



APC-3X19A

15", 17", and 19" 4th Gen. Intel Core i7/i5/i3 Panel PC User Manual

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APC-3X19A User Ma	nual		0

Revision History

Reversion Date		Description	
1.0	2015/10/06	Official Version	

Warning!

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.

Caution

Risk of explosion if the battery is replaced with an incorrect type. Batteries should be recycled where possible. Disposal of used batteries must be in accordance with local environmental regulations.

Packing List

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

Safety Precautions

Follow the messages below to prevent your systems from damage:

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

Table of Contents

Revision History	1
, Warning!/Caution	
Packing List/Safety Precautions	

Chapter 1

Getting Started

1.1 Features	6
1.2 Specifications	6
1.3 Dimensions	8
1.4 Brief Description of APC-3X19A	11
1.5 Installation of Riser Card	12
1.6 Installation of HDD/SSD – 15"	13
1.7 Installation of HDD/SSD – 17" and 19"	14
1.8 Mounting of APC-3X19A	15

Chapter 2 Motherboard

2.1 Motherboard IMB-181-L Specifications	16
2.2 Motherboard Layout	18
2.3 I/O Panel	
2.4 Installation	
2.5 Jumpers Setup	24
2.6 Onboard Headers and Connectors	

Chapter 3 UEFI SETUP UTILITY

3.1 Introduction	
3.2 Main Screen	
3.3 Advanced Screen	32
3.4 Hardware Health Event Monitoring Screen	45
3.5 Boot Screen	46
3.6 Security Screen	
3.7 Exit Screen	48

Chapter 4 Installation of Drivers

4.1 Intel Q87 Chipset Driver	51
4.2 Intel [®] VGA Chipsrt Driver	
APC-3X19A User Manual	4

4.3 Intel I210 & I217LM LAN Driver	57
4.4 Rearltek_Audio Driver	60
4.5 USB 3.0 Driver	62
4.6 Com Driver	65
4.7 Intel Trusted Execution Engine Driver	67
4.8 SmartConnect Driver	69

Chapter 5

Touch Screen Installation

5.1 Windows	7/8.1	Universal	Driver	Installation	for	PenMount	6000
Series							73
5.2 Software F	unctic	ons					82

Figures

Figure 1.1: Dimensions of APC-3519A	8
Figure 1.2: Dimensions of APC-3719A	9
Figure 1.3: Dimensions of APC-3919A	10
Figure 1.4: Front View of APC-3X19A	11
Figure 1.5: Rear View of APC-3X19A	11
Figure 1.6: Panel Mounting and Wall Mounting of APC-3x19A	14
Figure 2.1: Motherboard Layout	17

Chapter 1

1.1 Features

- 15"/17"/19" TFT LED Backlight LCD
- 4th Generation Intel Core i7/i5/i3 Panel PC
- Intel Q87
- 2 x DDR3 1066/1333/1600MHz SO-DIMM, up to 16GB System Memory
- Fanless Design
- Support 1 x PCle x16
- Wide range DC 11~32V Power Input
- IP65 Compliant Front Panel

1.2 Specifications

	APC-3519A	APC-3719A	APC-3919A		
System			·		
	Socket LGA 1150, 4 th Gen. intel Core i7/i5/i3				
Processor	Intel Core i7-4770TE 2.3G 8M (TDP: 45W)				
FIOCESSO	Intel Core i5-4570TE 2.7G 4M(TDP: 35W)				
	Intel Core i3-4330TE 2.4G 4M(TDP: 35W)				
System Chipset		Intel Q87			
System Memory	2 x 204-pin DDR3 9	SO-DIMM, up to 16GB 10	066/1333/1600MHz		
Storage	2 x 2.5" SATA	HDD Space, Easy Access	sible, RAID 0.1		
	Windows 7	Professional for Embedo	ded Systems		
OS Support	Windows 7 Ultimate for Embedded Systems				
OS Support	Windows Embedded 8.1 Pro				
	Windows 8.1 Industry pro				
I/O Ports					
USB	4 x USB 3.0 Type A				
036	2 x USB 2.0 Type A by cable (option)				
Serial/Parallel	3 x RS-232/422/485 DB-9, COM1, COM2, and COM3, Default RS-232				
Audio	1 x Mic-in, Line-out				
LAN	2 x GbE LAN RJ-45				
VGA	1 x VGA				
Power	1 x DC Power 3-pin Terminal Block Connector				
Power	1 x Rocker Switch for Power on/off				
	2 x LED Indication for Power and HDD				
Others	1 x 8-pin Terminal Block 3 in/3 out/VCC/GND (option)				
	1 x CF Slot (option)				

Expansion Slots						
		1 x PCIe x16 slot				
Expansion Slots	1 x mSATA or 1 x M	1 x mSATA or 1 x Mini-PCIe slot for WIFI/BT/3G/GPS (option)				
Power						
Power Input		11~32V DC				
Power Consumption	MAX: 45.1W MAX: 48.5W MAX: 51.2W					
LCD						
Display Type	15" color TFT LCD	17" color TFT LCD	19" color TFT LCD			
Max. Resolution	1024 x 768	1280 x 1024	1280 x 1024			
Max. Color	16.7M	16.7M	16.7M			
Contrast Ratio	800: 1	1000: 1	1000: 1			
Luminance (cd/m2)	400	350	350			
Viewing Angle	160 (H) / 140 (V)	170 (H) / 160 (V)	170 (H) / 160 (V)			
Backlight Lifetime	50,000 hrs	30,000 hrs	50,000 hrs			
Touch Screen(option)						
Туре	Resistive Touch Screen/Projected Capacitive Touch Screen					
Interface	USB					
Light Transmission	Over 80%(Resistive)					
	Ove	er 90%(Projected Capacit	ive)			
Mechanical						
Front Bezel	Steel Black or Aluminum with Resistive Touch					
	Aluminum with Projec	ted Capacitive Touch (on	ly Flat Bezel Designed)			
Rear Bezel		Steel Black				
Mounting	Panel Mount/VES	SA Mount 75 x 75	Panel Mount/VESA			
Woulding			Mount 100 x 100			
IP Rating	IF	265 Compliant Front Pan	el			
Dimension	410 x 310 x 122.5mm	439 x 348 x 119.1mm	484 x 400 x 119mm			
Net Weight	9.5Kg	10.8Kg	12.9Kg			
Environmental						
Operating	0~50 °C					
Temperature						
Storage Temperature	-30~70 °C					
Storage Humidity	10%~90%@ 40°C, non-condensing					
Certificate	Meet CE / FCC Class A					

1.3 Dimentions

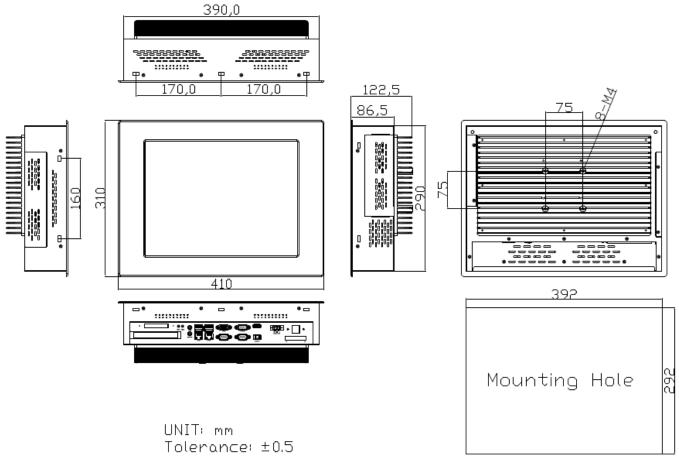


Figure 1.1: Dimensions of APC-3519A

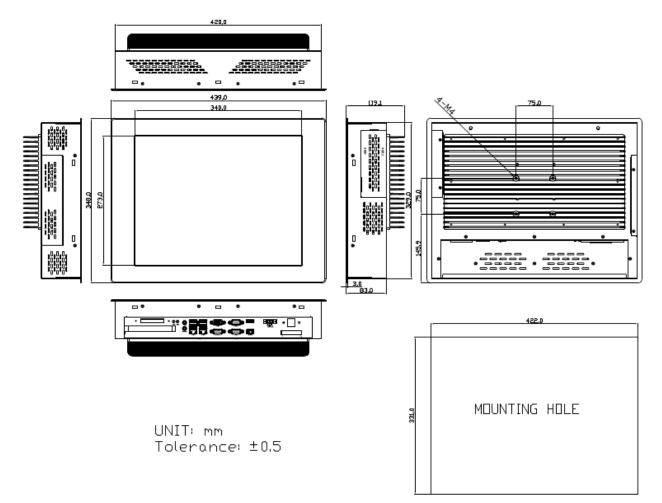


Figure 1.2: Dimensions of APC-3719A

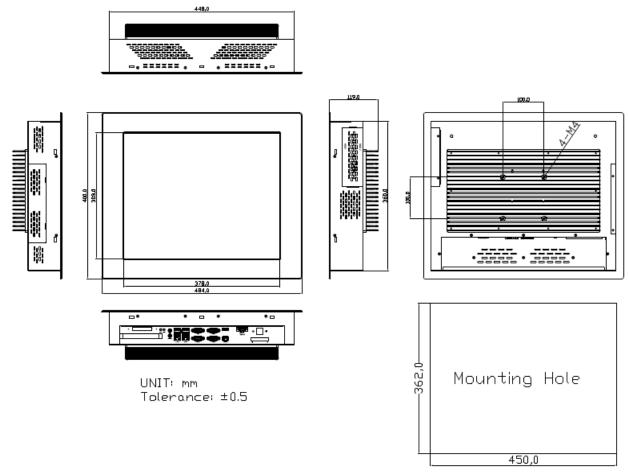


Figure 1.3: Dimensions of APC-3919A

1.4 Brief Description of APC-3X19A

APC-3X19A series come with 15", 17", and 19" TFT LED Backlight LCD, IP65 compliant Front bezel, fanless designed, and powered by Intel 4th Generation Core i7/i5/i3 Processor and Intel Q87 Chipset. The model supports 2 x 204-pin DDR3 1066/1333/1600MHz up to 16GB system memory, comes with DC 11~32V wide-ranging power input, 4 x USB 3.0, 2 x USB 2.0 for option, 3 x RS-232 ports, 1 x Mic-in Line-out, 2 x LAN, 1 x VGA, 1 x DC power terminal block connector, 1 x rocker switch, and 2 x LED indication, and supports 1 x PCIe x16. Additionally, 1 x CF slot and 1 x 8-pin terminal block 3 in/3 out/VCC/GND are optional. APC-3X19A is steel black or aluminum with resistive, and it can be aluminum with Projected Capacitive Touch. It can be VESA 75 x 75 mounted for 15" and 17", and VESA 100 x 100 mounted for 19". The panel PC has a variety of functions and peripherals. Regarding the storage capability, APC-3X19A provides 2 x 2.5" easy accessible SATA HDD space with RAID 0.1, allowing customers to easily access/backup the data.



