

## PPC-MB-8260AE Mini-ITX Motherboard with Intel® Core™ i7/i5/i3/Pentium®/Celeron® LGA 1151 CPU, DP/VGA, 5 COM, 6 USB, Dual LAN, PCIe x4, and Mini PCIe Startup Manual

### Packing List

Before card installation, please ensure that the following items have been included in your shipment:

- 1 x PPC-MB-8260AE mini-ITX motherboard
- 4 x COM cables (2 x 5-pin cables)
- 1 x SATA cable
- 1 x PPC-MB-8260AE startup manual
- 1 x Warranty card
- 1 x Thermal grease
- 14 x COM port screws
- 1 x Mini PCIe packet screws

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

**Note 1:** For detailed PPC-MB-8260AE specifications, refer to the latest product information provided on the Advantech website (PPC-61X1C model).

**Note 2:** Acrobat Reader is required to view PDF files.The Acrobat Reader software can be downloaded from [www.adobe.com/Products/acrobat/readstep2.html](http://www.adobe.com/Products/acrobat/readstep2.html) (Acrobat is a trademark of Adobe).

For more information about this or other Advantech products, visit our website at

<http://www.advantech.com>

For technical support and service, visit our support website at

<http://support.advantech.com>

This manual is for PPC-MB-8260AE, Rev. A1.

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Printed in China

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### Specifications

Selected M/B	PPC-MB-8260AE						
CPU	CPU	KBL	i7-7700	i5-7500	i3-7101E	/	/
		SKL	i7-6700TE	i5-6500TE	i3-6100TE	Pentium G4400 TE	Celeron G3900 TE
	Core #	Quad Core	Quad Core	Dual Core	Dual Core	Dual Core	
	Max. Speed	KBL	3.6 GHz (up to 4.2 GHz)	3.4 GHz (up to 3.8 GHz)	3.9 GHz	/	/
		SKL	2.4 GHz (up to 3.4 GHz)	2.3 GHz (up to 3.3 GHz)	2.7 GHz	2.4 GHz	2.3 GHz
L3 Cache	KBL	8M	6M	4M	/	/	
	SKL			3M	3M	2M	
TDP	KBL	65W	65W	54W	/	/	
	SKL	35W	35W	35W	35W	35W	
Chipset	Intel® H110						
Memory	1 x 260-pin SODIMM DDR4, 2133 MHz (up to 16 GB)						
Network (LAN)	2 x 10/100/1000 Mbps Ethernet, 2 x Intel® I211						
I/O Port	1 x RS232/422/485, 1 x RS232 1 x DP 1 x VGA 4 x USB 3.0 1 x Line-Out, 1 x Mic-In						
Internal Connector	3 x RS232 1 x GPIO (8 channels) 1 x Speaker connector 1 x LED connector 2 x USB 2.0 1 x LVDS connector 1 x Touch connector 2 x SATA connector						
Watchdog Timer	255 timer intervals, configurable using software						
Expansion	1 x Full-size mSATA or mini PCIe, 1 x PCIe x4 slot						
Dimensions	170 x 170 mm (6.69 x 6.69")						
Operating System	Microsoft® Windows 7 (32/64 bit), Windows 8.1 (64 bit), Windows 10 (64 bit*)						

\*Kaby lake processors only support Windows 10 (64 bit)

## Jumpers and Connectors

The PPC-MB-8260AE motherboard features a number of jumpers that allow users to configure the system according to specific applications. The functions of each jumper and connector are listed in the table below.

### Connectors and Headers

Connectors and Headers List	
Label	Function
CN2	Mic-In/Line-Out connector
LAN2_USB1	RJ45+USB 3.0 stack connector
LAN1_USB1	RJ45+USB 3.0 stack connector
VGA1	VGA display connector
DP1	DisplayPort connector
CN1	COM 1/2 connector
DCIN1	Power input connector
ATX12v1	ATX 12V power supply connector
ATX_5Vsb1	ATX 5VSB power supply connector
CN5	Power button bonnector
CN6 ~ 8	COM 5/4/3 connector
CN11	General purpose I/O pin header
BAT1	Battery connector
SPI1	SPI BIOS flash socket
CN16	Touch connector
CN17	LVDS panel connector
CN20	LVDS backlight inverter power connector
Sysfan1 ~ 2	System fan power connector
CPUFAN1	CPU fan power connector
CN18 ~ 19	SATA power connector
SATA1 ~ 2	SATA signal connector
CN4	Power LED connector
CN9/CN12	2 x USB 2.0 pin header
PClex4_1	PCIe x4 slot connector
AMP1	Audio amplifier output connector
DIMMA1	DDR4 SODIMM socket
CPU1	CPU socket
Mini-PCIe1	MSATA and mini PCIe socket

