

Why Choose DSL?



Lifetime technical support Fully customisable products Product branding (bezel colours + company logos) Free pre-installation of OS and your software

Our Services

- Electronic Design
- Production Management
- Assembly and test
- Bespoke BIOS creation



DSL Ltd. | 4 Aylesford Court, Works Road, Letchworth Garden City, Hertfordshire, SG6 1LP



AHM-6XX6A HMI User Manual

Release DateRevisionNov 2011V1.0

®2011 Aplex Technology, Inc.

All Rights Reserved.

Published in Taiwan

Aplex Technology, Inc. 15F-1, No.186, Jian Yi Road, Zhonghe District, New Taipei City 235, Taiwan Tel: 886-2-82262881 Fax: 886-2-82262883 E-mail: aplex@aplex.com.tw URL: www.aplex.com.tw 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:
\square AC nower cable
Driver & manual CD disc
\Box Other (please specify)
(prease speeny)

Safety Precautions

Follow the messages below to avoid 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.

Table of Contents_____

Warning!	2
Disclaimer	2

Chapter 1

Getting Started

1.1 Specifications	6
1.2 Dimensions	8
1.3 Brief Description of AHM-6XX6A	13
1.4 Installation of HDD	14

Chapter 2

Hardware Installation

2.1	Mainboard Specifications1	15
2.2	Jumpers Setting and Connectors1	18

Chapter 3

BIOS Setup

3.1 Operations after POST Screen	28
3.2 BIOS SETUP UTILITY	30
3.3 System Overview	31
3.4 Advanced Settings	32
3.5 Advanced PCI/PnP Settings	40
3.6 Boot Settings	42
3.7 Security Settings	44
3.8 Advanced Chipset Settings	45
3.9 Exit Options	49

Chapter 4

Installation of Drivers

4.1 Intel Chipset Driver	.52
4.2 Intel GMA 3150 VGA Chipset Driver	.55
4.3 Intel 82574L Network adapter Driver	.58
4.4 Realtek HD Audio Driver Installation	.61

5.1 Introduction to Touch Screen Controller Board	64
5.2 Windows 2000/XP USB Driver Installation	64

Figures

Figure 1.1: Dimensions of the AHM-6086A	8
Figure 1.2: Dimensions of AHM-6126A	9
Figure 1.3: Dimensions of AHM-6156A	10
Figure 1.4: Dimensions of AHM-6176A	11
Figure 1.5: Dimensions of the AHM-6196A	12
Figure 1.6: Front and Rear View of AHM-6176A	13
Figure 1.7: Rear View of AHM-6126A and AHM-6156A	13
Figure 2.1: Mainboard Overview	15
Figure 2.2: Mainboard Dimensions	15
Figure 2.3: Jumpers and Connectors Location-TOP	16
Figure 2.4: Jumpers and Connectors Location- Bottom	16

Chapter 1_____

1.1 Specifications

Model No.					
Specs	AHM-6086A	AHM-6126A	AHM-6156A	AHM-6176A	AHM-6196A
System			I	I	I
Processor	Processor Intel Atom D525 1.8GHz processor FSB 800MHz				
System Chipset	Intel ICH8M Chipset				
System Memory	1 x 204 Pin S0	D-DIMM DDR3	800GHz, up to 2	GB SDRAM	
Storage	1 x 2 .5" SATA	HDD Space			
	1 x CF Interna	l Slot (AHM-60	86A)		
	1 x CF Externa	al Slot for optior	n (AHM-6126A/6	156A/6176A/619	6A)
External I/O Port	ernal I/O Port AHM-6086A				
	4 x USB ports				
	2 x LAN ports				
	1 x DB-15 VG	A			
	1 x DB-9 RS-2	32			
	1 x DB-9 RS-4	22/485			
	1 x 2 Pin termi	inal block conne	ector		
	AHM-6126A/6156A/6176A/6196A				
	4 x USB ports				
	2 x LAN ports				
	1 x DB-15 VGA				
	2 x DB-9 RS-232				
	1 x DB-9 RS-422/485				
1 x DC 3 Pin terminal block power input					
1 x 8 Pin terminal block 2in/2out GPIO, power switch and V		switch and VCC			
	1 x Audio Line-out 3.5mm jack				
Expansion Slots	s None				
OS support	Windows CE 6.0, XP Pro, XP Embedded, Windows Embedded Standard 7				
LCD					
Display Type	8"	12.1"	15"	17"	19"
	TFT-LCD	TFT-LCD	TFT-LCD	TFT-LCD	TFT-LCD
Max. Resolution 800x600 (AHM-6086A/6126A)					
	1024x768 (AHM-6156A)				
1280x1024 (AHM-6176A/6196A)					
Max. Color	262K (AHM-6	086A/6126A)			
	16.2M (AHM-6156A/6196A)				
	16.7M (AHM-6	6176A)			

Luminance (cd/m2)	350 (cd/m2) (AHM-6086A/6126A)
	400 (cd/m2) (AHM-6156A)
	550 (cd/m2) (AHM-6176A)
	450 (cd/m2) (AHM-6196A)
View Angle	H:130° / V:110° (AHM-6086A)
	H:140° / V:110° (AHM-6126A)
	H:160° / V:140° (AHM-6156A)
	H:170° / V:160° (AHM-6176A/6196A)
Backlight Lifetime	50,000 hrs
Touch Screen	
Туре	Overlay Resistive Touch (AHM-6086A/6126A)
	Resistive Touch (AHM-6156A/6176A/6196A)
Light Transmission	80%
Power Supply	·
Power Input	DC 12V / DC 11~32V (option)
Mechanical	
Construction	Plastic molding front panel and metal housing (AHM-6086A/6126A)
	Heavy-duty steel front panel and housing (AHM-6156A/6176A/6196A)
IP Rating	Front Panel IP65
Mounting	Panel/VESA 75x75 Mount (AHM-6086A/6126A/6156A/6176A)
	Panel/VESA 100x100 Mount (AHM-6196A)
Dimensions (WxHxD)	231 (W) x 176 (H) x 76.3 (D) mm (AHM-6086A)
	317 (W) x 243 (H) x 76.6 (D) mm (AHM-6126A)
	410 (W) x 310 (H) x 70.6 (D) mm (AHM-6156A)
	439 (W) x 348 (H) x 71.1 (D) mm (AHM-6176A)
	484 (W) x 400 (H) x 74.5 (D) mm (AHM-6196A)
Environmental	
Operating Temperature	0~50 °C
Storage Temperature	-30~60 °C
Storage Humidity	10~90% @40 °C non-condensing
Certificate	CE/FCC Class A

1.2 Dimensions



Figure 1.1: Dimensions of the AHM-6086A



Figure 1.2: Dimensions of the AHM-6126A



Figure 1.3: Dimensions of the AHM-6156A



Figure 1.4: Dimensions of the AHM-6176A





Figure 1.5: Dimensions of the AHM-6196A

1.3 Brief Description of the AHM-6XX6A

The AHM-6XX6A is a power-optimized and delivers robust performance-per-watt for embedded HMI. The powered by an Atom D525 1.8 GHz processor and offer full sizes:8/12.1/15/17/19-inch. It comes with a compact flash slot, 2.5-inch hard disk drive, DDR3 memory, audio jack (for AHM-6126A~6196A), 2 Ethernet, DC input, and 4 USB ports. The unit supports Windows CE6.0, XP Pro, XP Embedded and Windows Embedded Standard 7. The fanless touch panel computer is ideal for use as Web Browser, Terminal and HMI at all levels of automation control.



