOL bEnable){

f81866SetLdn(0x07);

if(bEnable){

f81866WriteByte(0x30, 0x01);

WDT_BASE_ADDR =

(f81866ReadByte(F81866_WDT_BASEADDR_REG_MSB) << 8)

| f81866ReadByte(F81866_WDT_BASEADDR_REG_LSB);

WDT_STATUS = f81866ReadByte(F81866_WDT_CONTROL_REG);

f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_STATUS | 0x20);

WDT_STATUS = f81866ReadByte(F81866_WDT_PME_REG);

f81866WriteByte(F81866_WDT_PME_REG, WDT_STATUS | 0x01);

}else{

}

}

```
f81866WriteByte(0x30, 0x00);
WDT_BASE_ADDR = 0;
WDT_STATUS = f81866ReadByte(F81866_WDT_CONTROL_REG);
f81866WriteByte(F81866_WDT_CONTROL_REG, WDT_STATUS & 0xDF);
WDT_STATUS = f81866ReadByte(F81866_WDT_PME_REG);
f81866WriteByte(F81866_WDT_PME_REG, WDT_STATUS & 0xFE);
```

Void aaeonSuperIOClose(){

aaeonioWritePortByte(F81866_INDEX, 0xaa);

}

Appendix B

I/O Information

HSB-CV1P

B.1 I/O Address Map

4	nput/output (IO)
	[00000000 - 0000001F] Direct memory access controller
	[00000000 - 00000CF7] PCI bus
	[00000010 - 0000001F] Motherboard resources
	📮 [00000020 - 00000021] Programmable interrupt controller
	[00000022 - 0000003F] Motherboard resources
	[00000024 - 00000025] Programmable interrupt controller
	🖳 [00000028 - 00000029] Programmable interrupt controller
	[0000002C - 0000002D] Programmable interrupt controller
	[0000002E - 0000002F] Motherboard resources
	📮 [00000030 - 00000031] Programmable interrupt controller
	📮 [00000034 - 00000035] Programmable interrupt controller
	[00000038 - 00000039] Programmable interrupt controller
	[0000003C - 0000003D] Programmable interrupt controller
	🖳 [00000040 - 00000043] System timer
	🖳 [00000044 - 0000005F] Motherboard resources
	[0000004E - 0000004F] Motherboard resources
	📮 [00000050 - 00000053] System timer
	📮 [00000061 - 00000061] Motherboard resources
	[00000062 - 00000063] Motherboard resources
	📮 [00000063 - 00000063] Motherboard resources
	[00000065 - 00000065] Motherboard resources
	[00000065 - 0000006F] Motherboard resources
	[00000067 - 00000067] Motherboard resources
	📮 [00000070 - 00000070] Motherboard resources
	[00000070 - 00000077] System CMOS/real time clock
	[00000072 - 0000007F] Motherboard resources
	[00000080 - 00000080] Motherboard resources
	📮 [00000080 - 00000080] Motherboard resources
	[00000081 - 00000091] Direct memory access controller
	[00000084 - 00000086] Motherboard resources
	🖳 [00000088 - 00000088] Motherboard resources
	[0000008C - 0000008E] Motherboard resources
	[00000090 - 0000009F] Motherboard resources
	[00000092 - 00000092] Motherboard resources
	[00000093 - 0000009F] Direct memory access controller
	[000000A0 - 000000A1] Programmable interrupt controller
	[000000A2 - 000000BF] Motherboard resources
	[000000A4 - 000000A5] Programmable interrupt controller
	[000000A8 - 000000A9] Programmable interrupt controller
	[000000AC - 000000AD] Programmable interrupt controller
	[000000B0 - 000000B1] Programmable interrupt controller
	[000000B2 - 000000B3] Motherboard resources
	[000000B4 - 000000B5] Programmable interrupt controller