## Jumpers and Connectors (Cont.)

### ATX\_5Vsb1: ATX 5VSB Power Supply Connector

Pin	Definition
1	+V5SB
2	GND
3	PSON

### CN1: COM 2 Connector

Pin	Definition (RS232)	Definition (RS422)	Definition (RS485)
1	DCD	TX-	TX-
2	RXD	TX+	TX+
3	TXD	RX+	
4	DTR	RX-	
5	GND		
6	DSR		
7	RTS		
8	CTS		
9	RI		

### CN6 ~ 8: COM 5/4/3 Connector

Pin	Definition
1	DCD
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	RI
10	NA

### CN11: General Purpose I/O Pin Header

Pin	Definition
1	GND
2	GPIO4
3	GPIO0

## Jumpers and Connectors (Cont.)

4	GPIO5
5	GPIO1
6	GPIO6
7	GPIO2
8	GPIO7
9	GPIO3
10	+V5

### CN16: Touch Connector

Pin	Definition
1	Y+
2	X+
3	SENSE
4	Y-
5	X-

### Sysfan 1 ~ 2: System Fan Power Connector

Pin	Definition
1	GND
2	POWER
3	SPEED
4	PWM

### CPUFAN1: CPU Fan Power Connector

Pin	Definition
1	GND
2	POWER
3	SPEED
4	PWM

### CN18 ~ 19: SATA Power Connector

Pin	Definition
1	+V3.3
2	GND
3	+V5
4	GND
5	+V12

## Jumpers and Connectors (Cont.)

### CN4: Power LED Connector

Pin	Definition
1	+V5_DUAL
2	+V5
3	GND
4	GND

### AMP1: Audio Amplifier Output Connector

Pin	Definition
1	SPK L-
2	SPK L+
3	SPK R+
4	SPK R-

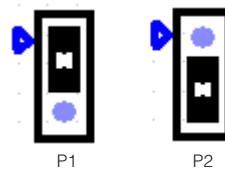
## Jumper Settings

### Jumpers List

Jumper	Function
JP1	ATX/AT select
JCMOS1	RTC select
JP2	Touch power select
JP3	LCD power select
JP4	Enable power select
JP5	LVDS PWM power select
JP6	COM Pin 9 power select (COM 1 and 2)
JP7	LVDS resolution select

### ATX/AT Select (JP1)

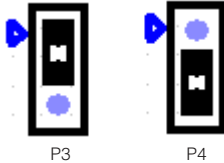
(1-2) P1	AT
(2-3) P2	ATX (default)



## Jumpers and Connectors (Cont.)

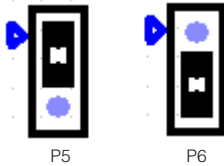
### RTC Select (Jcmos1)

(1-2) P3	Normal (default)
(2-3) P4	Clear CMOS



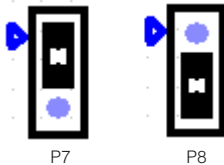
### Touch Power Select (JP2)

(1-2) P5	+V3.3_DUAL (default)
(2-3) P6	+V3.3



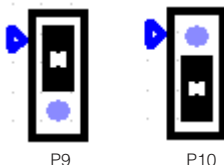
### LCD Power Select (JP3)

(1-2) P7	+V5
(2-3) P8	+V3.3 (default)



### Enable Power Select (JP4)

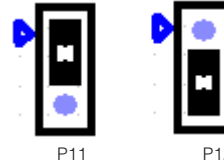
(1-2) P9	+V5
(2-3) P10	+V3.3 (default)



## Jumpers and Connectors (Cont.)

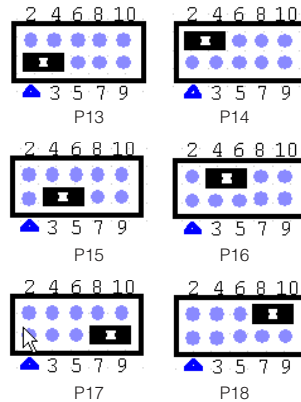
### LVDS PWM Power Select (JP5)

(1-2) P11	+V5
(2-3) P12	+V3.3 (default)



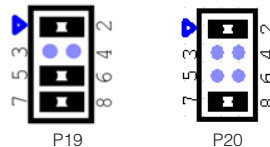
### COM Ring Select (JP6)

(1-3)/(2-4) P13/P14	COM 2/1 ring (default)
(3-5)/(4-6) P15/P16	COM 2/1 5V
(7-9)/(8-10) P17/P18	COM 2/1 12V