Figure 1.6: Front and Rear View of AHM-6176A



Figure 1.7: Rear View of AHM-6126A and AHM-6156A

1.4 Installation of HDD

Step 1

Step 2

There are 2 screws to deal with when enclosing or removing the HDD bracket as shown in the picture AHM-6156A.

Loosen screw and draw the HDD bracket

out as shown in the picture AHM-6156A.



Step 3 Push into the HDD bracket as shown in the picture AHM-6156A.

Step 4

Tighten the 2 screws as shown in the picture. That's how it should look after it has been installed.



Chapter 2_

Hardware Installation

2.1 Mainboard Specifications



Figure 2.1: Mainboard Overview



Figure 2.2: Mainboard Dimensions



Figure 2.3: Jumpers and Connectors Location-TOP



Figure 2.4: Jumpers and Connectors Location-Bottom

Mainboard Specifications			
Board Size	165 x 115mm		
CPU Support	Intel Atom D525 /1.8GHz (onboard)		
Chipset	Intel ICH8M		
Memory Support	1 x 204 Pin SO-DIMM, up to 2GB DDR3 800MHz FSB		
Super I/O	Winbond W83627UHG		
BIOS	AMIBIOS		
Storage	3 x SATA Connector 1 x Compact Flash II Slot		
Network	2 x RJ-45 1000Mbps LAN Intel 82574L		
USB	4 x USB 2.0 stack port for external 2 x USB 2.0 Pin header for internal		
Serial	1 x RS232 port, DB9 connector for external (COM1), pin 9 w/5V/12V/Ring select 1 x RS232/422/485 select header for internal (COM3), default RS232 4 x RS232 header for internal (COM2,COM4,COM5,COM6)		
Digital I/O	8-bit digital I/O by Pin header 4-bit digital Input 4-bit digital Output		
Battery	Support CR2477 Li battery by 2-pin header		
Audio	Support Audio via Realtek ALC662 HD audio decoder Support Line-in, Line-out, MIC by 2x5-pin header		
Keyboard /Mouse	1x PS2 keyboard/mouse by 1x6 box pin header		
Expansion Bus	1x PC 104+ connector (PCI master 4, jumper for +3.3V & 5V select) 2x mini-PCI-express slot (1x full size, 1x half-size)		
Power	DC12V input		
Management	1 x 2-pin power input connector		
Front I/O	by 2x5-pin header Power on/off switch Reset switch Power LED status		

	HDD LED status Buzzer
Watchdog Timer	Software programmable 1 – 255 second by Super I/O
External I/O port	1 x COM Port (COM1) 4 x USB 2.0 Ports (stack) 2 x RJ45 GbE Port (10/100/1000Mbps) 1 x VGA Port 1 x VGA 2x8 Pin Header
Temperature	Operating: 0°C − 60°C Storage: -20°C − 70°C
Humidity	5% - 95%, non-condensing, operating
Power Consumption EMI/EMS	12V /1.6A (Intel D525 processor with 2GB DDR3 DRAM) 12V /1.3A (Intel N455 processor with 2GB DDR3 DRAM) Meet CE/FCC class A

2.2 Jumpers Setting and Connectors

 JCLR_CMOS: (2 0mm Pitch 1x3 Pin Header)CMOS clear jumper, CMOS clear operation will permanently reset old BIOS settings to factory defaults.

JCLR_CMOS	CMOS
CLOSE 1-2	NORMAL (default)
CLOSE 2-3	Clear CMOS



Procedures of CMOS clear:

- 5.4.1.1 Turn off the system and unplug the power cord from the power outlet.
- 5.4.1.2 To clear the CMOS settings, use the jumper cap to close pins 2 and 3 for about 3 seconds then reinstall the jumper clip back to pins 1 and 2.
- 5.4 (.3 Power on the system again.
- 5.4.1.4 When entering the POST screen, press the <F1> or key to enter CMOS Setup. Utility to load optimal defaults.
- 5.4.1.5 After the above operations, save changes and exit BIOS Setup.
- JVCCIO: (2.0mm Pitch 1x3 Pin Header) PC104+ port voltage selection jumper select voltage for PCI-104 Plus device.

JVCCIO	PC104+ VCCIO Voltage
CLOSE 1-2	+3.3V (default)
CLOSE 2-3	+5V

- 3. BZ: onboard buzzer
- BAT: (1.25mm Pitch 1x2 box Pin Header) 3.0V Li battery is embedded to provide power for. CMOS

Pin#	Signal Name
Piri1	VBAT
PIN2	Ground

5. F_PANEL: (2 0mm Pitch 2X5 Pin Header), Front panel connector

Signal Name	Pur#	្រយដ	Signal Name
HD LED+	1	2	POWER LED+
HD LED-	3	4	POWER LED-
Ground	5	6	PWRBTN
RESET	7	8	Ground
BUZZER+	.9	10.	BUZZER-

- 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.
- Pin5-6. 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.
- Pin7-8. 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.
- Pin9-10. BUZZER, They are used to connect an external buzzer.

Note

When connecting LEDs and buzzer, 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

 USB3: (2.0mm Pitch 2x5 Pin Header) ,Front USB connector, it provides two USB ports via a dedicated USB cable, speed up to 480Mb/s.

Signal Name	Pin#	Pin#	Signal Name
+5V	1	2	+5V
USB_P6_DN	3	4	USB_P7_DN
USB_P6_DP	5	6	USB_P7_DP
Ground	7	8	Ground

NC.	9	10	Ground	
-----	---	----	--------	--

Note:

Before connection, make sure that pinout of the USB Cable is in accordance with that of the said tables. Any inconformity may cause system down and even hardware damages.

 JCOM: (2.0mm Pitch 2x6 Pin Header) COM1 and COM3 setting jumper, pin 1–6 are used to select signal out of pin 9 of COM1 port; pin 7–12 are used to select output type for COM3 port (RS232 Type or RS422 Type or RS485 Type)

JCOM Pin#	Function
CLOSE 1-2	COM1 Pin9=RI (default)
CLOSE 3-4	COM1 Pin9=+5V (option)
CLOSE 5-8	COM1 Pin9=+12V (option)
CLOSE 7-9	COM3 FOR RS232 FROM COM3 (default)
CLOSE 8-10	COM3 FOR RS485 FROM COM33 (option)
CLOSE 10-12	COM3 FOR RS422 FROM COM33 (option)
And and the second s	

Note:

Since COM3 and COM33 use the same address, they cannot work at the same time.