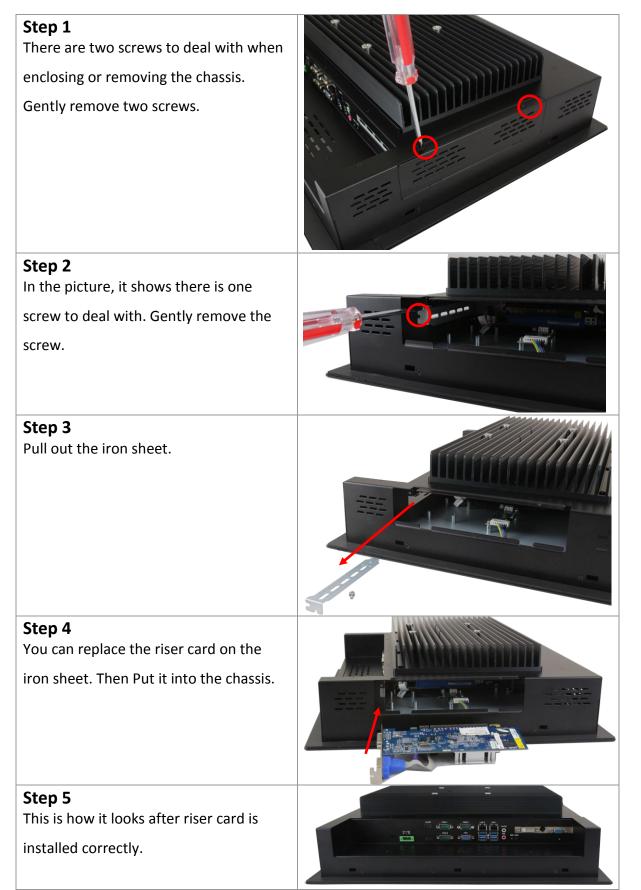
Figure 1.4 Front View of APC-3X19A



Figure 1.5: Rear View of APC-3X19A

APC-3X19A User Manual

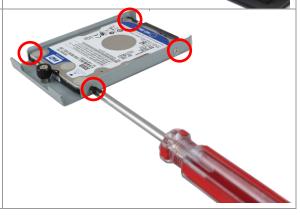
1.5 Installation of Riser Card



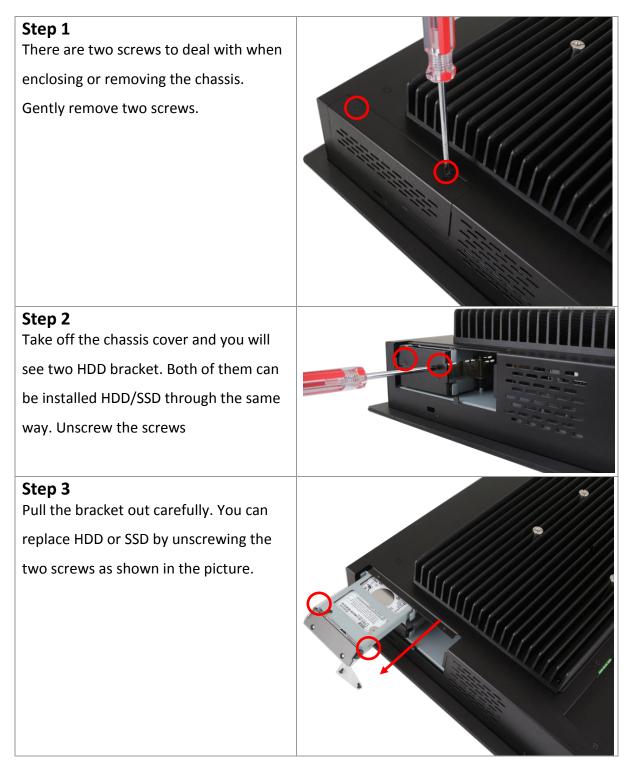
1.6 Installation of HDD/SSD – 15"



Step 4 You can replace HDD or SSD by unscrewing the four screws as shown in the picture.



1.7 Installation of HDD/SSD – 17" and 19"



1.8 Mounting of APC-3X19A

The APC-3X19A panel PC is designed to be panel-mounted as shown in Figure 1.6 just carefully place the unit through the hole and tighten the given screws from the rear to secure the mounting. And it also can be wall mounted as shown in the figure.

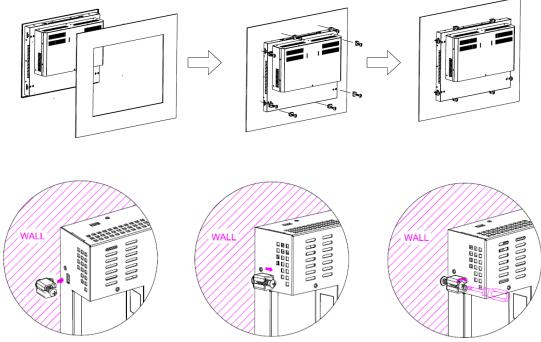


Figure 1.6: Panel Mounting and Wall Mounting of APC-3x19A

2.1 Motherboard IMB-181-L Specifications

Form Factor	Dimensions	Mini-ITX(6.7-in x 6.7-in)				
	CPU	Socket LGA1150 for Intel [®] Core i7/i5/i3/Celeron (Haswell)				
	Core Number	(By CPU, Max 4)				
Processor	Max Speed	(By CPU)				
System	L3 Cache	(By CPU)				
	Chipset	Q87				
	BIOS	UEFI				
	PCI	0				
	Mini-PCI3	1 (full size) shared with m-SATA				
Expansion	mSATA	1 (shared with mini-PCIe)				
Slot	PCle	1 (x16)				
	CFast Card	0				
	Socket	0				
	Technology	Dual Channel DDR3 1066/1333/1600 MHz SDRAM				
Memory	Max.	16GB				
	Socket	2 x SO-DIMM				
	Controller	Intel [®] HD Graphics (By CPU)				
	VRAM	Shared Memory				
	VGA	Supports max resolution 2048 x 1536				
	LVDS	Yes				
Graphics	HDMI	Supports HDMI 1.4a, max resolution 1920 x 1200				
	DVI	No				
	Display Port	No				
	Multi Display	Yes (Three Display)				
	Ethernet	10/100/1000 Mbps				
Ethernet	Controller	GbE LAN1: Intel [®] I210, LAN2: Intel [®] I217LM (with v-Pro support)				
	Connector	2 x RJ-45				
	Max Data					
SATA	Transfer Rate	SATA2 (3.0Gb/S), SATA3 (6.0Gb/S), Supports RAID 0/1/5/10				
	VGA	1				
	DVI	0				
Rear I/O	HDMI	1				
	Display Port	0				
	Ethernet	2				

	USB	4 x USB 3.0 compliant
	Audio	2 (Mic-in, Line-Out)
	Serial	3 (RS-232/422/485)
	PS/2	0
	USB	8 (4 x USB Header 2.54mm pitch)
	LVDS/Inverter	24 bit dual channel LVDS
	VGA	0
	Serial	4 (RS-232)
	SATA	4 x SATA3 (6.0Gb/s), Support RAID 0/1/5/10
Internal	mPCle	1 (shared)
Connector	Parallel	0
connector	mSATA	1 (shared)
	IrDA	0
	GPIO 8-bit	4 x GPI + 4 x GPO
	SATA PWR	0
	Output Con	0
	Speaker Header	1
Watchdog	Output	Output from super I/O to drag RESETCON#
Timer	Interval	256 Segments, 0, 1, 2,255 Sec/Min
	Input PWR	ATX PWR (4 + 24)
Power		AT/ATX Supported
Requirements	Power On	-AT: Directly PWR on as power input ready
		-ATX: Press button to PWR on after power input ready
Environment	Temperature	0~60 °C

2.2 Motherboard Layout

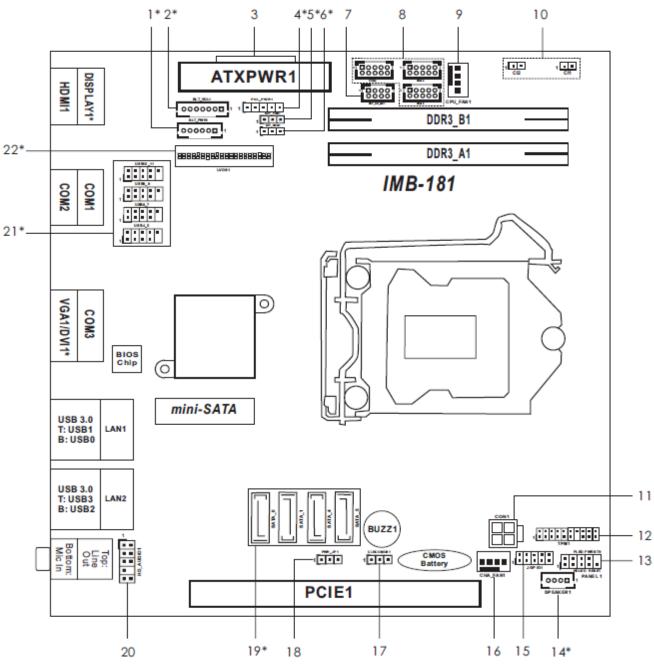


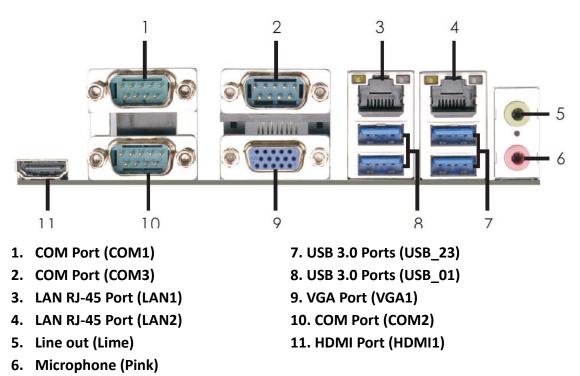
Figure 1.11: Motherboard IMB-181-L Layout

- 1*: Backlight Power Connector
- 2*: Backlight Volume Control
- 3 : 24-pin ATX Power Input Connector
- 4*: PNL_PWR1
- 5*: Backlight Power Selection
- 6*: BLT_PWM1
- 7 : PS2_KB_MS1
- 8 : RS-232 Port 4 Pint Headers
- 9 : 4-Pin Chassis FAN Connector (+12V)
- 10: Chassis Intrusion Headers
- 11: 4-pin ATX Power Input Connector
- 12: TPM Header
- 13: System Panel Header
- 14*: 3W Audio AMP Output Wafer
- 15: Digital Input/Output Pin Header
- 16: 4-Pin Chassis FAN Connector (+12V)
- 17: Clear CMOS Header
- 18: ATX/AT Mode Jumper
- 19*: SATA3 Connectors (SATA_0, SATA_1, SATA_4, SATA_5)

(SATA_5 (orange) is shared with mini-PCIe/mini-SATA slot)

- 20: Front Panel Audio Header
- 21*: USB 2.0 Connectors
- 22*: LVDS Panel Connector

2.3 I/O Panel



*There are two LED next to the LAN port. Please refer to the table below for the LAN port LED indications.

LAN Port LED Indications			ACT/LINK	SPEED		
Activ	ity/Link LED		SPEED LED		LED	LED
Status	Description		Status Description			
Off	No Link		Off 10Mbps connection		Carl I	
Blinking	Data Activity		Orange	100Mbps connection	init on	
On	Link		Green 1Gbps Connection		LAN F	Port

2.4 Installation

This is a Mini-ITX form factor (6.7" x 6.7", 17.0 x 17.0 cm) motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.



Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.

2.4.1 Screw Holes

Place screws into the holes to secure the motherboard to the chassis.



Do not over-tighten the screws! Doing so may damage the motherboard.

2.4.2 Pre-installation precautions

Take note of the following precautions before you install motherboard components or change any motherboard settings.

- 1. Unplug the power cord from the wall socket before touching any component.
- 2. To avoid damaging the motherboard components due to static electricity, NEVER place your motherboard directly on the carpet or the like. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle components.
- 3. Hold components by the edges and do not touch the ICs.
- 4. Whenever you uninstall any component, place it on a grounded antistatic pad or in the bag that comes with the component.



Before you install or remove any component, ensure that the power is switched off or the power cord is detached from the power supply. Failure to do so may cause severe damage to the motherboard, peripherals, and/or components.

2.4.3 Installation of Memory Modules (SO-DIMM)

This motherboard provides two 204-pin DDR3 (Double Data Rate 3) SO-DIMM slots.



It is not allowed to install a DDR or DDR2 memory module into DDR3 slot; otherwise, this motherboard and SO-DIMM may be damaged.

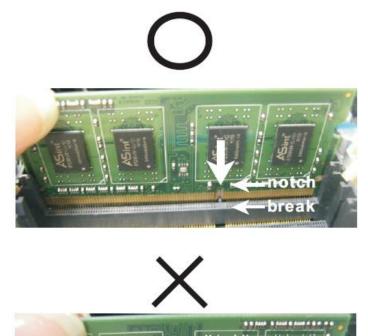
Installing a SO-DIMM



Please make sure to disconnect power supply before adding or removing SO-DIMMs or the system components.

Step 1. Unlock a SO-DIMM slot by pressing the retaining clips outward.

Step 2. Align a SO-DIMM on the slot such that the notch on the SO-DIMM matches the break on the slot.







The SO-DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the SO-DIMM if you force the SO-DIMM into the slot at incorrect orientation.

Step 3. Firmly insert the SO-DIMM into the slot until the retaining clips at both ends fully snap back in place and the SO-DIMM is properly seated.

APC-3X19A User Manual

2.4.4 Expansion Slots (PCI Express and mini-PCIe/mini-SATA Slots)

There is 1 PCI Express slot and 1 mini-PCIe/mini-SATA slot on this motherboard.

PCIE slots:

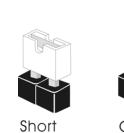
PCIE1 (PCIE x16 slot, Blue) is used for PCI Express x16 lane width graphics cards. MINI_PCIE1 (mini-PCIe/mini-SATA slot) is used for PCI Express mini cards or mSATA cards.