Appendix B I/O Information B - 2

HSB-CV1P

[000000B8 - 000000B9] Programmable interrupt controller
[000003B0 - 000003BB] Intel(R) Graphics Media Accelerator 3600 Series
[000003C0 - 000003DF] Intel(R) Graphics Media Accelerator 3600 Series
[000003E8 - 000003EF] Communications Port (COM3)
[00000400 - 0000047F] Motherboard resources
[000004D0 - 000004D1] Motherboard resources
[000004D0 - 000004D1] Programmable interrupt controller
[00000500 - 0000053F] Motherboard resources
[00000600 - 0000061F] Motherboard resources
[000006A0 - 000006AF] Motherboard resources
[00000A20 - 00000A2F] Motherboard resources
[0000D000 - 0000D0FF] Realtek PCIe GBE Family Controller #4
[0000D000 - 0000DFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D2
[0000E000 - 0000E0FF] Realtek PCIe GBE Family Controller #3
Improvement [0000E000 - 0000EFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
[0000F000 - 0000F01F] Intel(R) N10/ICH7 Family SMBus Controller - 27DA
[0000F020 - 0000F02F] Standard AHCI1.0 Serial ATA Controller
[0000F040 - 0000F05F] Intel(R) N10/ICH/ Family USB Universal Host Controller - 2/CB
[0000F000 - 0000F07F] Intel(R) NI0/ICH/ Family USB Universal Host Controller - 2/CA [0000F000 - 0000F00F] Intel(R) NI0/ICH/ Family USB Universal Host Controller - 2/CA
[0000F080 - 0000F09F] Intel(K) NI0/ICH7 Family USB Universal Host Controller - 27C9 [0000F080 - 0000F09F] Intel(K) NI0/ICH7 Family USB Universal Host Controller - 27C9
[0000F0A0 - 0000F0BF] Intel(K) NID/ICH/ Family 058 Universal Host Controller - 27C8 [0000F0A0 - 0000F0C2] Standard AUCI 1 0 Savial ATA Controller
[0000F0C0 - 0000F0C5] Standard AHCI1.0 Serial ATA Controller
[0000F0E0 - 0000F0E3] Standard AHCI1.0 Serial ATA Controller
I0000F0F0 - 0000F0F71 Standard AHCI1.0 Serial ATA Controller
[0000F100 - 0000F107] Intel(R) Graphics Media Accelerator 3600 Series
[0000FFFF - 0000FFFF] Motherboard resources
[0000FFFF - 0000FFFF] Motherboard resources

B.2 1st MB Memory Address Map

a - 🚺 I	Vemory
	[00000000 - 00000FFF] Motherboard resources
	[00000000 - 00000FFF] Motherboard resources
	[00000000 - 00003FFF] Motherboard resources
	[000A0000 - 000BFFFF] Intel(R) Graphics Media Accelerator 3600 Series
	[000A0000 - 000BFFFF] PCI bus
	[000C0000 - 000DFFFF] PCI bus
	[000E0000 - 000EFFFF] PCI bus
	[000F0000 - 000FFFFF] PCI bus
gl	[CF800000 - CFFFFFF] PCI bus
	[D0000000 - FEBFFFFF] PCI bus
	💂 [DFC00000 - DFCFFFFF] Intel(R) Graphics Media Accelerator 3600 Series
9	[DFD00000 - DFD03FFF] Realtek PCIe GBE Family Controller #4
	[DFD00000 - DFDFFFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D2
[[DFD04000 - DFD04FFF] Realtek PCIe GBE Family Controller #4
	[DFE00000 - DFE03FFF] Realtek PCIe GBE Family Controller #3
	[DFE00000 - DFEFFFFF] Intel(R) N10/ICH7 Family PCI Express Root Port - 27D0
	[DFE04000 - DFE04FFF] Realtek PCIe GBE Family Controller #3
	[DFF00000 - DFF03FFF] High Definition Audio Controller
	[DFF04000 - DFF043FF] Standard AHCI1.0 Serial ATA Controller
	[DFF05000 - DFF053FF] Intel(R) N10/ICH7 Family USB2 Enhanced Host Controller - 27CC
	[E0000000 - EFFFFFF] System board
	[FEC00000 - FEC00FFF] Motherboard resources
	[FED00000 - FED003FF] High precision event timer
	[FED14000 - FED19FFF] System board
	[FED1C000 - FED1FFF] Motherboard resources
	[FED1C000 - FED1FFF] Motherboard resources
	[FED20000 - FED8FFF] Motherboard resources
	[FED45000 - FED8FFF] Motherboard resources
	[FEE00000 - FEE00FFF] Motherboard resources
	[FF000000 - FFFFFFF] Intel(R) 82802 Firmware Hub Device
	[FF000000 - FFFFFFF] Intel(R) 82802 Firmware Hub Device
	[FFC00000 - FFFFFFF] Motherboard resources