GPIO: (2.0mm Pitch 2x5 Pin Header), General-purpose input/output port, if provides a group
of sett-programming interfaces to customers for flexible use.

Signal Name	Pin#	Pin#	Signal Name
GPIO20	1	2	GPIO60
GP1021	3	4	GPIO61
GP1022	5	6	GPI062
GPI023	7	8	GP(063
Ground	9	10	+5V
and the second se			

 COM33: (2.0mm Pitch 1x4 box Pin Header) it provides selectable RS422/RS485 serial signal output.

RS422 Type (d	option)	R	S485 Type (option)
Signal Name	Pm#	Pin#	Signal Name
422RXD	1	1	NG
422RXD+	2	2	NC
422TXD	3	3	485B
422TXD+	4	4	485A+

Note:

Use COM3 RS232/RS485 Function, please setting JCOM Jumpers and BIOS CMOS Setup

Path:

BIOS Setup Utility \ Advanced Setting \ SuperIO Configuration \ Serial Port3 Type: [RS232 Type] [RS485 Type]

10. F_AUDIO: (2.0mm Pitch 2x5 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-OUT-L	1	2	LINEIN_R
AUD_AGND	3	4	AUD_AGND
FRONT-OUT-R	5	6	LINEIN_L
AUD_AGND	7	8	AUD_AGND
FRONT-MIC1	9	10	FRONT-MIC2

 COM2-COM6: (2.0mm Pitch 2x5 Pin Header), COM2 COM3 COM4 COM5 COM6 Port, up to 5 standard RS232 ports are provided. They can be used directly via COM cable connection.

Signal Name	Pm#	Pin#	Signal Name
DCD	1	2	RXD
TXD	3	4	DTR.
Ground	5	6	DSR
RTS	7	8	CTS
RI	9	10	NG

COM2,COM3,COM4,COM5 Signal Name.

COM6 Signal Name

Signal Name	Pin#	Pin#	Signal Name
DCD	1	2	RXD
TXD	3	4	DTR
Ground	5	6	DSR
RTS	7	8	CIS
RI	8	10	JCOM6 Setting: (NC: default) Pm1-2 : 5V (option) Pin2-3:12V (option)

To Note

COM3 port is controlled by pins No 7-10 of JCOM. For details, please refer to description of JCOM and COM33 BIOS Setup.

12. KB/MS: (2.0mm Pitch 1x0 box Pin Header). PS/2 keyboard and mouse port, the port can be

connected to PS/2 keyboard or mouse via a dedicated cable for direct used

Signal Name
KBDATA
MSDATA
Ground
+5V
KBCLK
MSCLK

 USB1/2: (Double stack USB type A), Rear USB connector, it provides up to 4 USB2.0 ports speed up to 480Mb/s.



 LAN1/2: (RJ45 Connector), Rear LAN port,2 standard 10/100/1000M RJ-45 Ethernet ports are provided. Used Intel 82567LM 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.



15. CPU SCREW HOLES: Four screw holes for fixed CPU Cooler assemble.

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



 VGA-PH: (CRT 2.0mm Pitch 2x8 Pin Header), Video Graphic Array Port, Provide 2x8 Pin cable to VGA Port, they can not work at the same time for VGA and VGA-PH.

Signal Name	Pin# Pin#		Signal Name	
CRT_RED	3 de	2	Ground	
CRT GREEN	3	4	Ground	

CRT_BLUE	5	6	NC
CRT_R_HSYNC	1	8	CRT_PU_DDC_DAT
CRT_R_VSYNC	9	10	CRT_PU_DDC_CLK
NC	11	12	NC
+12V	13	14	Ground
+12V	15	16	Ground

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



19. AT12V: (5.0mm 1x2 Pin Connector), DC12V System power input connector.

Pin#	Signal Name
1	+121
2	Ground

Note:

Make sure that the voltage of power supply is DC(12±5%)V before power on, or it may cause boot up failure and even system damage.

 FAN: (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.

Pm#	Signal Name			
1	Ground			
2	VCC			
3	Rotation detection			

S

Note:

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

21. JBGT_CTRL: (2.0mm Pitch 1x3 Pin Header), Backlight Control jumper setting for LVDS (

Signal Name	BKL For LVDS
PWM	Close1-2
LEVEL	Close2-3

B

Note

Please check first your LVDS panel backlight control by LEVEL or PWM?

Panel backlight control by Level 5V.

 LVDS: For 18 bit LVDS output connector, fully supported by Intel Atom D525 chipset, the interface features single channel 18-bit output. Model name of the interface connector is Hirose DF13-30DP-1.25V.

Signal Name	Pin#	Pin#	Signal Name
LVDS1_VDD5	1	2	LVDS1_VDD5
Ground	3	4	Ground
LVDS1_VDD33	5	6	LVDS1_VDD33
LADATAN0	7	8	NC
LADATAP0	9	10	NC
LADATAN1	11	12	NC
LADATAP1	13	14	NC
LADATAN2	15	16	NC
LADATAP2	17	18	NC
LACLKN	19	20	NC
LACLKP	21	22	NC
LDDC_CLK	23	24	NC
LBKLT_EN	25	26	BKLT_CTRL
Ground	27	28	Ground
+V12S	29	30	+V12S

23. BKL: (2.0mm Pitch 1x5 box Pin Header), Backlight control connector for LVDS1.

Pin#	Signal Name
1	+DC12V
2	+DC12V
3	Ground
4	Ground
5	BKLT EN
6	BKLT_CTRL

- SATA1/2/3: (SATA 7P), SATA1, SATA2, SATA3 SATA Connectors, Three SATA connectors are provided, with transfer speed up to 3.0Gb/s.
- CN1: (2.5mm Pitch 1x2 box Pin Header) an onboard 5V output connector is reserved to provide power for IDE/SATA devices.

Pin#	Signal Name
1	+DC5V
2	Ground



Note.

Output current of the connector must not be above. LA

- PC104+: (4x30 Pin), PC104 plus connector, II conforms to standard PC104+ specification.
- MPCIE2 (30mmx30mm Socket 52Pin),mini PCIE socket, it is located at the top, it supports mini PCI-E devices with USB2.0, SMBUS and PCI-E signal.
- MPCIE: (50.95x30mm socket 52Pm)/mm PCIE socket, it is located at the bottom, it supports mini PCI E devices with USB2.0, SMBUS and PCI E signal
- 29. CF: CF Card socket, 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.
- DDR3: (SO DIMM 204Pin socket), DDRIII memory socket, the socket is located at the bottom of the board and supports 204Pin 1.5V DDR1II 800MHz FSB SO-DIMM memory module up to 2G

Chapter 3_

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.