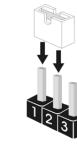
Installing an expansion card

- Step 1. Before installing the expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.
- Step 2. Remove the system unit cover (if your motherboard is already installed in a chassis).
- Step 3. Remove the bracket facing the slot that you intend to use. Keep the screws for later use.
- Step 4. Align the card connector with the slot and press firmly until the card is completely seated on the slot.
- Step 5. Fasten the card to the chassis with screws.
- Step 6. Replace the system cover.

2.5 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is "Short". If no jumper cap is placed on pins, the jumper is "Open". The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when jumper cap is placed on these 2 pins.





Jumper	Settir	ng	Description
Clear CMOS Jumper	1_2	2_3	
(3-pin CLRCMOS1)		$\bigcirc \bullet \bullet$	
(see p.12, No. 17)	Default	Clear CMOS	

Note: CLRCMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, user default profile and MAC address will be cleared only if the CMOS battery is removed.

Panel Power Selection (5-pin PNL_PWR1) (see p.12, No. 4)	1 00000	1-2: 2-3: 4-5:	LVDD: +3V LVDD: +5V LVDD: +12V
Backlight Power Selection (3-pin BKT _PWR1) (see p.12, No. 5)	$\begin{array}{c} \square \bigcirc \bigcirc \\ 1 & 2 & 3 \end{array}$	1-2: 2-3:	+5V +12V
ATX/AT Mode Selection (3-pin PWR_JP1) (see p.12, No. 18)	$ \boxed{\begin{array}{c} \bigcirc \bigcirc \\ 1 \end{array}} $	1-2: 2-3:	AT Mode ATX Mode
BLT_PWM1 (3-pin BLT_PWM1) (see p.12, No. 6)	$\begin{array}{c} \square \bigcirc \bigcirc \\ 1 & 2 & 3 \end{array}$	1-2: 2-3:	+3V Level +5V Level

2.6 Onboard Header and Connectors



Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage of the motherboard!

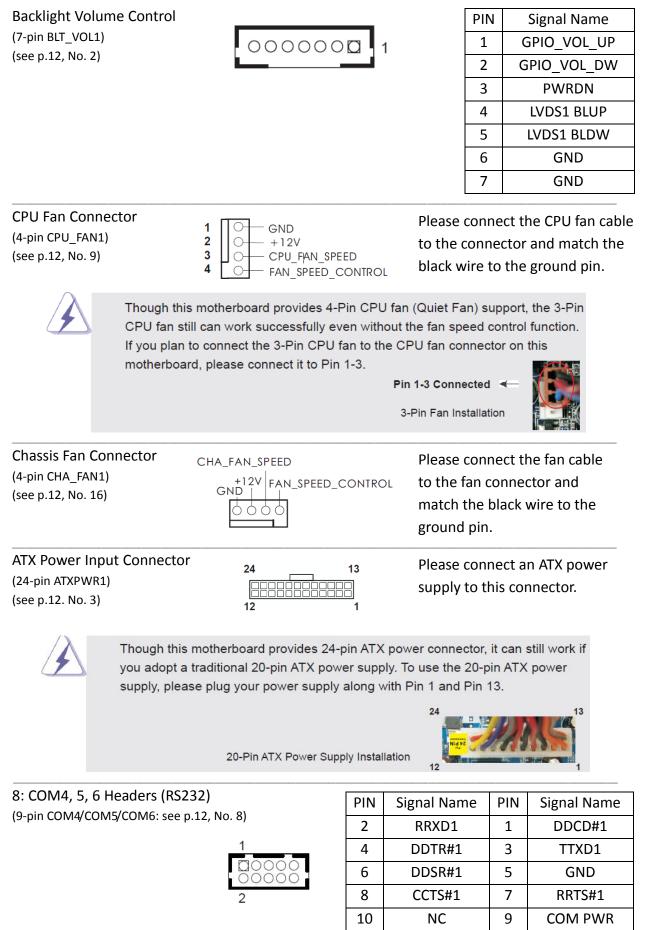
LVDS Panel Connect			PIN
(40-pin LVDS1) (see p.12, No. 22)			1
(see p.12, No. 22)			3
	39	1	5
			7
			9
			11
			40

PIN	Signal Name	PIN	Signal Name
1	LVDD	2	LVDD
3	+3V	4	N/A
5	N/A	6	LVDS_A_DATA0#
7	LVDS_A_DATA0	8	GND1
9	LVDS_A_DATA1#	10	LVDS_A_DATA1
11	GND6	12	LVDS_A_DATA2#
13	LVDS_A_DATA2	14	GND2
15	LVDS_A_DATA3#	16	LVDS_A_DATA3
17	GND7	18	LVDS_A_CLK#
19	LVDS_A_CLK	20	GND3
21	LVDS_B_DATA0#	22	LVDS_B_DATA0
23	GND8	24	LVDS_B_DATA1#
25	LVDS_B_DATA1	26	GND4
27	LVDS_B_DATA2#	28	LVDS_B_DATA2
29	DPLVDD_EN	30	LVDS_B_DATA3#
31	LVDS_B_DATA3	32	GND5
33	LVDS_B_CLK#	34	LVDS_B_CLK
35	GND9	36	CON_LBKLT_EN_R
37	CON_LBKLT_CTR_R	38	LCD_BLT_VCC
39	LCD_BLT_VCC	40	LCD_BLT_VCC

Backlight Power Connector
(6-pin BLT_PWR1)
(see p.12, No. 1)



PIN	Signal Name
1	GND
2	GND
3	BL EN
4	BL CTL
5	LCD_BLT_VCC
6	LCD_BLT_VCC



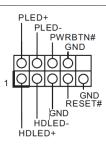
APC-3X19A User Manual

Digital Input/Output Pin Header (10-pin JGPIO1) (see p.12, No. 15)



PIN	Signal Name	PIN	Signal Name
1	SIO_GP24	2	SIO_GP20
3	SIO_GP25	4	SIO_GP21
5	SIO_GP26	6	SIO_GP22
7	SIO_GP27	8	SIO_GP23
9	JGPIO_PWR1	10	GND

System Panel Header (9-pin PANEL1) (see p.12, No. 13)



This header accommodates several system front panel functions.



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

PWRBTN (Power Switch):

Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

RESET (Reset Switch):

Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

PLED (System Power LED):

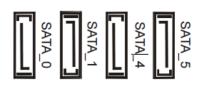
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1/S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

HDLED (Hard Drive Activity LED):

Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

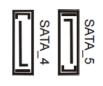
The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assign-ments are matched correctly.

SATA3 Connectors (SATA_0/SATA_1/SATA_4/SATA_5: see p.12, No. 19)



SATA2 Connectors (SATA_4/SATA_5: see p.12, No. 19)

USB 2.0 Headers



PWR

These four Serial ATA3 (SATA3) connectors support SATA data cables for internal storage devices. The current SATA3 interface allows up to 6.0 Gb/s data transfer rate. (SATA_5 (orange) is shared with mini-PCle/mini-SATA slot.)

These two Serial ATA2 (SATA2) connectors support SATA data cables for internal storage devices. The current SATA2 interface allows up to 3.0 Gb/s data transfer rate. (SATA_5 (orange) is shared with mini-SATA slot.)

There are four USB 2.0 headers on this motherboard. Each USB 2.0 header can support two USB 2.0 ports.

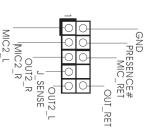
Chassis Intrusion Headers (2-pin Cl1/Cl2: see p.12, No. 10)

(9-pin USB4_5/USB6_7/USB8_9/USB10_11: see p.12, No. 21)



This motherboard supports CASE OPEN detection feature that detects if the chassis cover has been removed. This feature requires a chassis with chassis intrusion detection design.

Cl1: Close: Active case open Open: Normal Cl2: Close: Normal Open: Active case open Front Panel Audio Header (9-pin HD_AUDIO1) (see p.12 No. 20)



This is an interface for front panel audio cable that allows convenient connection and control of audio devices.

3W Audio Amp Output Wafer (4-pin SPEAKER1) (see p.12, No. 14)



PIN	Signal Name
1	SPK L-
2	SPK L+
3	SPK R+
4	SPK R-

ATX 12V Power Input Connector (4-pin ATX12V1) (see p.12, No. 11)



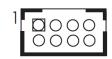
(see p.12, No. 12)

(19-pin TPM1)

SMB_DATA_MAIN SMB_CLK_MAIN S_PWRDWN# SERIRQ# 48MHz LAD2 GND LADI GND GND GND LAD3 LADO PCICL FRAME +3VSB +3V +5V Please connect an ATX 12V power supply to this connector.

This connector supports a Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, projects digital identities, and ensures platform integrity.

PS2_KB_MS1 (8-pin PS2_KB_MS1) (see p.12, No. 7)



PIN	Signal Name	
1	KBCLK	
2	+5V	
3	KBDATQA	
4	+5V	
5	MSDATA	
6	GND	
7	MSCLK	
8	GND	
-		

Chapter 3 UEFI SETUP UTILITY

3.1 Introduction

This section explains how to use the UEFI SETUP UTILITY to configure your system. The UEFI chip on the motherboard stores the UEFI SETUP UTILITY. You may run the UEFI SETUP UTILITY when you start up the computer. Please press <F2> or during the Power-On-Self-Test (POST) to enter the UEFI SETUP UTILITY, otherwise, POST will continue with its test routines.

If you wish to enter the UEFI SETUP UTILITY after POST, restart the system by pressing <Ctl> + <Alt> + <Delete>, or by pressing the reset button on the system chassis. You may also restart by turning the system off and then back on.



Because the UEFI software is constantly being updated, the following UEFI setup screens and descriptions are for reference purpose only, and they may not exactly match what you see on your screen.

3.1.1 UEFI Menu Bars

The top of the screen has a menu bar with the following selections:		
Main	To set up the system time/date information	
Advanced	To set up the advanced UEFI features	
H/W Monitor	To display current hardware status	
Boot	To set up the default system device to locate and load the	
	Operating System	
Security	To set up the security features	
Exit	To exit the current screen or the UEFI SETUP UTILITY	
Use <<-> key or <->> key to choose among the selections on the menu bar, and		
then press <enter> t</enter>	to get into the sub screen. You can also use the mouse to click	
your required item.		

3.1.2 Navigation Keys

	Function Description
Navigation key(s)	Function Description
<i>←</i> /→	Moves cursor left or right to select Screen
↑/↓	Moves cursor up or down to select items
+/-	To change option for the selected items
<enter></enter>	To bring up the selected screen
<f1></f1>	To display the General Help Screen
<f7></f7>	Discard changes
<f9></f9>	To load optimal default values for all the settings
<f10></f10>	To save changes and exit the UEFI SETUP UTILITY
<f12></f12>	Print screen
<esc></esc>	To jump to the Exit Screen or exit the current screen

Please check the following table for the function description of each navigation key.

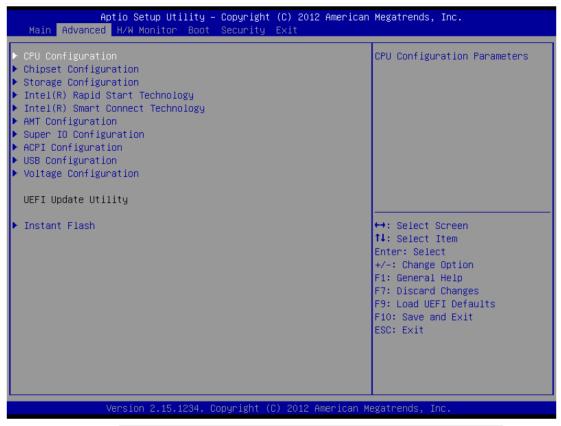
3.2 Main Screen

When you enter the UEFI SETUP UTILITY, the Main screen will appear and display the system overview.

	t <mark>io Setup Utility – Copyright (C) 2012 Americar</mark> H/W Monitor Boot Security Exit) Megatrends, Inc.
	: 306C3/7	Set the Date. Use Tab to switch between Date elements.
Total Memory	: 4096MB with 256MB Shared Memory and 2MB GTT memory Single-Channel Memory Mode	
DDR3_A1 DDR3_B1	: 4096MB(DDR3-1333) : None	
System Date System Time	[Fri 06/28/2013] [19:34:05]	<pre>↔: Select Screen ↑↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Ve	ersion 2.15.1234.Copyright (C) 2012 American ⊧	legatrends, Inc.

3.3 Advanced Screen

In this section, you may set the configurations for the following items: CPU Configuration, Chipset Configuration, Storage Configuration, Intel(R) Rapid Start Technology, Intel(R) Smart Connect Technology, AMT Configuration, Super IO Configuration, ACPI Configuration, USB Configuration and Voltage Configuration.