HSB-CV1P

B.3 IRQ Mapping Chart

Interrupt request (IRQ)	
1 (ISA) 0x00000000 (00)	System timer
	Standard PS/2 Keyboard
	Communications Port (COM2)
	Communications Port (COM1)
	System CMOS/real time clock
(ISA) 0x0000000A (10)	Communications Port (COM3)
	Communications Port (COM4)
	Communications Port (COM6)
1 (ISA) 0x000000D (13)	Numeric data processor
1 (ISA) 0x00000051 (81)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
19 (ISA) 0x00000059 (89)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
1 (ISA) 0x0000005C (92)	Microsoft ACPI-Compliant System
1 (ISA) 0x0000005D (93)	Microsoft ACPI-Compliant System
1 (ISA) 0x0000005E (94)	Microsoft ACPI-Compliant System
1 (ISA) 0x0000005F (95)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
(ISA) 0x0000062 (98)	Microsoft ACPI-Compliant System
(ISA) 0x0000063 (99)	Microsoft ACPI-Compliant System
(ISA) 0x00000064 (100)	Microsoft ACPI-Compliant System
(ISA) 0x00000065 (101)	Microsoft ACPI-Compliant System
(ISA) 0x00000066 (102)	Microsoft ACPI-Compliant System
(ISA) 0x00000067 (103)	Microsoft ACPI-Compliant System
(ISA) 0x00000088 (104)	Microsoft ACPI-Compliant System
(ISA) 0x00000006 (105)	Microsoft ACPI-Compliant System
(ISA) 0x000000A (100)	Microsoft ACPI-Compliant System
(ISA) 0x0000006 (107)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
(ISA) 0x0000000D (I09)	Microsoft ACPI-Compliant System
(ISA) 0x000000E (III)	Microsoft ACPI-Compliant System
(ISA) 0x000000F (III)	Microsoft ACPI-Compliant System
(ISA) 0x00000070 (II2)	Microsoft ACPI-Compliant System
	wicrosoft ACPI-Compliant System