Please select boot device:
Hitachi HTS545016B9A300
USB: USB Hotplug FDD
↑ and ↓ to move selection ENTER to select Boot device ESC to boot using defaults

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 PC	IPnP Boot	Security	Chipset Exit		
System Overview AMIBIOS	10 p. m. m.		User [ENTER], [TAB] or [SHIFT-TAB] to		
Version 08.00.16			Select a field		
Build Date 02/18/11 ID L706V003			Use[+] or [-] to configure system Time.		
Processor Intel ® Atom™ CPU D525	5 @ 1.80GHz				
Speed 1800MHz Count 2			← Select Screen 1↓ Select Item		
System Memory			+- Charge Field		
Size :2038MB			F1 General Help		
System Time System Date	[00:01:08]	20021	F10 Save and Exit ESC Exit		
v02.68 © Cop	vright 1985-2009	American Me	gatrends , Inc.		

3.3 System Overview

BIOS SETUP UTILITY						
Main Advanced	PCIPnP	Boot	Security	Chipset	Exit	
System Overview	/			User	[ENTER], [TAB]	
AMIBIOS	-			or [SHIFT-TAB] to	
Version 08.0	0.16			Selec	t a field	
Build Date 02/1	8/11					
ID 170	V002			Use[-	+] or [-] to	
				confi	gure system Time.	
Processor						
Intel ® Atom™ CP	UD525 @ 1.8	BOGHZ				
Speed 1800M	IHz			++	Select Screen	
Count 2				11	Select Item	
				+-	Charge Field	
System Memory				Tab	Select Field	
Size 2038	MB			F1	General Help	
				F10	Save and Exit	
System Time	[60:0	6:91]		ESC	Exit	
System Date	[Tue	01/01/200	02]			
V02.68	© Copyright 198	5-2009 Am	nerican Me	ga trends	, inc.	

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 12

Date: 01 to 31

Year: 2010 to 2099

3.4 Advanced Settings

BIOS SETUP UTILITY						
Main	Advanced	PCIPnP	Boot	Security	Chipset	Exit
Adva	nced Settings	í.			Confi	gure CPU
WAR	NING: Setting may ca	wrong value use system	es in belov to malfun	w sections ction.		
► CP	U Configuratio	n 1				
► Su ► Ha	per IO Configu rdware Health PI Configuratio	ration Configuration	3			
► AH ► AS	CI Configuration	n			+-	Select Screen
 MF PC Sm 	S Configuration	n figuration			11 Enter F1	Select Item Charge Field General Help
► US	B Configuratio	A.			F10 ESC	Save and Exit
	V02.68 ©	Copyright 1	985-2009	American M	lega trends	, Inc.
	/					

3.4.1 CPU Configuration

BIOS SETUP UTILITY		
Configure advanced CPU settings Module Version 3F.1C	Disabled for Windows XP	
Manufacturer : Intel Intel® Along ^{III} CPU D525 (g. 1,80G)(z Frequency :1,80GHz FBB Speed : 900MHz Cache ±1 :48KB Cache ±2 :1024KB Ratio Actual Value (9)		
Max CPUID Value Limit [Disabled] Execute-Disable Bit Capability [Enabled] Hyper Threading Technology [Enabled]	 ← Select Screen ↑↓ Select Item +- Charge Field F1 General Help F10 Save and Exit ESC Exit 	

Max CPUID Value Limit:

[Disabled] [Enabled]

Execute Disable Bit Capability: [Enabled] [Disabled]

Hyper Threading Technology: [Enabled] [Disabled]

3.4.2 IDE Configuration

B	IOS SETUP UTILITY	
Advanced		
IDE Configuration		Options
ATA/IDE Configuration	[Enhanced]	Disabled
Configure SATA as	[IDE]	Enhanced
Primary IDE Master	[Not Detected]	
Primary IDE Slaver	: [Not Detected]	
Secondary IDE Master	[Not Detected]	
Secondary IDE Slaver	[Not Detected]	
► Third IDE Master	[Not Detected]	
Third IDE Slaver	[Not Detected]	
Fourth IDE Master	[Not Detected]	
Fourth IDE Slaver	[Not Detected]	← Select Screen
		1↓ Select Item
Hard Disk Write Protect	[Disabled]	+- Charge Field
IDE Detect Time Out (Sec)	[35]	F1 General Help
ATA(PI) 80Pin Cable Detection	[Host & Device]	F10 Save and Exit
		ESC Exit

V02.68 © Copyright 1985-2009 American Mega trends , Inc.

ATA/IDE Configuration:

[Enhanced] [Disabled]

Configure SATA as:

[IDE] [AHCI]

Hard Disk Write Protect:

[Disabled] [Enobled]

IDE Detect Time Out :

[35]

Options [0,5,10,15,20,25,30,35]

ATA(PI) 80Pin Cable Detection:

[Host & Device] [Host] [Device]

3.4.3 Super IO Configuration

Advanced	BIOS SETUP UTILITY	
Configure Win627UHG Sup	er IO Chipset	Allow BIOS to Select
Senal Port1 Address Senal Port2 Address Senal Port2 Address Senal Port2 IRO Senal Port3 Address Senal Port3 Type Senal Port3 Type Senal Port3 Type Senal Port3 Type Senal Port3 Type Senal Port3 IRO Senal Port3 IRO Senal Port5 IRO Senal Port5 IRO Senal Port5 IRO Senal Port5 IRO	[3F 0] [IRO4] [2F 8] [IRO3] [3E8] [IRO11] [RS232 Type] [7E8] [IRO10] [2F0] [IRO11] [2F0] [IRO11] [2E0] [IRO10] [Disable]	Senal Port Base Address Select Screen 11 Select Item + Charge Field F1 General Help F10 Save and Exit ESC Exit

Serial Port3 Type:

COM3 Options:	[RS232 Type]	or [RS485 Type]
	[RS232 Type]	for RS232 Mode
	[RS485 Type]	for RS485 or RS422 Mode

WatchDog Setting:

[Disable]

Options: [10sec,20sec,30sec,40sec,1min,2min,4min]

3.4.4 Hardware Health Configuration

Hardware Health Config	juration	Fan configuration mode
CPU Rumpichian	HIDONOT	setting
REPLIER M Speed	LINN RIEM	
CPUFAN Mode Setting	(Manual Mode	
CPUFAN PWM Control	[250]	
		← Select Screen
		11 Select Item
		+- Charge Field
		F1 General Help


CPU Temperature:

Show you the current CPU temperature.