Setting wrong values in this section may cause the system to malfunction.

Instant Flash

Instant Flash is a UEFI flash utility embedded in Flash ROM. This convenient UEFI update tool allows you to update system UEFI without entering operating systems first like MS-DOS or Windows[®]. Just launch this tool and save the new UEFI file to your USB flash drive, floppy disk or hard drive, then you can update your UEFI only in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system. If you execute Instant Flash utility, the utility will show the UEFI files and their respective information. Select the proper UEFI file to update your UEFI, and reboot your system after UEFI update process completes.

3.3.1 CPU Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2012 American	Megatrends, Inc.
Intel(R) Core(TM) i5-4670S CPU @ 3. Max CPU Speed Min CPU Speed Processor Cores Intel HT Technology Intel VT-x Technology Intel SMX Technology 64-bit	10GHz 3100 MHz 800 MHz 4 Not Supported Supported Supported Supported	Select the number of cores to enable in each processor package.
Active Processor Cores CPU C States Support Enhanced Halt State(C1E) CPU C3 State Support CPU C6 State Support CPU C7 State Support Package C State Support	[All] [Auto] [Auto] [Auto] [Auto] [Auto] [Disabled]	↔: Select Screen 1↓: Select Item Enter: Select +/-: Change Option
Intel SpeedStep Technology Intel Turbo Boost Technology CPU Thermal Throttling No-Execute Memory Protection Intel Virtualization Technology Hardware Prefetcher Adjacent Cache Line Prefetch	[Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled] [Enabled]	F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit
Version 2.15.1234. C	opyright (C) 2012 American M	egatrends, Inc.

Intel Hyper Threading Technology

Intel Hyper Threading Technology allows multiple threads to run on each core, so that the overall performance on threaded software is improved.

Active Processor Cores

Select the number of cores to enable in each processor package.

CPU C States Support

Enable CPU C States Support for power saving. It is recommended to keep C3, C6 and C7 all enabled for better power saving.

Enhanced Halt State (C1E)

Enable Enhanced Halt State (C1E) for lower power consumption.

CPU C3 State Support

Enable C3 sleep state for lower power consumption.

CPU C6 State Support

Enable C6 deep sleep state for lower power consumption.

CPU C7 State Support

Enable C7 deep sleep state for lower power consumption.

Package C State Support

Enable CPU, PCIe, Memory, Graphics C State Support for power saving.

Intel SpeedStep Technology

Intel SpeedStep technology is Intel's new power saving technology. Processors can switch between multiple frequencies and voltage points to enable power saving. The default value is [Enabled]. Configuration options: [Enabled] and [Disabled]. If you install Windows[®] 7 / 8 and want to enable this function, please set this item to [Enabled]. This item will be hidden if the current CPU does not support Intel SpeedStep technology.



Please note that enabling this function may reduce CPU voltage and lead to system stability or compatibility issues with some power supplies. Please set this item to [Disabled] if above issues occur.

Intel Turbo Boost Technology

Use this item to enable or disable Intel Turbo Boost Mode Technology. Turbo Boost Mode allows processor cores to run faster than marked frequency in specific conditions. The default value is [Enabled].

CPU Thermal Throttling

You may select [Enabled] to enable CPU internal thermal control mechanism to keep the CPU from overheating.

No-Execute Memory Protection

No-Execution (NX) Memory Protection Technology is an enhancement to the IA-32 Intel Architecture. An IA-32 processor with "No Execute (NX) Memory Protection" can prevent data pages from being used by malicious software to execute codes. This option will be hidden if the current CPU does not support No-Excute Memory Protection.

Intel Virtualization Technology

When this option is set to [Enabled], a VMM (Virtual Machine Architecture) can utilize the additional hardware capabilities provided by Vanderpool Technology. This option will be hidden if the installed CPU does not support Intel Virtualization Technology.

Hardware Prefetcher

Use this item to turn on/off the MLC streamer prefetcher.

Adjacent Cache Line Prefetch

Use this item to turn on/off prefetching of adjacent cache lines.

3.3.2 Chipset Configuration

VT-d Capability	Supported	If [Auto] is selected, the motherboard will detect the
DRAM Frequency	[Auto]	memory module(s) inserted and
		assign the appropriate
Primary Graphics Adapter	[PCI Express]	frequency automatically.
VT-d	[Disabled]	
PCIE1 Link Speed	[Auto]	
Share Memory	[Auto]	
IGPU Multi-Monitor	[Disabled]	
Render Standby	[Enabled]	
Onboard HD Audio	[Enabled]	
Front Panel	[Auto]	↔: Select Screen
Onboard HDMI HD Audio	[Enabled]	↑↓: Select Item
Onboard LAN1	[Enabled]	Enter: Select
Onboard LAN2	[Enabled]	+/-: Change Option
		F1: General Help
Deep Sleep	[Disabled]	F7: Discard Changes
Restore on AC/Power Loss	[Power Off]	F9: Load UEFI Defaults F10: Save and Exit
Active LVDS	[Enabled]	ESC: Exit
Panel Type Selection	[1440x900/24-bit/2-c]	
Primary IGFX Boot Display	[VBIOS Default]	

DRAM Frequency

If [Auto] is selected, the motherboard will detect the memory module(s) inserted and assign the appropriate frequency automatically.

Primary Graphics Adapter

This allows you to select [Onboard] or [PCI Express] as the boot graphic adapter priority. The default value is [PCI Express].

VT-d

Use this to enable or disable Intel[®] VT-d technology (Intel[®] Virtualization Technology for Directed I/O). The default value of this feature is [Disabled].

PCIE1 Link Speed

Select the link speed for PCIE1.

Share Memory

Configure the size of memory that is allocated to the integrated graphics processor when the system boots up.

IGPU Multi-Monitor

Select disable to disable the integrated graphics when an external graphics card is installed. Select enable to keep the integrated graphics enabled at all times.

Render Standby

Use this to enable or disable Render Standby by Internal Graphics Device. The default value is [Enabled].

Onboard HD Audio

Select [Auto], [Enabled] or [Disabled] for the onboard HD Audio feature. If you select [Auto], the onboard HD Audio will be disabled when PCI Sound Card is plugged.

Front Panel

Select [Auto] or [Disabled] for the onboard HD Audio Front Panel.

Onboard HDMI HD Audio

This allows you to enable or disable the Onboard HDMI HD Audio feature.

Onboard LAN1

This allows you to enable or disable the Onboard LAN1 feature.

Onboard LAN2

This allows you to enable or disable the Onboard LAN2 feature.

Deep Sleep

Mobile platforms support Deep S4/S5 in DC only and desktop platforms support Deep S4/S5 in AC only. The default value is [Disabled].

Restore on AC/Power Loss

This allows you to set the power state after an unexpected AC/power loss. If [Power Off] is selected, the AC/power remains off when the power recovers. If [Power On] is selected, the AC/power resumes and the system starts to boot up when the power recovers.

Active LVDS

Use this to enable or disable the LVDS. The default value is [Enabled].

Panel Type Selection

Use this to select panel type.

Primary IGFX Boot Display

Select the Video Device which will be activated during POST. This has no effect if external graphics present. Secondary boot display selection will appear based on your selection. VGA modes will be supported only on primary display. Configuration options: [VBIOS Default], [CRT], [DVI], [HDMI] and [LVDS]. The default value is [VBIOS Default].

3.3.3 Storage Configuration

Aptio Setup Utility - Advanced	Copyright (C) 2012 Americar) Megatrends, Inc.
SATA Controller(s) SATA Mode Selection SATA Aggressive Link Power Mgmt Dynamic Storage Accelerator Hard Disk S.M.A.R.T	[Enabled] [AHCI] [Disabled] [Enabled] [Disabled]	Enable/disable the SATA controllers.
 SATA_0 : Not Detected SATA_1 : Not Detected SATA_4 : Not Detected SATA_5 : Not Detected 		
		<pre>↔: Select Screen fl: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.15.1234. C	opyright (C) 2012 American ⊧	legatrends, Inc.

SATA Controller(s)

Use this item to enable or disable the SATA Controller feature.

SATA Mode Selection

Use this to select SATA mode. Configuration options: [IDE Mode], [AHCI Mode] and [RAID Mode]. The default value is [AHCI Mode].



AHCI (Advanced Host Controller Interface) supports NCQ and other new features that will improve SATA disk performance but IDE mode does not have these advantages.

SATA Aggressive Link Power Management

Use this item to configure SATA Aggressive Link Power Management.

Dynamic Storage Accelerator

Keep this option enabled for higher HDD and SDD I/O performance, lower latency and increased system responsiveness.

Hard Disk S.M.A.R.T.

Use this item to enable or disable the S.M.A.R.T. (Self-Monitoring, Analysis, and Reporting Technology) feature. Configuration options: [Disabled] and [Enabled].

3.3.4 Intel[®] Rapid Start Technology

Aptio Setup Utility – Advanced	Copyright (C)	2012 American	Megatrends, Inc.
Intel(R) Rapid Start Technology	[Disabled]		Intel(R) Rapid Start Technology is a new zero power hibernation mode which allows users to resume in just 5–6 seconds.
			<pre>↔: Select Screen fl: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.15.1234. Co	pyright (C) 2	012 American Me	egatrends, Inc.

Intel(R) Rapid Start Technology

Use this item to enable or disable Intel(R) Rapid Start Technology. Intel(R) Rapid Start Technology is a new zero power hibernation mode which allows users to resume in just 5-6 seconds. The default is [Disabled].

Aptio Setup Utility – Copyright (C) 2012 American Advanced	Megatrends, Inc.
Intel(R) Smart Connect Technology [Enabled]	Intel(R) Smart Connect Technology automatically updates your email and social networks, such as Twitter, Facebook, etc. while the computer is in sleep mode.
Version 2.15.1234. Copyright (C) 2012 American Me	gatrends, Inc.

3.3.5 Intel[®] Smart Connect Technology

Intel(R) Smart Connect Technology

Use this item to enable or disable Intel(R) Smart Connect Technology. Intel(R) Smart Connect Technology keeps your e-mail and social networks, such as Twitter, Facebook, etc. updated automatically while the computer is in sleep mode. The default is [Enabled].

3.3.6 AMT Technology

Aptio Setup Utility – Advanced	Copyright (C) 2012 American	Megatrends, Inc.
Intel AMT BIOS Hotkey Pressed MEBx Selection Screen Hide Un-Config ME Confirm Prompt MEBx Debug Message Output Un-Configure ME Amt Wait Timer Disable ME ASF Activate Remote Assistance Process USB Configure PET Progress AMT CIRA Timeout	[Enabled] [Disabled] [Disabled] [Disabled] [Disabled] 0 [Disabled] [Enabled] [Enabled] [Enabled] [Enabled] 0	Enable/Disable Intel (R) Active Management Technology BIOS Extension. Note : iAMT H/W is always enabled. This option just controls the BIOS extension execution. If enabled, this requires additional firmware in the SPI device ++: Select Screen 11: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit
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APC-3X19A User Manual

Intel AMT

Use this to enable or disable Intel(R) Active Management Technology BIOS Extension. The default is [Enabled].

BIOS Hotkey Pressed

Use this to enable or disable BIOS hotkey press. The default is [Disabled].

MEBx Selection Screen

Use this to enable or disable MEBx Selection Screen. The default is [Disabled].

Hide Un-Configure ME Confirmation

Hide Un-Configure ME without password confirmation prompt. The default is [Disabled].

MEBx Debug Message Output

Use this to enable or disable MEBx Debug Message Output. The default is [Disabled].

Un-Configure ME

Un-Configure ME without password. The default is [Disabled].

Amt Wait Timer

Set timer to wait before sending ASF_GET_BOOT_OPTIONS.

Disable ME

Set ME to Soft Temporary Disabled. The default is [Disabled].

ASF

Use this to enable or disable Alert Specification Format. The default is [Enabled].

Activate Remote Assistance Process

Trigger CIRA boot. The default is [Disabled].

USB Configure

Use this to enable or disable USB Configure function. The default is [Enabled].

PET Progress

User can enable or disable PET Events progress to receive PET events or not. The default is [Enabled].

3.3.7 Super IO Configuration

Aptio Setup Utility – C Advanced	opyright (C) 2012 American	Megatrends, Inc.
Super IO Configuration		Set Parameters of COM1
 COM1 Configuration COM2 Configuration COM3 Configuration COM4 Configuration COM5 Configuration COM6 Configuration 		
WDT Timeout Reset	[Disabled]	
		<pre>↔: Select Screen fl: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.15.1234. Con	yright (C) 2012 American Ma	egatrends. Inc.