HSB-CV1P

(ISA) 0x00000072 (114)	Microsoft ACPI-Compliant System
(ISA) 0x00000073 (115)	Microsoft ACPI-Compliant System
(ISA) 0x00000074 (116)	Microsoft ACPI-Compliant System
(ISA) 0x00000075 (117)	Microsoft ACPI-Compliant System
(ISA) 0x00000076 (118)	Microsoft ACPI-Compliant System
(ISA) 0x00000077 (119)	Microsoft ACPI-Compliant System
(ISA) 0x00000078 (120)	Microsoft ACPI-Compliant System
(ISA) 0x00000079 (121)	Microsoft ACPI-Compliant System
(ISA) 0x0000007A (122)	Microsoft ACPI-Compliant System
(ISA) 0x0000007B (123)	Microsoft ACPI-Compliant System
(ISA) 0x0000007C (124)	Microsoft ACPI-Compliant System
(ISA) 0x0000007D (125)	Microsoft ACPI-Compliant System
(ISA) 0x0000007E (126)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000007F (127)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000080 (128)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000081 (129)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000082 (130)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000083 (131)	Microsoft ACPI-Compliant System
19 (ISA) 0x0000084 (132)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
1 (ISA) 0x0000088 (136)	Microsoft ACPI-Compliant System
1 (ISA) 0x0000089 (137)	Microsoft ACPI-Compliant System
1 (ISA) 0x000008A (138)	Microsoft ACPI-Compliant System
1 (ISA) 0x000008B (139)	Microsoft ACPI-Compliant System
(ISA) 0x000008C (140)	Microsoft ACPI-Compliant System
(ISA) 0x000008D (141)	Microsoft ACPI-Compliant System
(ISA) 0x000008E (142)	Microsoft ACPI-Compliant System
(ISA) 0x000008F (143)	Microsoft ACPI-Compliant System
(ISA) 0x0000090 (144)	Microsoft ACPI-Compliant System
(ISA) 0x00000091 (145)	Microsoft ACPI-Compliant System
(ISA) 0x00000092 (146)	Microsoft ACPI-Compliant System
(ISA) 0x00000093 (147)	Microsoft ACPI-Compliant System
(ISA) 0x0000094 (148)	Microsoft ACPI-Compliant System
(ISA) 0x00000095 (149)	Microsoft ACPI-Compliant System
(ISA) 0x00000096 (150)	Microsoft ACPI-Compliant System
(ISA) 0x00000097 (151)	Microsoft ACPI-Compliant System
(ISA) 0x0000098 (152)	Microsoft ACPI-Compliant System
(ISA) 0x0000099 (153)	Microsoft ACPI-Compliant System
(ISA) 0x000009A (154)	Microsoft ACPI-Compliant System
(ISA) 0x000009B (155)	Microsoft ACPI-Compliant System
	Microsoft ACPI-Compliant System
(ISA) 0x0000009D (157)	Microsoft ACPI-Compliant System
(ISA) 0x000009E (158)	Microsoft ACPI-Compliant System
(ISA) 0x0000009F (159)	Microsoft ACPI-Compliant System
(ISA) 0x000000A0 (160)	Microsoft ACPI-Compliant System
(ISA) 0x000000A1 (161)	Microsoft ACPI-Compliant System
(ISA) 0x000000A2 (162)	Microsoft ACPI-Compliant System
(ISA) 0x00000A3 (163)	Microsoft ACPI-Compliant System

Appendix B I/O Information B - 6

HSB-CV1P



B.4 DMA Channel Assignments

- Direct memory access (DMA)
 - Printer Port (LPT1)
 - 4 Direct memory access controller

HSB-CV1P



Mating Connector

Appendix C Mating Connector C - 1

C.1 List of Mating Connectors and Cables

The table notes mating connectors and available cables.

Connector		Mating	Connector	Available		
Label	Function	Vendor	Model No.	Cable		
CN1	LCD Inverter Connector	CATCH	1192-700-05S	N/A	N/A	
CN2	LVDS Connector	E-Call	01 10-01-553-300	N/A	N/A	
CN3	KB Pin Header	HoBase	2503-WS-5	N/A	N/A	
CN4	PS2 Keyboard/ Mouse Connector	TechBest	DN508BS1-6-L	KB/MS Cable	1700060192	
CN5	Digital I/O Connector	JIH VEI Electronics	21B22050-XXS 10B-01G-4/2.8	N/A	N/A	
CN6	Ethernet Connector	UDE	RT7-17FAAM1 A	N/A	N/A	
CN7	Ethernet Connector	UDE	RT7-17FAAM1 A	N/A	N/A	
CN8	External +5VSB Input Connector	CATCH	1191-700-03S	+5VSB Input Cable	1703030501	
CN9	Audio Pin Header	JIH VEI Electronics	21N22050-10S 10B-01G-4/2.8- V1-G	N/A	N/A	
FP1	Front Panel Connector	JIH VEI Electronics	21B22564-XXS 10B-01G-6/3-V XX	N/A	N/A	
FP2	Front Panel Connector	JIH VEI Electronics	21B22564-XXS 10B-01G-6/3-V XX	N/A	N/A	
VGA1	CRT Display	Catch Electronics	3125-000-15SB	N/A	N/A	