CPUFAN Speed:

Show you the current CPU Fan operating speed

CPUFAN Mode Setting:

[Manual Mode] [Thermal Cruise Mode] [Speed Cruise Mode] [Smart Fan3 Mode]

3.4.5 ACPI Configuration

Section for Advanced ACPI Configuration

Options:

[Advanced ACPI Configuration] [Chipset ACPI Configuration]

3.4.6 AHCI Configuration

AHEL Continuitation		White enteriors culum
+ And Poli + And Poli + And Poli	(Paul Conscient) (Paul Conscient)	BIOS auto detects the presence of IDE devices. This displays the status of auto detecting of IDE devices
		Select Screen Select Screen Screet Bern Enler Go to sub screen F1 General Help F10 Save and Exit Soc. Sci

While entering setup, BIOS auto detects the presence of IDE devices. This displays the status of auto detecting of

3.4.7 MPS Configuration

APS Configuration	Select
MPS Revision [1.4]	Revision
	- Select Screen
	1↓ Select Item
	+- Charge Field
	F1 General Help
	F10 Save and Exit
	ESC Exit

Configure the Multi-Processor Table.

MPS Revision:

[1.4] [1.1]

3.4.8 PCI Express Configuration

PCI Express Configuration		Enables/Disables
Rolland Ordenia Maximum Paylaad Size Extended /Tag Fleid No Siboop Maximum Read Request Size	(Auto) [Auto] [Auto] [Auto] [Auto]	PCI Express Device Retaxed Ordening
Active State Power Management Extended Synch	(Disasterd) (Auto)	Fill Select Item +- Charge Field F1 General Help F10 Save and Exit F90 Evit

Relaxed Ordering.

[Auto] [Disabled] [Enable] Maximum Payload Size.

(Auto)

[128/256/512/1024/2048/4096 Bytes] Set Maximum Payload of allow System BIOS select the value.

Extended Tag Field

(Autu) [Disabled] [Enable]

No Snoop

[Auto] [Disabled] [Enable]

Maximum Read Request Size:

[Auto]

[128/256/512/1024/2048/4096 Bytes] Set Maximum Read Request Size of PCI Express Device or allow System BIOS select

the value.

Active State Power Management

[Disabled]

Extended Synch.

[Auto] [Disabled] [Enable]

3.4.9 Smbios Configuration

Smblos Configuration		SMBIOS SMI Wrappe	
s notes sur Surphy	/£1124−1	Support for PnP Func 50h-54h	
		Select Screen Select Item Charge Field F1 General Help F10 Salve and Exit Select Exit	

Stubios Smi Support

AHM-6XX6A User Manual

[Enable] [Disabled]

3.4.10 USB Configuration

JSB Configuration		Enables support for legacy USB ATUO option disables legacy
USH Devices Establed		devices are connected
- (jery (150 Stages)	(Epithide op	
USB2.0 Emphaties Mode	(Historical)	
blos Erka Handkaff	(Entabled)	- Select Screen
Hotplag USE FEID Support	[Auto]	T1 Select liem
		+ Charge Field
• 1 ISB Mass storoge Device D	notautation	F1 General Help
	- Contraction	F10 Save and Exit
		ESC Exit

Legacy USB Support:

[Enable] [Disabled]

USB2.0 Controller Mode:

[HiSpeed] [FullSpeed]

BIOS EHCI Hand-Off:

[Enable] [Disabled]

Hotplug USB FDD Support:

[Auto] [Disabled] [Enable]

USB Mass Storage Device Configuration:

JSB Mass Storage Device Configuration	Number of seconds
USB Mass Storage Reset Delay [20 Sec]	POST waits for the USB
	mass storage device
Device #V USB Histolog	after start unit command
Emulation Type [Auto]	
	← Select Screen
	†↓ Select Item
	+- Charge Field
	F1 General Help
	F10 Save and Exit
	ESC Exit

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.

		BI	OS SETUR	UTILITY		
Main	Advanced	PCIPNP	Boot	Security	Chipset	Exit
Advanced PCI/PnP Settings					Clear	NURAM during
WARNIN	NG: Setting	wrong value	s in belov	sections	Syster	m Boot
	may ca	use system t	to malfund	tion.		
Clear N	VRAM		[NO]			
Plug & F	Play O/S		[No]			
PCI Late	ency Timer		[64]			
Allocate	IRQ to PCI	VGA	[Yes]			
Palette \$	Snooping		[Disab	led]		
PCHIDE	BusMaster		[Enabl	ed]		
OffBoard	d PCI/ISA IE	DE Card	[Auto]		-	

V02.68 C C	opyright 1985-2009 American M	lega trends , Inc.
IRKUU	(Available)	
IRQ9	(Avansbie)	
IRO7	(Assemble)	ESC Exit
IRCIO	[Avaiable]	F10 Save and Exit
ROS	[Avariattie]	F1 General Help
(R04	(Avglioble)	+ Charge Field
(R03	(Available)	11 Select Item
		- Select Screen

Clear NVRAM:

[No] [Yes]

Plug & Play OS:

[No] [Yes]

PCI Latency Timer:

[64]	
[32]	
[96]	
[128]	
[160]	
[192]	
[224]	
(248)	

Allocate IRQ to PCI/VGA:

[Yes]

Palette Snooping:

(Disabled) [Enable]

PCI IDE BusMaster:

[Disabled] [Enable]

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

		8	OS SETUR	UTILITY		
Main	Advanced	PCIPhP	Boot	Security	Chipset	Exit
Boot	Settings			-	Config	ure Settings
-	n' Sang Sen	nynanieri			Dunne	System Boot
- Br	of Device 1 mo	my.				
					- 5	elect Screen
					10 3	elect them
					+ 0	harge Field
					Ft c	ieneral Help
					F10	Save and Exit
					ESC	Edt

Boot Setting Configuration:

Quick Bool.

[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]

PS/2 Mouse Support, Select support for PS/2 Mouse [Auto] [Enabled]

[Disabled]

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:

[Disabled] [Enabled] Enabled: Allows option ROMs to trap interrupt 19

Boot Device Priority:

Specifies the Boot Device Priority sequence.

3.7 Security Settings

	BI	OS SETU	P UTILITY		
Main Advanced	PCIPnP	Boot	Security	Chipset Exit	
Security Settings				Install or Chang	e the
Supervisor Pass User Password	word :Not Ins :Not Ins	stalled stalled		password.	
Change Supervise	or Password				
Change User Pas	sword				
Boot Sector Virus	Protection [D	isabled]			
				← Select Scree	en
				Enter Charge F1 General Hel	p
				F10 Save and E ESC Exit	xit
V02.68	© Copyright 1	985-2009	American M	ega trends , inc.	

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 Bool 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 provent 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, it Security Option is set to Setup, you will be requested for password for entering BIOS setup.