COM1 Configuration

Use this to set parameters of COM1.

COM2 Configuration

Use this to set parameters of COM2.

COM3 Configuration

Use this to set parameters of COM3.

COM4 Configuration

Use this to set parameters of COM4.

COM5 Configuration

Use this to set parameters of COM5.

COM6 Configuration

Use this to set parameters of COM6.

WDT Timeout Reset

This allows users to enable/disable the Watch Dog Timer timeout to reset system. The default value is [Disabled].

3.3.8 ACPI Configuration

Aptio Setup Utility Advanced	– Copyright (C) 2012 Americ	can Megatrends, Inc.
Suspend to RAM Check Ready Bit ACPI HPET Table	[Auto] [Enabled] [Enabled]	Select disable for ACPI suspend type S1. It is recommended to select auto for ACPI S3 power saving.
PS/2 Keyboard Power On PCI Devices Power On Wake From Onboard LAN 2 RTC Alarm Power On USB Keyboard/Remote Power On USB Mouse Power On	[Disabled] [Disabled] [Disabled] [By OS] [Disabled] [Disabled]	
		<pre>↔: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit</pre>
Version 2.15.1234.	Copyright (C) 2012 American	ESC: Exit

Suspend to RAM

Use this item to select whether to auto-detector disable the Suspend-to- RAM feature. Select [Auto] will enable this feature if the OS supports it.

Check Ready Bit

Use this item to enable or disable the feature Check Ready Bit.

ACPI HPET Table

Use this item to enable or disable ACPI HPET Table. The default value is [Enabled]. Please set this option to [Enabled] if you plan to use this motherboard to submit Windows[®] certification.

PS/2 Keyboard Power On

Use this item to enable or disable PS/2 keyboard to turn on the system from the power-soft-off mode.

PCI Devices Power On

Use this item to enable or disable PCI devices to turn on the system from the power-soft-off mode.

Wake From Onboard LAN 2

Use this item to enable or disable the Wake From Onboard LAN 2 feature.

RTC Alarm Power On

Use this item to enable or disable RTC (Real Time Clock) to power on the system.

USB Keyboard/Remote Power On

Use this item to enable or disable USB Keyboard/Remote to power on the system.

USB Mouse Power On

Use this item to enable or disable USB Mouse to power on the system.

APC-3X19A User Manual

3.3.9 USB Configuration

USB Controller Intel USB3.0 Mode Legacy USB Support Legacy USB 3.0 Support	[Enabled] [Smart Auto] [Enabled] [Enabled]	Enable or disable all the USB ports.
	234. Copyright (C) 2012 Americ	<pre>↔: Select Screen ↑↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>

USB Controller

Use this item to enable or disable the use of USB controller.

Intel USB 3.0 Mode

Use this item to enable or disable the use of Intel USB 3.0 mode.

Legacy USB Support

Use this option to select legacy support for USB devices. There are four configuration options: [Enabled], [Auto], [Disabled] and [UEFI Setup Only]. The default value is [Enabled]. Please refer to below descriptions for the details of these four options:

[Enabled] - Enables support for legacy USB.

[Auto] - Enables legacy support if USB devices are connected.

[Disabled] - USB devices are not allowed to use under legacy OS and UEFI setup when [Disabled] is selected. If you have USB compatibility issues, it is recommended to select [Disabled] to enter OS.

[UEFI Setup Only] - USB devices are allowed to use only under UEFI setup and Windows / Linux OS.

Legacy USB 3.0 Support

Use this option to enable or disable legacy support for USB 3.0 devices. The default value is [Enabled].

Aptio Setu Advanced	up Utility – Copyright (C) 2012 Amer	rican Megatrends, Inc.
DRAM Voltage	[1.50V]	1.35V/1.50V
		<pre>↔: Select Screen 1↓: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>

3.3.10 Voltage Configuration

DRAM Voltage

Use this to select DRAM Voltage. The default value is [Auto].

3.4 Hardware Health Event Monitoring Screen

In this section, it allows you to monitor the status of the hardware on your system, including the parameters of the CPU temperature, motherboard temperature, CPU fan speed, chassis fan speed, and the critical voltage.

Aptio Setup Utility – Main Advanced H/W Monitor Boot	Copyright (C) 2012 American Security Exit	Megatrends, Inc.
Hardware Health Event Monitoring		Quiet Fan Function Control
CPU Temperature M/B Temperature	: 54 °C : 29 °C	
CPU_FAN1 Speed CHA_FAN1 Speed	: N/A : 2163 RPM	
Vcore + 3.30V + 5.00V + 12.00V	: +1.776 V : +3.376 V : +5.088 V : +11.985 V	
CPU_FAN1 Setting CHA_FAN1 Setting Over Temperature Protection Case Open Feature	[Full On] [Full On] [Disabled] [Disabled]	<pre> +→: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.15.1234. C	opyright (C) 2012 American M	egatrends, Inc.

CPU_FAN1 Setting

This allows you to set CPU fan 1's speed. Configuration options: [Full On] and [Automatic Mode]. The default value is [Full On].

CHA_FAN1 Setting

This allows you to set chassis fan 1's speed. Configuration options: [Full On] and [Automatic Mode]. The default value is [Full On].

Over Temperature Protection

Use this to enable or disable Over Temperature Protection. The default value is [Enabled].

Case Open Feature

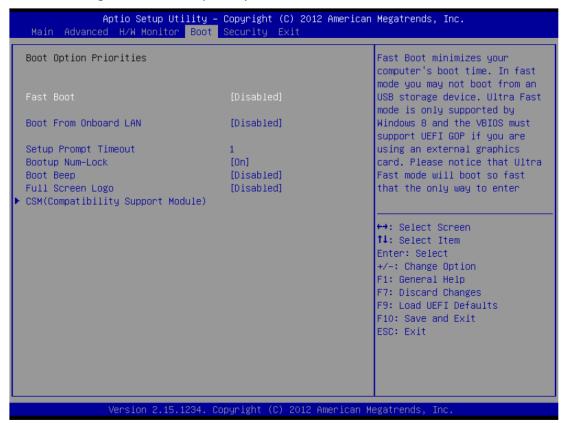
This allows you to enable or disable case open detection feature. The default is value [Disabled].

Clear Status

This option appears only when the case open has been detected. Use this option to keep or clear the record of previous chassis intrusion status.

3.5 Boot Screen

In this section, it will display the available devices on your system for you to configure the boot settings and the boot priority.



Fast Boot

Fast Boot minimizes your computer's boot time. There are three configuration options: [Disabled], [Fast] and [Ultra Fast]. The default value is [Disabled]. Please refer to below descriptions for the details of these three options: [Disabled] - Disable Fast Boot.

[Fast] - The only restriction is you may not boot by using an USB flash drive. [Ultra Fast] - There are a few restrictions.

- 1. Only supports Windows[®] 8 UEFI operating system.
- 2. You will not be able to enter BIOS Setup (Clear CMOS or run utility in Widows[®] to enter BIOS Setup).
- 3. If you are using an external graphics card, the VBIOS must support UEFI GOP in order to boot.

Boot From Onboard LAN

Use this item to enable or disable the Boot From Onboard LAN feature.

Setup Prompt Timeout

This shows the number of seconds to wait for setup activation key. APC-3X19A User Manual

65535(0XFFFF) means indefinite waiting.

Bootup Num-Lock

If this item is set to [On], it will automatically activate the Numeric Lock function after boot-up.

Boot Beep

Select whether the Boot Beep should be turned on or off when the system boots up. Please note that a buzzer is needed.

Full Screen Logo

Use this item to enable or disable OEM Logo. The default value is [Enabled].

AddOn ROM Display

Use this option to adjust AddOn ROM Display. If you enable the option "Full Screen Logo" but you want to see the AddOn ROM information when the system boots, please select [Enabled]. Configuration options: [Enabled] and [Disabled]. The default value is [Enabled].

CSM

Please disable CSM when you enable Fast Boot option. The default value is [Enabled].

CSM Launch PXE OpROM policy Launch Storage OpROM policy Launch Video OpROM policy	[Enabled] [Legacy only] (Legacy only]	Enable to launch the Compatibility Support Module.
	(Legacy only)	Please do not disable unless you're running a WHCK test. If you are using Windows 8 64-bit and all of your devices support UEFI, you may also disable CSM for faster boot speed.
		<pre>↔: Select Screen 14: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>

3.6 Security Screen

In this section, you may set, change or clear the supervisor/user password for the system.

Aptio Setup Utility – Copyright (C) 2012 American Megatrends, Inc. Main Advanced H/W Monitor Boot <mark>Security</mark> Exit		
Supervisor Password User Password	Not Installed Not Installed	Set or change the password for the administrator account. Only the administrator has
Supervisor Password User Password		authority to change the settings in the UEFI Setup Utility. Leave it blank and press enter to remove the
System Mode state Secure Boot state	Setup Disabled	password.
Secure Boot	[Disabled]	
		↔: Select Screen ↑↓: Select Item
		Enter: Select +/−: Change Option
		F1: General Help F7: Discard Changes F9: Load UEFI Defaults
		F10: Save and Exit ESC: Exit
Version 2.15.1234. C	opyright (C) 2012 American M	egatrends, Inc.

Secure Boot

Use this to enable or disable Secure Boot. The default value is [Disabled].

3.7 Exit Screen

Aptio Setup Utility – Copyright (C) 2012 American Main Advanced H/W Monitor Boot Security <mark>Exit</mark>	Megatrends, Inc.
Save Changes and Exit Discard Changes and Exit Discard Changes Load UEFI Defaults Launch EFI Shell from filesystem device	Exit system setup after saving the changes. F10 key can be used for this operation.
	<pre>↔: Select Screen f1: Select Item Enter: Select +/-: Change Option F1: General Help F7: Discard Changes F9: Load UEFI Defaults F10: Save and Exit ESC: Exit</pre>
Version 2.15.1234. Copyright (C) 2012 American Me	egatrends, Inc.

Save Changes and Exit

When you select this option, it will pop-out the following message, "Save configuration changes and exit setup?" Select [OK] to save the changes and exit the UEFI SETUP UTILITY.

Discard Changes and Exit

When you select this option, it will pop-out the following message, "Discard changes and exit setup?" Select [OK] to exit the UEFI SETUP UTILITY without saving any changes.

Discard Changes

When you select this option, it will pop-out the following message, "Discard changes?" Select [OK] to discard all changes.

Load UEFI Defaults

Load UEFI default values for all the setup questions. F9 key can be used for this operation.

Launch EFI Shell from filesystem device

Attempts to Launch EFI Shell application (Shell64.efi) from one of the available filesystem devices.

Chapter 4 Installation of Drivers

This chapter describes the installation procedures for software and drivers under the windows 7. The software and drivers are included with the motherboard. The contents include IntelR Q87 Chipset, Intel® VGA Chipset, Intel I210 & I217LM LAN Driver, Realtek_Audio Driver, USB 3.0 Driver, Touch Panel Driver, Com Driver, Intel Trusted Execution Engine Driver, and SmatConnect Installation instructions are given below.

Important Note:

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

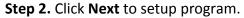


4.1 Intel Q87 Chipset Driver

To install the Intel chipset driver, please follow the steps below.

Step 1. Select Intel Q87 Chipset from the list



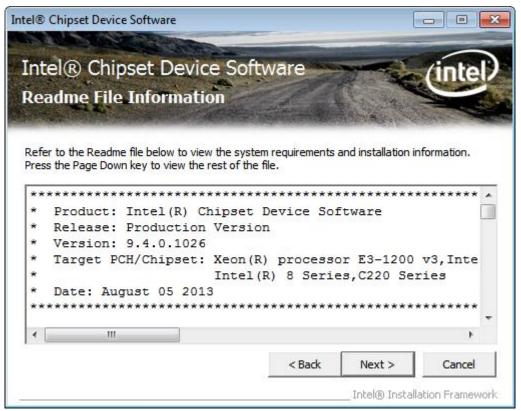


Intel® Chipset Device Software		3
Intel® Chipset Device Softw	ware	
Welcome to the Setup Program		
This setup program will install the Intel® Chipset strongly recommended that you exit all programs		
	< <u>Back</u> <u>Next ></u> <u>Cancel</u> Intel® Installation Framework	

Step 3. Read the license agreement. Click **Yes** to accept all of the terms of the license agreement.



Step 4. Click Next to continue.



Step 5. Click Next.



Step 6. Select **Yes, I want to restart this computer now**. Click **Finish**, then remove any installation media from the drives.