Appendix C Mating Connector C - 2

	Connector				
	RS-232			Serial	
COM1	Serial Port	CATCH	1147-000-10S	Port	1701100305
	Connector			Cable	
	RS-232/4			Coriol	
0040	22/485	CATCH	11 17 000 100	Dort	1701100205
COIVIZ	Serial Port	CAICH	1147-000-105	Coble	1701100305
	Connector			Cable	
	RS-232			Serial	
COM3	Serial Port	CATCH	1147-000-10S	Port	1701100305
	Connector			Cable	
	RS-232			Serial	
COM4	Serial Port	CATCH	1147-000-10S	Port	1701100305
	Connector			Cable	
	USB Pin	JIH VEI	21B22050-XXS	USB	1700100201
0301	Header	Electronics	10B-01G-4/2.8	Cable	1709100201
11682	USB Pin	JIH VEI	21B22050-XXS	USB	1700100201
0362	Header	Electronics	10B-01G-4/2.8	Cable	1709100201
	USB Pin	JIH VEI	21B22050-XXS	USB	4700400004
0363	Header	Electronics	10B-01G-4/2.8	Cable	1709100201
LISB/	USB	HoBasa	KS-0011/-ANIW	ΝΙ/Δ	N/A
0004	Connector	Поразе		11/7	
LISB5	USB	Astron	22-0104-4W-1T	N/A	N/A
0000	Connector	7.5001	-R	11/7	1 1/7 1
IR1	Infrared	JIH VEI	21B12050-XXS	Ν/Δ	N/A
	Connector	Electronics	10B-01G-4/2.8	11/7 (11/7 (
I PT1	LPT port	CATCH	1147-000-26S	I PT cable	1701260307
	Connector	0/11011	1147 000 200		1701200307
SATA1	SATA	LOTES	ABA-SAT-046-	SATA	1709070800
0/11/11	Connector	20120	K12	cable	1100010000
SATA2	SATA	LOTES	ABA-SAT-046-	SATA	1709070800
0, 11, 12	Connector	20120	K12	cable	
	BIOS				
SPI1	Debug	Astron	27-44041-204-2	N/A	N/A
0111	Port	71011011	G-TB1R	1.77	1 1/7 1
	Connector				
BAT1A1	BAT Pin	CATCH	1201-700-02S	N/A	N/A
5,11,11	Header	0,11011	1201 100-020		11/1
FAN1	FAN	CATCH	1190-700-042	N/A	N/A
.,	Connector	0,0.1			
FAN2	FAN	CATCH	1190-700-042	N/A	N/A
173112	Connector	0,1,011	1190-700-042	IN/A	1 1// 1

Appendix C Mating Connector C - 3

	Half-size	SBC	HSB		
ATX1	ATX Power Connector	CATCH	1121-700-04S	N/A	N/A

Appendix

AHCI Setting

D.1 Setting AHCI

OS installation to setup AHCI Mode.

Step 1: Copy the files below from "Driver CD -> STEP6 - AHCI for XP

installation\F6 Install Floppy Create for 32 and 64 bit Windows" to Disk









Step 2: Connect the USB Floppy to the board

Step 3: Setup OS





Step 4: Press "F6"



Step 5: Choose "S"


Step 6: Choose "Intel(R) NM10 Express Chipset"



Step 7: It will show the model number you select and then press "ENTER

Step 8: Setup is loading files



Appendix DAHCI Setting D-4