3.8 Advanced Chipset Settings

Main Advanced PCIPnP Bool Security Chipset E Advanced Chipset Settings Cantigure Cantigure Cantigure Feature Feature Feature Feature WARNING: Setting wrong values in below sections may cause system to malfunction Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature • Frence Grant and Feature Feature Feature Feature Feature	al Yodh Bodg
Advanced Chipset Settings Configure WARNING: Setting wrong values in below sections feature may cause system to malfunction feature • Manual Configure Configure (Configure Configure) feature • South bridge Configure (Configure) feature • South bridge Configure (Configure) feature	North Bridg
WARNING: Setting wrong values in below sections feature may cause system to malfunction - contract in the malfunction - south bringer Motor Monor - Select	
 Homo unque i fer las parte Soluti Brindae i Moltagin Mont 	
- Soldh Brinde (Mohaur Million)	
- Seler	
	1 Sensor
ti Salar	1 thom
Enter Go ti	sub scree
F1 Gen	erat Help
F10 Save	and Exil
ESC. Exil	A CE CON

27

"S" Note: Due to limited address length of BIOS, only a portion of panel parameters are listed in BIOS

Setup. If the connected panel is not included in the parameter list, display problem will occur. In this case, Please do not change BIOS setup.

3.8.1 North Bridge Configuration

BIOS	SETUP UTILITY	
		Chipset
North Bridge Chipset Configuration	on	Options
POT MMIO Allocation: 4Gb To 307		Auto
DRAM Frequency	[Auto]	Max MHz
Configure DRAM Timing by SPD	[Enabled]	
Initate Graphic Adapter	[IGD]	
Internal Graphics Mode Select	[Enable,8MB]	← Select Screen
		1↓ Select Item
PEG Port Configuration		+- Charge Field
		F1 General Help
 Video Function Configuration 		F10 Save and Exit
		ESC EXIT
V02.68 © Copyright 198	5-2009 American M	ega trends , Inc.

DRAM Frequency:

[Auto]

[Max MHz]

Configure DRAM Timing By SPD:

[Enabled] [Disabled]

Initate Graphic Adapter:

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

[IGD] [PCI/IGD] [PCI/PEG] [PEG/IGD] [PCIE/PCI] Internal Graphics Mode Select: [Enabled, 8MB]

Video Function Configuration:

Options Fixed Mode DVMT Mode
 Select Screen Select Item Charge option F1 General Help F10 Save and Ext ESC Ext

DVMT Mode Select:

[DVMT Mode] [FIXED Mode]

DVMT/FIXED Memory Size: [256MB]

[128MB] [Maximum DVMT]

Boot Display Device:

[BIOS-Default] [CRT] [LVDS] [CRT+LVDS]

Flat Panel Type:

[1024x 768] (640x480] [800x600] [1280x1024] [1400x1050] [1600x1200]

Panel Backlight Control:

[Level9]

[Level0-15]

Note: Panel support PWM Function.

3.8.2 South Bridge Configuration:

South Bridge Chipset Configur	ation	Options
118H (Frankford)	in List Hors	Disabled
USB2.0 Controller	(Enabled)	2 USB Ports
826741 AN1 BEDGT	[Disabled]	4 USB Ports
82874LAN2 BOOT	[Disabled]	6 USB Ports
DAN Wakeup	[Disposed]	8 USB Ports
HDA Controller	(Disabled)	1.1100.00010000000000
SMBUS Controller	(Enabled)	Select Screen Select Item
SLP_S4# Min. Assertion Width	[1 to 2 seconds]	+- Charge Field
Restore on AC Power Loss	(Power on)	F10 Save and Exit
PCIE Ports Configuration		ESC Exit

USB Functions:

[6 USB Ports] [Disabled]. [2 USB Ports] [4 USB Ports] [6 USB Ports]

USB 2.0 Controller:

[Enabled] [Disabled]

82574L LAN1 Boot:

[Disabled]

82574L LAN2 Boot

[Disabled] [Enabled]

LAN WakeUp:

(Disabled) (Enabled)

HDA Controller:

[Enabled] [Disabled]

SMBUS Controller:

[Enabled] [Disabled]

SLP_S4# Min. Assertion Width:

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

Restore on AC Power Loss:

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

3.9 Exit Options

	81	OS SETU	P UTILITY		
Main Advanced	PCIPnP	Boot	Security	Chipsel	Exit
Exit Options				Exit sy	stem setup
Sive Changes and	Exc			after s	aving the
Descard Changes an	nt Exil			chang	es
Discard Changes					
				F10 kr	ey can be used
Load Optimal Defau	112			For the	is operation
Loud Fallsale Defau	ils)				

AHM-6XX6A User Manual



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:

Diacard changes? (F7 key can be used for this operation) [OK] [Cancel]

Load Optimized Defaults: Load Optimized Defaults?

(F9 key can be used for this operation) [OK] [Cancet]

Load Fail-Safe Defaults: Load Fail-Safe Defaults? (F9 key can be used for this operation) [OK] [CanceT]

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 driver**, **Audio driver**, **Touch Panel 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 LMS_SQL driver.





<	¢		>
*	Date: April 02 2008		
×	<pre>Target Chipset#: Intel(R) SCH Fa</pre>	mily	
*	Version: 8.8.0.1011		
*	Release: Production Version		
	ELOGNOC' INCEL(K) CUTDAEC DEALCE	SUICWAIE	



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

4.2 Intel GMA 3150 VGA Chipset Driver

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

1. Click Intel GMA 3150 VGA Chipset Driver.



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

Intel(R) Chipset Graphics Driver Software – InstallShield Wizard	
Production Version Releases Microsoft Windows* XP Microsoft Windows* XP Priver Revision: 14.37, 50.4, 5260 Package: 96685 Graphics: 6, 14, 10, 5260 HDMI Audio: None April 30, 2010 NOTE: This document refers to systems containing the following Intel chipsets: Intel® Atom ^{**} D400 and Intel® Atom ^{**} D500 Series Intel® Atom ^{**} N400 Series	
Kancel Section Section Cancel	



 Please Also Note:

 * If you are an Original Equipment Manufacturer (OEM), Independent Hardware Vendor (IFV), or Independent Software Vendor (ISV), this complete LICENSE AGREEMENT applies;

 < Back</td>
 Yes

 No



Next

Intel® Installation Framework



Click FINISH; A Driver Installation Complete.

4.3 Intel 82574L Network adapter Driver

To install the Intel 82574L Network adapter Driver, please follow the steps below. Select LAN from the list



AHM-6XX6A User Manual

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

B Intel(R) Network Connections - InstallShield Wizard	
Welcome to the InstallShield Wizard for Intel(R) 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.	
InstallShield	Cancel

🛃 Intel(R) Network Connections - InstallShield Wizard	×
License Agreement Please read the following license agreement carefully.)
INTEL SOFTWARE LICENSE AGREEMENT (Final, License) <u>IMPORTANT - READ BEFORE COPYING, INSTALLING OR 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 Agreement. If you do not wish to so agree, do not install or use the Software.	
LICENSES: Please Note:	
I accept the terms in the license agreement Print I do not accept the terms in the license agreement InstallShield	כ
< <u>B</u> ack <u>N</u> ext > Cancel	

Intel(R) Network Connections	X
Select the program features you want installed.	(intel)
Install:	
Feature Description	Cancel

🔂 Intel(R) Network Connections - InstallShield Wizard	
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, click Back. Click exit the wizard.	Cancel to
InstallShield	Cancel



Click FINISH; A Driver Installation Complete.