4.2 Intel[®] VGA Chipset Driver

To install the VGA drivers, follow the steps below to proceed with the installation. **Step 1**.Select **Intel(R) VGA Chipset Driver.**





Intel® Installation Framework	- • •	
Intel® Graphics Driver		
Welcome to the Setup Program	(intel)	
This setup program will install the following components: - Intel® Graphics Driver - Intel® Display Audio Driver		
It is strongly recommended that you exit all programs before continuing. Click Next to continue.		
☑ Automatically run WinSAT and enable the Windows Aero desktop theme (if s	upported).	
< Back Next > Intel® I	Cancel	

APC-3X19A User Manual

Step 3. Click Yes.

Intel® Installation Framework	- • ×
Intel® Graphics Driver	
License Agreement	intel
You must accept all of the terms of the license agreement in order to continue program. Do you accept the terms?	the setup
INTEL SOFTWARE LICENSE AGREEMENT (OEM / IHV / ISV Distribution & Single IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING. Do not use or load this software and any associated materials (collectively, th until you have carefully read the following terms and conditions. By loading or Software, you agree to the terms of this Agreement. If you do not wish to so install or use the Software.	e "Software") using the
* If you are an Original Equipment Manufacturer (OEM), Independent Hardwa (IHV), or Independent Software Vendor (ISV), this complete LICENSE AGREEN * If you are an End-User, then only Exhibit A, the INTEL SOFTWARE LICENSE	IENT applies;
<back td="" yes<=""><td>No No</td></back>	No No

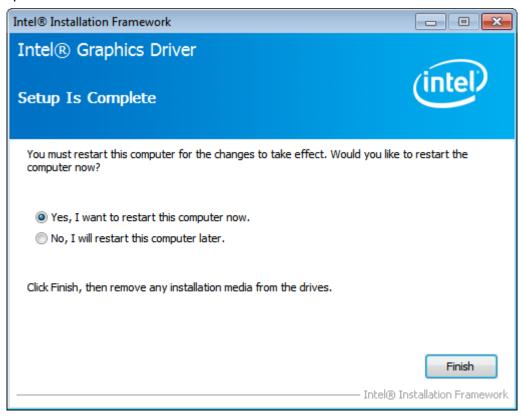
Step 4. Click Next to continue.

Intel® Installation Framework		- • •
Intel® Graphics Driver		
Readme File Information		(intel)
Refer to the Readme file below to view the system	m requirements and installation	information.
README FILE Release Version: Production Version Driver Version: 15.33.1.3277		•
Operating System(s): Microsoft Windows* 7 Microsoft Windows* 8 Microsoft Windows* 8.1		Ŧ
	<back next=""> Intel® Int</back>	Cancel

Step 5. Click Next to continue.

Intel® Installation Framework	
Intel® Graphics Driver	(intel)
Setup Progress	inter
Please wait while the following setup operations are performed:	
Copying File: C: \Windows\system32\difxapi.dll Deleting Registry Key: HKLM\SOFTWARE\Microsoft\Windows\Curro Deleting Registry Key: HKLM\SOFTWARE\Intel\IGDI Deleting File: C: \ProgramData\Microsoft\Windows\Start Menu\Prog Deleting File: C: \ProgramData\Microsoft\Windows\Start Menu\Prog Deleting File: C: \ProgramData\Microsoft\Windows\Start Menu\Prog Deleting File: C: \Users\Public\Desktop\Intel(R) HD Graphics Contro Deleting File: C: \Users\Public\Desktop\Intel(R) Graphics and Media Deleting File: C: \Users\Public\Desktop\Intel(R) Iris(TM) Graphics Contro Deleting File: C: \Users\Public\Desktop\Intel(R) Iris(TM) Graphics Contro Click Next to continue.	grams\Intel\Intel(R) HD Grap grams\Intel(R) HD Graphics grams\Intel(R) Graphics and I Panel.Ink Control Panel.Ink grams\Intel\Intel(R) Iris(TM)
•	4
	Next >
	— Intel® Installation Framework

Step 6. Select **Yes, I want to restart this computer now,** and then click **Finish** to complete the indtallation.



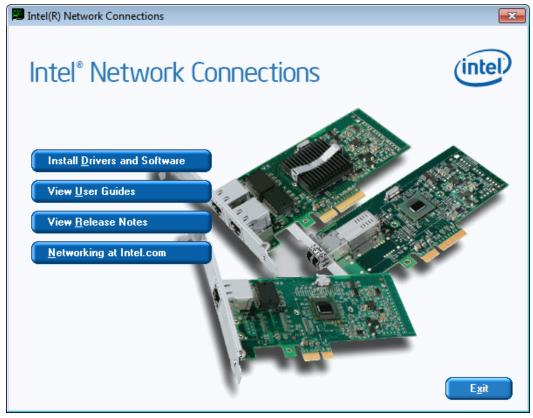
4.3 Intel I210 & I2127LM LAN Driver

To install the Intel I210 & I217LM LAN Driver, please follow the steps below.

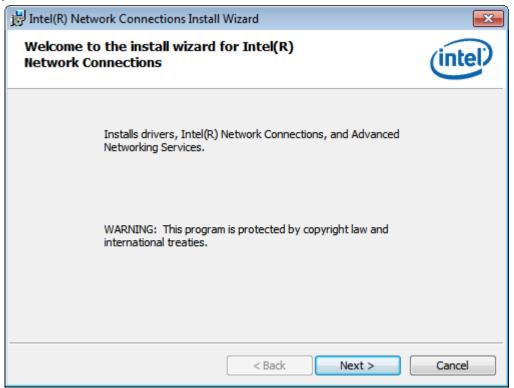
Step 1. Select Intel I210 & I217LM LAN Driver from the list.



Step 2. Click Install Drivers and Software to continue.



Step 3. Click Next to continue



Step 4. Read the License Agreement, and select **I accept the terms in the license agreement.** Click **Next** to continue.

🔡 Intel(R) Network Connections Install Wizard	×	
License Agreement Please read the following license agreement carefully.	(intel)	
INTEL SOFTWARE LICENSE AGREEMENT IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING.		
Do not copy, install, or use this software and any associated materials (collectively, the "Software") provided under this license agreement ("Agreement") until you have carefully read the following terms and conditions. By copying, installing, or otherwise using the Software, you agree to be bound by the terms of this Agreement. If you do not agree to the terms of this Agreement,		
I accept the terms in the license agreement I do not accept the terms in the license agreement	Print	
< Back Next >	Cancel	

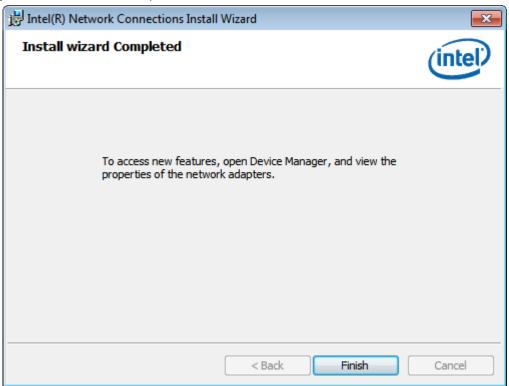
Step 5. Select the program features you want installed. Click Next to continue.

Intel(R) Network Connections	— ×
Setup Options Select the program features you want installed.	(intel)
Install:	
Drivers Intel(R) PROSet for Windows* Device Manager Advanced Network Services Intel(R) Network Connections SNMP Agent	
Feature Description Drivers for all wired Intel Network Connections	
< Back Next >	Cancel

Step 6. Click Install to begin the installation.

HINTEL (R) Network Connections Install Wizard	X
Ready to Install the Program The wizard is ready to begin installation.	(intel)
Click Install to begin the installation.	h Consulta
If you want to review or change any of your installation settings, click Back. Clic exit the wizard.	k Cancel to
< Back Install	Cancel

Step 6. Click Finish to complete the installation.



4.4 Realtek_Audio Driver

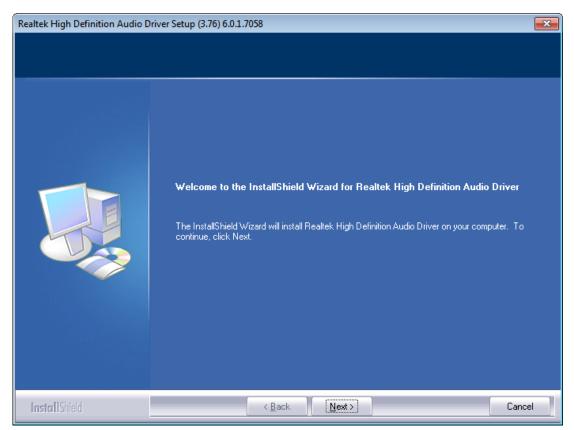
To install the Realtek_Audio Driver, please follow the steps below.

Step 1. Select Realtek_Audio Driver from the list

Drivers CD Industrial Pa WIN7	- DRIVER
	RS IntelR Q87 Chipsel Chipset Intel(R) VGA Chipset Intel I210 & I217LM LAN Driver Realtek_Audio Driver USB 3.0 Driver Touch Panel Driver Com Driver Intel Trusted Execution Engine Driver SmartConnect Driver
OTHER	S User Manual
	View EXIT

APC-3X19A User Manual

Step 2. Click Next to continue.



Step 3. Select **Yes, I want to restart my computer now.,** and then click **Finish** to complete installation.

Realtek High Definition Audio Dri	ver Setup (3.76) 6.0.1.7058
	InstallShield Wizard Complete The InstallShield Wizard has successfully installed Realtek High Definition Audio Driver. Before you can use the program, you must restart your computer. • Yes, I want to restart my computer now. • No, I will restart my computer later. Remove any disks from their drives, and then click Finish to complete setup.
InstallShield	< Back Finish Cancel

APC-3X19A User Manual

4.5 USB 3.0 Driver

To install the USB 3.0 Driver, please follow the steps below. **Step 1.** Select **USB 3.0 Driver** from the list.

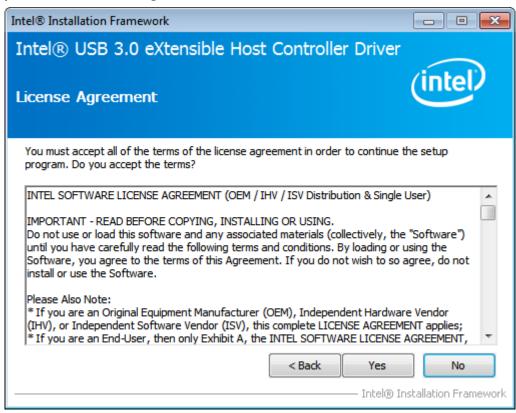




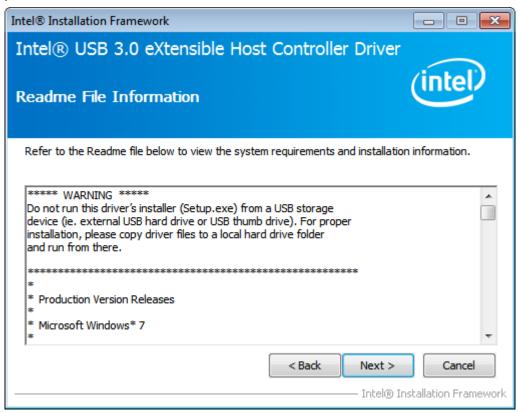
Intel® Installation Framework	
Intel® USB 3.0 eXtensible Host Controller Driver Welcome to the Setup Program	(intel)
This setup program will install the following components: • Intel® USB 3.0 eXtensible Host Controller Driver • Intel® USB 3.0 Hub Driver • Intel® USB 3.0 Host Controller Switch Driver • Intel® USB 3.0 Monitor Click Next to continue.	
< Back Next >	Cancel stallation Framework

APC-3X19A User Manual

Step 3. Read the license agreement and click Yes to continue.



Step 4. Click Next to continue.



Step 5. Click Next to continue

ntel® Installation Framework	
Intel® USB 3.0 eXtensible Host Controller Drive Setup Progress	intel
Please wait while the following setup operations are performed: Copying File: C:\Program Files\Intel\Intel(R) USB 3.0 eXtensible Host Control Copying File: C:\Program Files\Intel\Intel(R) USB 3.0 eXtensible Host Control Creating Registry Key: HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion Click Next to continue. III	ler Driver Vapplica ler Driver Vapplica ler Driver Vapplica ler Driver Vapplica ler Driver Vapplica ler Driver Vapplica ler Driver Vapplica
Intel®	Next >

Step 6. Select **Yes, I want to restart this computer now.**, and then click **Finish** to complete the installation.

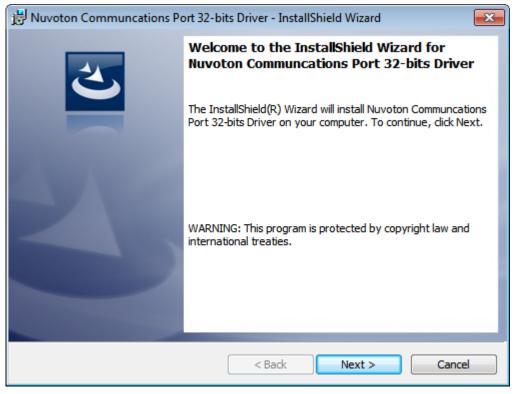


4.6 Com Driver

To install the Com Driver, please follow the steps below. **Step 1.** Select **Com Driver** from the list.



Step 2. Click Next to continue.



APC-3X19A User Manual

Step 3. Click install to begin the installation.

😥 Nuvoton Communcations Port 32-bits Driver - InstallShield Wizard		
Ready to Install the Program		
The wizard is ready to begin installation.		
Click Install to begin the installation.		
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.		
InstallShield		
< Back Install Cancel		

Step 4. Click Finish to complete the installation.

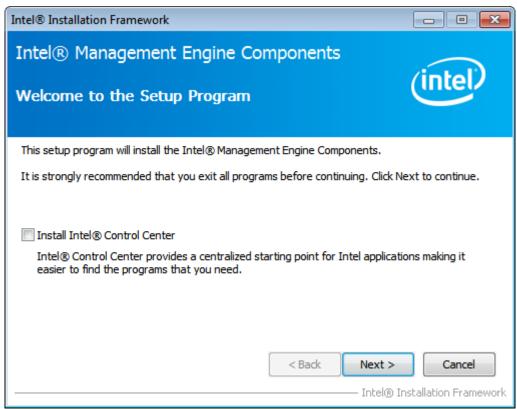


4.7 Intel Trusted Execution Engine Driver

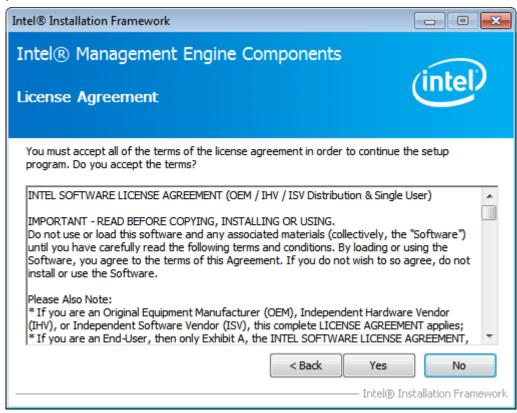
To install the Intel Trusted Execution Engine Driver, please follow the steps below. **Step 1.** Select **Intel Trusted Execution Engine Driver** from the list.







Step 3. Click Yes to continue.



Step 4. Click Next to continue.

s (intel)
Engine Components\FWService e Components\FWService\Inte e Components\FWService\Inte Engine Components\FWService Engine Components\FWService Engine Components\FWService
•

Step 5. Select **Yes, I want to restart this computer now.** then click **Finish** to complete the installation.



4.8 SmartConnect Driver

To install the SmartConnect Driver, please follow the steps below.



Drivers CD Industrial Pa WIN7 -	DRIVER
DRIVER	 IntelR Q87 Chipsel Chipset Intel(R) VGA Chipset Intel I210 & I217LM LAN Driver Realtek_Audio Driver USB 3.0 Driver Touch Panel Driver Com Driver Intel Trusted Execution Engine Driver SmartConnect Driver
OTHER	S User Manual
	View

APC-3X19A User Manual

Step 2. Click Next to continue.

🔁 Intel(R) Smart Connect Technology Setup			
intel	Welcome to the Intel(R) Smart Connect Technology Setup Wizard Please wait while the Setup Wizard prepares to guide you through the installation.		
	Back Next Cancel		





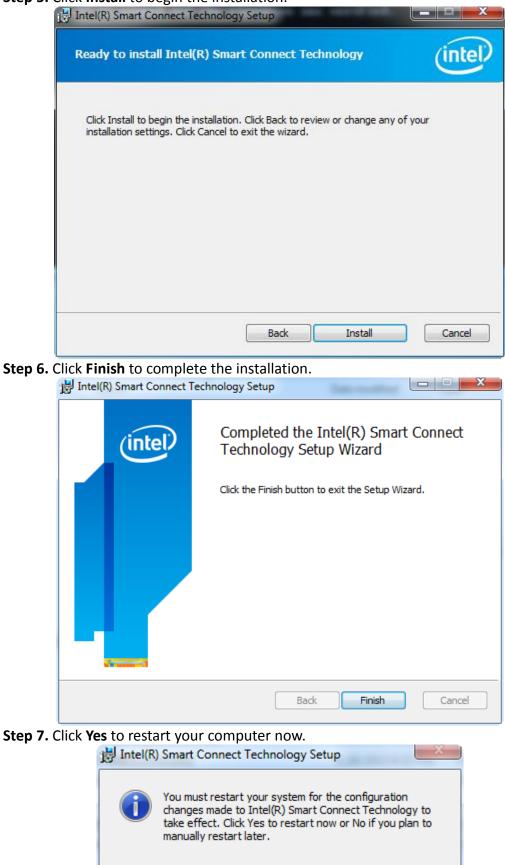
Step 3. Click Next to continue.

🔂 Intel(R) Smart Connect Technology Setup	x
End-User License Agreement Please read the following license agreement carefully	el
INTEL® Smart Connect Technology SOFTWARE LICENSE AGREEMENT (Single User)	•
IMPORTANT - READ BEFORE COPYING, INSTALLING OR USING. DO NOT INSTALL, USE OR LOAD THIS SOFTWARE (DEFINED BELOW) UNTIL YOU HAVE CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS. BY INSTALLING, USING OR LOADING THE SOFTWARE, YOU AGREE TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT WISH TO SO AGREE, DO NOT INSTALL, USE OR LOAD THE SOFTWARE.	
"Software" means any computing programming code and any associated materials that are provided in connection with, under, or subject to this	Ŧ
✓ I accept the terms in the License Agreement	
Print Back Next Cance	2

Step 4. Select the way you want features to be installed. Then click Next to continue.

Intel(R) Smart Connect Technology Setup		
Custom Setup Select the way you want features to be installed	intel	
Click the icons in the tree below to change the way features will be installed.		
ISCT Agent	This feature requires 2956KB on your hard drive.	
Reset Disk Usage	Back Next Cancel	

Step 5. Click Install to begin the installation.



Yes

No

APC-3X19A User Manual

Chapter 5 Touch Screen Installation

This chapter describes how to install drivers and other software that will allow your touch screen work with different operating systems.

5.1 Windows 7/8.1 Universal Driver Installation for

PenMount 6000 Series

Before installing the Windows 7/8.1 driver software, you must have the Windows 7/8.1 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.

5.1.1 Installing Software(Resistive Touch)

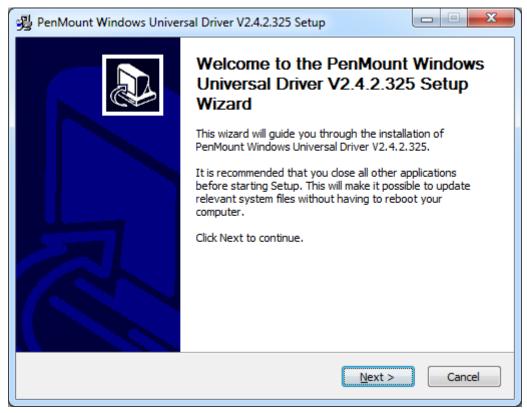
If you have an older version of the PenMount Windows 7 driver installed in your system, please remove it first. Follow the steps below to install the PenMount DMC6000 Windows 7 driver.

Step 1. Insert the product CD, the screen below would appear. Click **Touch Panel Driver** from the list.



APC-3X19A User Manual

Step 2. Click Next to continue.



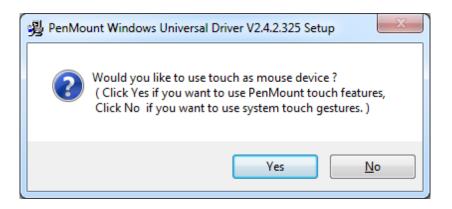
Step 3. Read the license agreement. Click I Agree to agree the license agreement.

PenMount Windows Universal Driver V2.4.2.325 Setup		
License Agreement Please review the license terms before installing PenMount Windows Universal Driver V2.4.2.325.		
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 equipment which does not utilize an PenMount touch screen controller 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 V2.4.2.325.		
Nullsoft Install System v2.46		

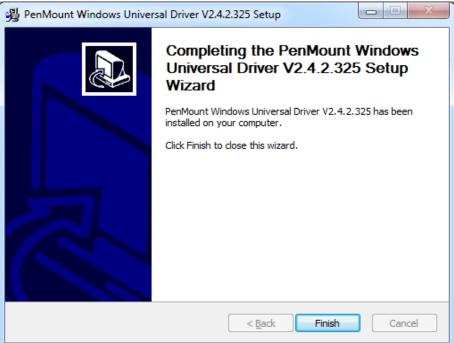
Step 4. Choose the folder in which to install PenMount Windows Universal Driver. Click **Install** to start the installation.

😼 PenMount Windows Universal Driver V2.4.2.325 Setup
Choose Install Location Choose the folder in which to install PenMount Windows Universal Driver V2.4.2.325.
Setup will install PenMount Windows Universal Driver V2.4.2.325 in the following folder. To install in a different folder, dick Browse and select another folder. Click Install to start the installation.
Destination Folder C:\Program Files (x86)\PenMount Windows Universal Driver Browse
Space required: 0.0KB Space available: 136.8GB
Nullsoft Install System v2.46

Step 5. Click **Yes** if you want to use penMount touch features, Click **No** if you want to use system touch gestures.



Step 6. Click Finish to complete the installation.

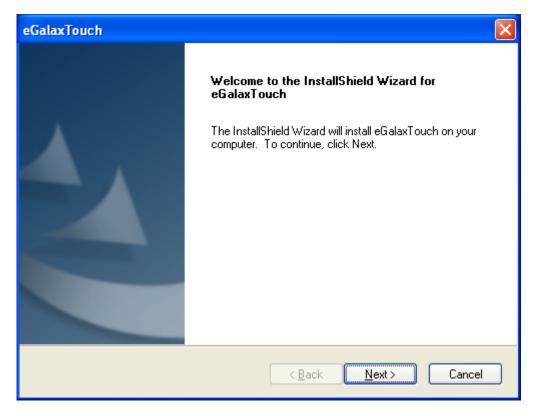


5.1.2 Installing Software(Projected Capacitive)

Step 1. Insert the product CD, the screen below would appear. Click **Touch Panel Driver** from the list.



Step 2. Click Next to continue.