4.4 Realtek 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 HD Audio - InstallShield Wizard	
Extracting Files The contents of this package are being extract	ed.
Please wait while the InstallShield Wizard extrac HD Audio on your computer.This may take a fe	ts the files needed to install Realtek w moments.
Extracting RTKHDA64.CAT	
InstallShield	< Back Next > Cancel





C Reallock Ingle Definition	Annual Inner Setup (3.33) 82.57	(a. 6)
Realtek High Definitio	m Audio Driver R2.57	
	And the second se	
	Testigh has interted copying their to your computer. Balance your com- uses the program, you need include your computer.	
	Select over of the lightening options and citch OC to limit setup.	
	White, I wanted to sumfault into control deer more	
	C No. 1 initiating opposite later.	
	A	

Click FINISH; A Driver Installation Complete.

Chapter 5____

Touch Screen Installation

This chapter describes how to install drivers and other software that will allow your PenMount 6000 Controller Board to work with different operating systems.

NOTE: PenMount USB drivers support up to 15 USB controllers.

5.1 Introduction to Touch Screen Controller Board

PenMount 6300 USB control board is a touch screen control board designed for USB interface and specific for 4, 5, 8-wire touch screens. It is designed with USB interface features with multiple devices supporting function. PenMount 6300 control board using PenMount 6000 controller that has been designed for those who may like and all-in-one solution with 10-bit A/D converter built-in to make the total printed circuit board denser, circuit diagram also designed for 12-bit ADC for optional. There are two connectors on this board, one connector is for 4, 5, 8-wire touch screen cable (optional), and another is for 4-pin USB A type cable (optional).



Figure 5.1: Bird's Eye View of Control Board

5.2 Windows 2000/XP/2003/Vista Universal Driver Installation

for PenMount 6000 Series

Before installing the Windows 2000/XP driver software, you must have the Windows 2000/XP system installed and running on your computer. You must also have one of the following PenMount 6000 series controller or control boards installed: PM6500, PM6300.

5.2.1 Installing Software

If you have an older version of the PenMount Windows 2000/XP driver installed in your system, please remove it first. Follow the steps below to install the PenMount DMC6000 Windows 2000/XP driver.

1. Please make sure your PenMount 6000 device had plugged in advance. If your device uses RS232 interface, please plugged in before the machine is turned on. When the system first detects the controller board, a screen appears that shows "Unknown Device". Do not use this hardware wizard. Press Cancel.

2. Insert the Aplex product CD install **setup.exe.** the screen below would appear. Click touch panel driver





3. A License Agreement appears. Click "I Agree..." and "Next"

	PenMount Windows Universal Driver V2.2.0.283(Win7 32/64b 🔳	
L	icense Agreement Please review the license terms before installing PenMount Windows Universal Driver V2.2.0.283(Win7 32/64bit WHQL).	P
	Press Page Down to see the rest of the agreement.	
	PLEASE READ THE LICENSE AGREEMENT	
	PenMount touch screen driver software is only for using with PenMount touch screen controller or control board	
	Any person or company using a PenMount driver on any piece of	
	will be prosecuted to the full extent of the law.	~
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install PenMount Windows Universal Driver V2.2.0.283(Win7 32/64bit WHQL).		
Nu	lsoft Install System v2,46	
	< <u>B</u> ack I <u>A</u> gree Can	cel

4. Ready to Install the Program. Click "Install"

PenMount Windows Universal Driver V2.2.0.283(Win7 32/64b	
Choose Install Location Choose the folder in which to install PenMount Windows Universal Driver V2.2.0.283(Win7 32/64bit WHQL).	Ð
Setup will install PenMount Windows Universal Driver V2.2.0.283(Win7 32/64bit WHQL) in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.	2
Destination Folder C:\Program Files\PenMount Windows Universal Driver Browse	
Space required: 0.0KB Space available: 26.3GB	
Nullsoft Install System v2.46	

PenMount Windows Universal Driver V2.2.0.283(Win7 32/64b 🔳 🗖 🔀
Installing Please wait while PenMount Windows Universal Driver V2.2.0.283(Win7 32/64bit WHQL) is being installed.
Execute: "C:\Program Files\PenMount Windows Universal Driver\Install.exe" /Install
Nullsoft Install System v2,46 < <u>B</u> ack <u>N</u> ext > Cancel

5. Installing

🖳 PenMount Windows Universal Driver V2.2.0.283(Win7 32/64b 📃 📰 📰		
Installing Please wait while PenMount Windows Universal Driver V2,2.0.283(Win7 32/64bit WHQL) is being installed.		
Execute: "C:\Program Files\PenMount Windows Universal Driver\Install.exe" /Install		
PenMount Installer		
No PenMount serial device is detected on the system! If you are using PenMount USB device, please ignore this message. If you are using PenMount serial device, please make sure that the device is connected first! If you are using non PnP serial devices, please modify install.ini settings before running setup. More details can be found in Chapter 3 of the PenMount Installation Guide. OK		
Nullsoff-Install System v2.4c < Back: Next > Cancel		

6. The "Install Shield Wizard Completed" appears. Click "Finish".

🖳 PenMount Windows Universal Driver V2.2.0.283(Win7 32/64b 🔲 🗖 🔀		
	Completing the PenMount Windows Universal Driver V2.2.0.283(Win7 22/64bit WHQL) has been installed on your computer. Click Finish to close this wizard.	
	< <u>B</u> ack <u>Einish</u> Cancel	

5.2.2 Software Functions

Upon rebooting, the computer automatically finds the new 6000 controller board. The touch screen is connected but not calibrated. Follow the procedures below to carry out calibration.

- 1. After installation, click the PenMount Monitor icon "PM" in the menu bar.
- 2. When the PenMount Control Panel appears, select a device to "Calibrate."

PenMount Control Panel

The functions of the PenMount Control Panel are **Device**, **Multiple Monitors**, **Tools** and **About**, which are explained in the following sections.

Device

In this window, you can find out that how many devices are detected on your system.

RenMount Control Panel	
Device Multiple Monitors Tools About	
Select a device to configure.	
1	
PenMount	
6000 USB	
1	
Configure Refresh	
	OK

Calibrate

This function offers two ways to calibrate your touch screen. 'Standard Calibration' adjusts most touch screens. 'Advanced Calibration' adjusts aging touch screens.

Standard Calibration	Click this button and arrows appear pointing to red squares. Use your finger or stylus to touch the red squares in sequence. After the fifth red point calibration is complete. To skip, press
	calibration is complete. To skip, press 'ESC'.