Step 3. Select I accept the terms of the license agreement. Click Next.

eGalaxTouch
License Agreement
Please read the following license agreement carefully.
Declaration and Disclaimer
The programs, including but not limited to software and/or firmware (hereinafter referred to "Programs" or "PROGRAMS"), are owned by eGalax_eMPIA Technology Inc. (hereinafter referred to EETI) and are compiled from EETI Source code. EETI hereby grants to licensee a personal, non-exclusive, non-transferable license to copy, use and create derivative works of Programs for the sole purpose in conjunction with an EETI Product, including but not limited to integrated circuit and/or controller. Any reproduction, copies, modification, translation, compilation, application, or representation of Programs except as specified above is prohibited without the express written permission by EETI.
I do not accept the terms of the license agreement
< <u>Back</u> <u>Next</u> > Cancel

Step.4. Click Next to continue.

eGalaxTouch
Setup Type Select the setup type that best suits your needs.
Extra PS/2 interface driver for eGalaxTouch controller. Please check the check box for PS/2 touch controller.
InstallShield

Step 5. Click Install RS232 interface driver. Then click Next to continue.

eGalaxTouch	×
Setup Type Select the setup type that best suits your needs.	
Extra RS232 interface driver for eGalaxTouch controller. Please check the check box for RS232 touch controller.	
Install RS232 interface driver	
InstallShield	
< <u>B</u> ack <u>N</u> ext > Cancel]

Step 6. Select None. Click Next.

eGalaxTouch	
Setup Type Select the setup type that best suits your needs.	
Do 4 point calibration after system reboot	
O Every system boot up	
O Next system boot up	
⊙ None	
InstallShield	
< <u>B</u> ack	Next > Cancel

Step 7. Click OK to continue.

eGalaxT	ouch - InstallShield Wizard 🛛 🛛 🔀
(į)	If you are trying to install the USB touch device, please make sure that your touch monitor or touch controller's USB cable is plugged into the computer now. Please close the "Found New Hardware Wizard" dialog when it appears.
	ОК

Step 8. Click Support Muti-Monitor System. Click Next.

eGalaxTouch	×
Setup Type Select the setup type that best suits your need	ls.
If you want to use Multi-Monitor, please check	the box.
Support Multi-Monitor System	
InstallShield	
	< <u>B</u> ack <u>N</u> ext > Cancel

APC-3X19A User Manual

Step 9. Go to C:\Program Files\eGalaxTouch. Click Next.

eGalaxTouch	×
Choose Destination Location Select folder where setup will install files.	
Setup will install eGalaxTouch in the following folder.	
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.	
C Destination Folder	1
C:\Program Files\eGalaxTouch Browse	
InstallShield	
< <u>B</u> ack Next> Cancel	

Step 10. Click Next.

eGalaxTouch	×
Select Program Folder Please select a program folder.	
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing folders list. Click Next to continue. Program Folder: EgalaxTouch Existing Folders: Administrative Tools Games Startup	
InstallShield <u>Kack N</u> ext > Cancel	

Step 11. Click **Create a eGalaxTouch Utility shortcut on desktop**. Click **Next**.

eGalaxTouch	×
Setup Type Select the setup type that best suits your needs.	
Select the features you want to install, and deselect the features you do not want to install. Click Next to continue.	
Create a eGalaxTouch Utility shortcut on desktop	
InstallShield <u>Back</u> Cancel]

Step 12. Wait for installation.

eGalaxTouch	\mathbf{X}
Setup Status	
eGalaxTouch is configuring your new software installation.	
C:\Program Files\eGalaxTouch\msvcrt.dll	
InstallShield	
	Cancel

Step 13. Click Yes to do 4 point calibration.

Question	n 🖂
?	The eGalaxTouch driver has been installed, before operating touch function, please do 4 point calibration. Would you do 4 point calibration now ? Yes <u>No</u>

5.2 Software Functions(Resistive Touch)

5.2.1 Software Functions(Resistive Touch)

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 be detected on your system.

📲 PenM	ount Control Panel	
Device	Multiple Monitors Tools About	
	ct a device to configure.	
Pen	Mount 10 USB	
	Configure Refresh	
		ок

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 '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'.

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

🏭 PenMount Control Panel	
Device Multiple Monitors Tools About	
Select a device to configure.	_
PenMount 6000 USB	
Configure Refresh	
0	к 📗

Step 2. Click "Standard Calibration" to start calibration procedure

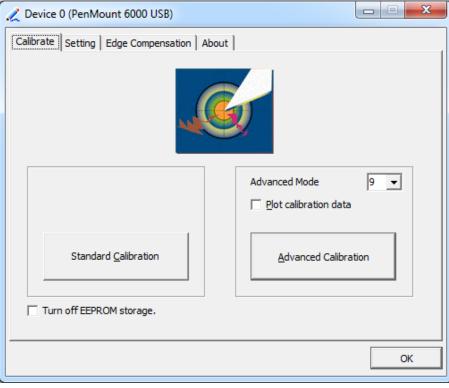
🖉 Device 0 (PenMount 6000 USB)	
Calibrate Setting About	
G	
Standard <u>C</u> alibra	stion
Turn off EEPROM storage.	
Turn off EEPROM storage.	
Turn off EEPROM storage.	[ОК
	[ОК
Turn off EEPROM storage.	<u>ок</u>
	<u>OK</u>
	2
1	2

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:

Step 3.Come back to "PenMount Control Panel" and select **Tools** then click **Advanced Calibration**.

🍓 PenMount Control Panel		
Device Multiple Monitors Tools	About	
Draw	Test by drarwing on the touch screen Turn ON/OFF Advanced Calibration Mode	
Right Button Icon	Show/Hide the icon for switching buttons Desktop O System Tray	S S
	Back to Defaul <u>t</u>	ок

Step 4. 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	The function disable for calibration data to write in
storage	Controller. The default setting is Enable.

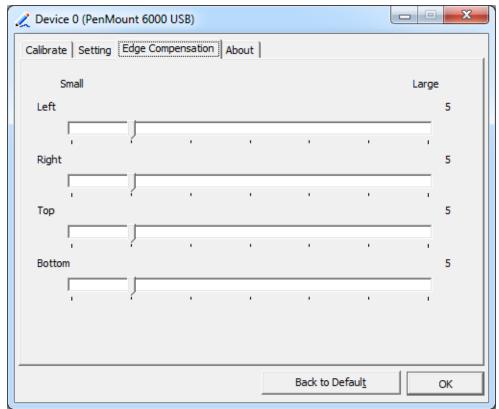
Setting

r		
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 mouse only provides a	
	click function, and dragging is disables.	
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	You can set the time out and area for you need.	
hold as right click		

🟒 Device 0 (PenMount 6000 US	B)	
Calibrate Setting Edge Compen	sation About	
Operation Mode	Mouse Emulation	
Beep Sound	Kind of Sound	Buzzer Beep 💌
Beep Mode Beep on pen d <u>o</u> wn C Beep on pen <u>up</u> C Beep on both	Beep Frequency Beep Duration	1000 Hz 100 ms
Cursor Stabilizer You can use Cursor Stabilizer to remove jitter of cursor.	Use press and hold as right Delay:	click 2.0 sec
	Back to Defa	и <u>т</u> ок

Edge Compensation

You can use Edge Compensation to calibrate more subtly.



About

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

🟒 Device 0 (PenMc	ount 6000 USB)		J
Calibrate Setting	Edge Compensation About		
6	PenMount 6000 USB (10-bit) Driver Version	2.4.2	
-	Firmware Version	6000.6.0.0	
	Firmware Config Data	2,36864,852,32,7,500,12	
		ОК	

Multiple Monitors

Multiple Monitors support from two to six touch screen displays for one system. The PenMount drivers for Windows 7/8.1 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 USB interface. Driver installation procedures are the same as for a single monitor. Multiple Monitors support the following modes:

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

NOTE: The Multiple Monitor 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 **Enable Multiple Monitor Support** box; then click **Map Touch Screens** to assign touch controllers to displays.

📽 PenMount Control Panel	
Calibrate Draw Multiple Monitors Option About	
	ОК

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

📲 PenMount Control Panel	
Calibrate Draw Multiple Monitors Option About	
Enable Multiple Monitor Support DonN Mapping Please touch the panel as indicated in the following	X screens.
ОК	ОК

3. Touch each screen as it displays "Please touch this monitor". Following this sequence and touching each screen is called mapping the touch screens.



- 4. Touching all screens completes the mapping and the desktop reappears on the monitors.
- 5. Select a display and execute the "Calibration" function. A message to start calibration appears. Click **OK**.



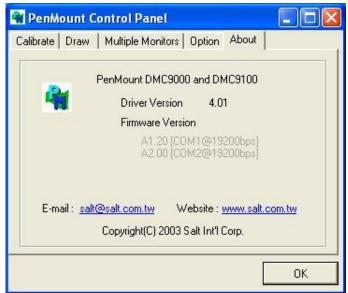
- 6. "Touch this screen to start its calibration" appears on one of the screens. Touch the screen.
- 7. "Touch the red square" messages appear. Touch the red squares in sequence.
- 8. Continue calibration for each monitor by clicking **Standard Calibration** and touching the red squares.

NOTES:

- 1. If you use a single VGA output for multiple monitors, please do not use the **Multiple Monitor** 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 Monitor 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.

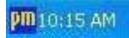
About

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

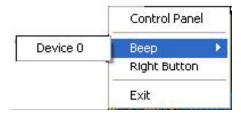


PenMount Monitor Menu Icon

The PenMount monitor icon (PM) appears in the menu bar of Windows 7/8.1 system when you turn on PenMount Monitor in PenMount Utilities.



PenMount Monitor has the following function



Control Panel	Open Control Panel Windows
Веер	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 unctions.
Exit	Exits the PenMount Monitor 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.

Please touch ti	he point		

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

5.2.2 Software Functions(Projected Capacitive)

General

In this window, you can see there is USB Controller. Click **OK** to continue.

😪 eGalaxTouch : USB Controller	×
General Setting Tools Display Hardware About	
Installed Touchscreen Controllers	
Q	_
USB Controller	
Monitor	
Mapping Add Remove	8
	_
OK Cancel	Apply

Monitor Mapping

to adjust touch panel

Add

to search for device

Setting

🖻 eGalaxTouch : USB Controller	$\mathbf{\times}$
General Setting Tools Display Hardware About	
Beep Frequency ✓ Beep On Touch	
Linearization Style © 9 Points © 25 Points	
Double Click Time Shorter<	
Double Click Area Smaller<	
Normal Mode Option	
OK Cancel Apply	

Веер

- Beep On Touch
- Beep On Release
- Beep From System Beep
- Beep From Sound Card

Linearization Style

- 9 points
- 25 points

Double Click Time

Shorter

Longer

Double Click Area

Smaller

Bigger

Normal mode

Simulate the mouse mode

Option	×
Option	
Function ✓ Enable Constant Touch ✓ Enable Auto Right Click ✓ Enable Touch ✓ Enable Cursor Stabilization Constant Touch Area	
Smaller<<	
Auto Right Click Time	
Shorter<< >>Longer	
OK Cancel Apply	

Option

Function Enable Constant Touch Enable Auto Right Click Enable Touch Enable Cursor Stabilization Constant Touch Area Auto Right Click Time

Tools

Click **OK** to continue the settings.

🖻 eGalaxTouch : USB Controller 🛛 🔀					
General Setting Tools Display Hardware About					
	Linearization Curve				
	4 Points Calibration				
	Clear and Calibrate	Clear linearization parameter and do 4 points alignment.			
	Linearization	Do 9 points linearization for better touchscreen linearity.			
	Draw Test	Do draw test to verify the touch accuracy.			
OK Cancel <u>A</u> pply					

4 Points Calibration

Do 4 points alignment to match display.

Clear and Calibrate

Clear linearization parameter and do 4 points alignment.

Linearization

Do 9 points linearization for better touchscreen linearity.

Draw Test

Do draw test to verify the touch accuracy.

Display

In this window, it shows the mode of display.

🖻 eGalaxTouch : USB Controller	×
General Setting Tools Display Hardware About	
Display	
Double click on the monitor area to map the touchscreen to the display monitor. I Enable Multiple Monitors.	
Map to main display if system has only one display monitor.	
Operation Mode	
Full Screen C Lower Screen C Left Screen	
C Upper Screen C Right Screen Other	
OK Cancel <u>A</u> pply	

Enable Multiple Monitors.

Map to main display if system has only one display monitor

Full Screen Lower Screen Left Screen Upper Screen Right Screen

Other		
Other Active Area		
Other		
C Quarter 1	C Quarter 3	C Customized
C Quarter 2	C Quarter 4	
└── Customized Area800 × 4	80	
Left 0	Тор	
Right 800	Bottom 480	
Drag W	/orking Area	
	OK	Cancel Apply

Other

Other mode of display. Quarter1~4 and Customized area.

Other		
Other Active Area		
- Active Area		
Enable The Active Are	a Function.	
Active Area List	Left 0	Тор
1 -	Right 0	Bottom 0
Drag Active Are	a	
	OK	Cancel Apply

Active Area

Drag active area to enable Active Area Function.

Hardware

🖻 eGalaxTouch : USB Controller 🛛 🔀
General Setting Tools Display Hardware About
Controller Model PCAP7200 Series
Firmware Version 1030
Hardware Calibration
OK Cancel Apply

Saturn Hardware Configuration

Saturn - Hardware Configuration		
Saturn		
Saturn - Hardware Configuration		
Sensitivity 128		
Delay Time 800 us Shorter<		
Reset all of the control parameters to factory default setting.		
OK Cance	:1	

About

To display information about eGalaxTouch and its version.

🖻 eGalaxTouch : U	SB Controller	×
General Setting To	ols Display Hardware About	
	Touch Screen Utility	
	Copyright (C) 2000-2011	
eGalaxTouch	eGalax_eMPIA_TechnologyInc.	
	Version 5.11.0.9126	
	ange of controllers for	
The resistive contro through RS232, PS	oller communicates with the PC system directly i/2 or USB port.	
	ized for an accurate, sensitive and quick touch II as an ease of use interface.	
	a set of operating systems, 00 / Windows(R)XP , Windows Vista(R), Wind	
	~	
<		
	OK Cancel <u>App</u> l	y