Advanced Calibration	Advanced Calibration uses 4, 9, 16 or 25 points to effectively calibrate touch panel linearity of aged touch screens. Click this button and touch the red squares in sequence with a stylus. To skip, press ESC'.
Command Calibration	Command call calibration function. Use command mode call calibration function, this can uses Standard, 4, 9, 16 or 25 points to calibrate E.g. Please run ms-dos prompt or command prompt c:\Program Files\PenMount Universa Driver\Dmcctrl.exe -calibration 0 (Standard Calibration) Dmcctrl.exe - calibration (\$) 0= Standard Calibration 4=Advanced Calibration 4 9=Advanced Calibration 9 16=Advanced Calibration 16 25=Advanced Calibration 25

1. Please select a device then click "Configure". You can also double click the device too.

🙀 PenMount Control Panel	
Device Multiple Monitors Tools About	
PenMount 6000 USB	
Configure Refresh	
	ОК

2. Click "Standard Calibration" to start calibration procedure



NOTE: The older the touch screen, the more Advanced Mode calibration points you need for an accurate calibration. Use a stylus during Advanced Calibration for greater accuracy. Please follow the step as below:

3.Come back to "PenMount Control Panel" and select "Tools" then Click "Advanced Calibration".
Draw	Test by drarwing on the touch screen
Advanced Calibration	Turn ON/OFF Advanced Calibration Mode
CI Right Button Icon	Show/Hide the icon for switching buttons

Select "Device" to calibrate, then you can start to do "Advanced Calibration".



NOTE: Recommend to use a stylus during Advanced Calibration for greater accuracy.



Plot Calibration Data	Check this function and a touch panel linearity
	comparison graph appears when you have finished
	Advanced Calibration. The blue lines show linearity
	before calibration and black lines show linearity after
	calibration.
Turn off EEPROM storage	The function disable for calibration data to write in
	Controller. The default setting is Enable

Setting

Touch Mode	This mode enables and disables the mouse's ability to drag on-screen icons—useful for configuring POS terminals.
	Mouse Emulation – Select this mode and the mouse functions
	as normal and allows dragging of icons.
	Click on Touch – Select this mode and the mouse only
	provides a click function, and dragging is disabled
Beep Sound	Enable Beep Sound – turns beep function on and off
	Beep on Pen Down – beep occurs when pen comes down
	Beep on Pen Up – beep occurs when pen is lifted up
	Beep on both – beep occurs when comes down and lifted up
	Beep Frequency – modifies sound frequency
	Beep Duration – modifies sound duration
Cursor Stabilizer	Enable the function support to prevent cursor shake.
Use press and hold as	You can set the time out and area for you need
right click	

🖉 Device 0 (PenMount 6000 USI	3) 📃 🗖 🔀
Calibrate Setting About	
Mouse Emulation	C Click on Touch
Eeep Sound	Kind of Sound Buzzer Beep +
Beep Mode G Beep on periodym C Beep on periody C Root on book	Beep Frequency 1000Hs Beep (Number 1000Hs
✓ Cursor Stabilizer ✓ Cursor Stabilizer ✓ Stabilizer to remove jitter of cursor.	Use press and hold as right click. Delay: 2.0 sec Area:
	Back to Default OK

About

This panel displays information about the PenMount controller and driver version.



Multiple Monitors

Multiple Monitors supports from two to six touch screen displays for one system. The PenMount drivers for Windows 2000/XP support Multiple Monitors. This function supports from two to six touch screen displays for one system. Each monitor requires its own PenMount touch screen control board, either installed inside the display or in a central unit. The PenMount control boards must be connected to the computer COM ports via the RS-232 interface. Driver installation procedures are the same as for a single monitor. Multiple Monitors supports the following modes:

Windows Extend Monitor Function Matrox DualHead Multi-Screen Function nVidia nView Function

NOTE: The Multiple Monitors function is for use with multiple displays only. Do not use this function if you have only one touch screen display. Please note once you turn on this function the Rotating function is disabled.

Enable the multiple display function as follows:

1. Check the **"Multiple Monitor Support"** box; then click **"Map Touch Screens"** to assign touch controllers to displays.

🐐 PenMount Control Panel	
Device Multiple Monitors Tools About Multiple Monitor Support	
	ОК

2. When the mapping screen message appears, click "OK"

RenMount Control Banel	
Device Multiple Monitors Tools About	
☑ Multiple Monitor Support	
Mapping	
Please touch the panel as indicated in the f	ollowing screens,
ОК	
white Teach is classics	
	ОК

3. Touch each screen as it displays "**Please touch this monitor. Press 'S' to skip**" Following this sequence and touching each screen is called **mapping the touch screens**.



4. After the setting procedure is finished, maybe you need to calibrate for each panel and controller

NOTES:

1. If you used a single VGA output for multiple monitors, please do not use the **Multiple Monitors** function. Just follow the regular procedure for calibration on each of your desktop monitors.

2. The Rotating function is disabled if you use the Multiple Monitors function.

3. If you change the resolution of display or screen address, you have to redo **Map Touch Screens** so the system understands where the displays are.

4. If you more monitor mapping one touch screen, Please press 'S' to skip mapping step.

Tools

Draw	Tests or demonstrates the PenMount touch
	screen operation.
Advanced Calibration	Enable Advanced Calibration function
Right Button Icon	Enable right button function. The icon can
	show on Desktop or System Tray (menu bar).

PenMount Control Panel		
Device Multiple Monitors Tools	About	1
Draw	Test by drarwing on the touch screen	
Advanced Calibration	Turn ON/OFF Advanced Calibration Mo	de 📈
Right Button Icon	Show/Hide the icon for switching butto	ns S
	Back to Default_	ок

About

You can see how many devices of PenMount controller that are plugged to your system



PenMount Monitor Menu Icon

The PenMount monitor icon (PM) appears in the menu bar of Windows 2000/XP system when you turn on PenMount Monitor in PenMount Utilities.



PenMount Monitor has the following function



Control Panel	Open Control Panel Windows	
Beep	Setting Beep function for each device	
Right Button	When you select this function, a mouse icon appears in the right-bottom of the screen. Click this icon to switch between Right and Left Button functions.	
Exit	Exits the PenMount Monitor function.	

PenMount Rotating Functions

The PenMount driver for Windows 2000/XP supports several display rotating software packages. AHM-6XX6A User Manual

Windows Me/2000/XP support display rotating software packages such as:

- Portrait's Pivot Screen Rotation Software
- ATI Display Driver Rotate Function
- nVidia Display Driver Rotate Function
- SMI Display Driver Rotate Function
- Intel 845G/GE Display Driver Rotate Function

Configuring the Rotate Function

- 1. Install the rotation software package.
- 2. Choose the rotate function (0°, 90°, 180°, 270°) in the 3rd party software. The calibration screen appears automatically. Touch this point and rotation is mapped.

m m	

NOTE: The Rotate function is disabled if you use Monitor Mapping