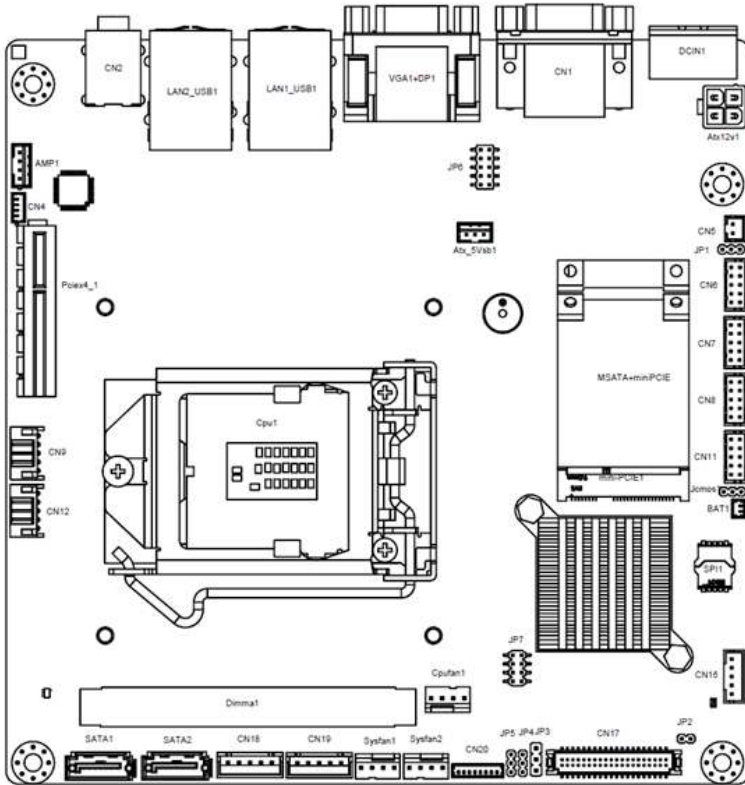


### LVDS Resolution Select (JP7)

(1-2)/(5-6)/ (7-8) P19	1024*768 (24 bit)
(1-2)/(7-8) P20	1280*1024 (24 bit)

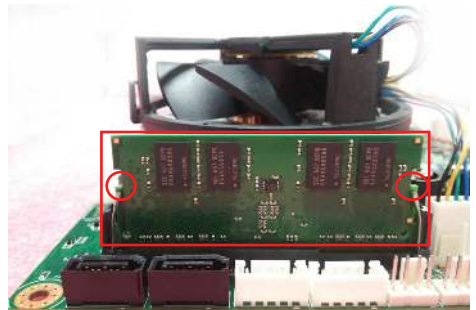


## Board Layout: Jumper and Connector Locations



## Installation Guide

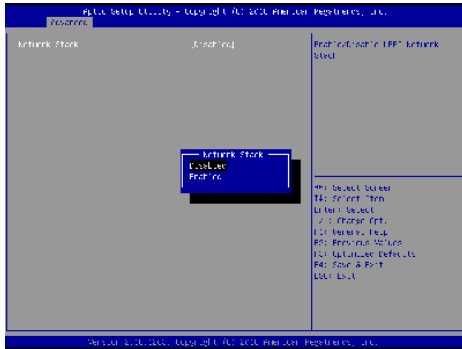
1. Insert the memory module into the memory slot at a 45 degree angle, as shown below. Ensure that the gold fingers of the module are fully inserted into the slot.
2. Once inserted, gently press the memory module into the slot until the tabs snap into place, securing the module in position.





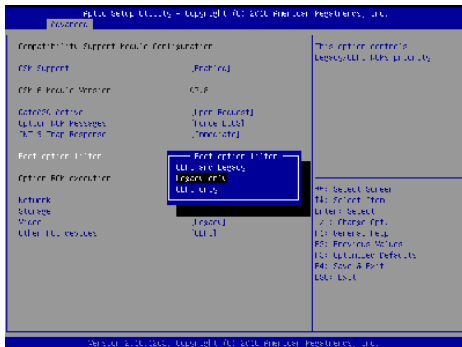
## BIOS Setup Program (Cont.)

2. Select the "Enabled" option for the "Network Stack" item.



### 1.5 Boot Option Filter

1. Access the "CSM Configuration" item from the "Advanced" tab. Users can select "UEFI only" or "Legacy only" for "Boot Option Filter" configuration.



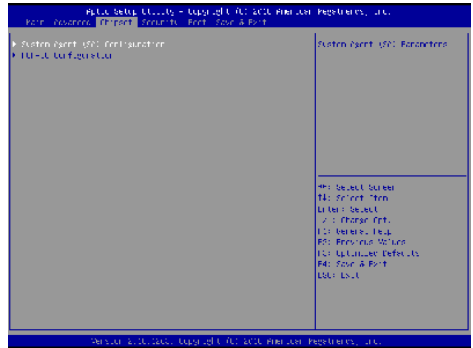
2. Configure the Video and Storage item settings to match the Boot Option Filter configuration.



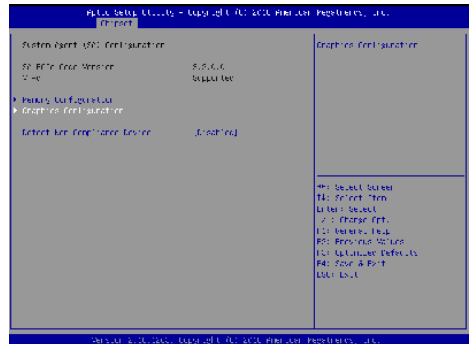
## BIOS Setup Program (Cont.)

### 1.6 Graphics Configuration

1. Access the "System Agent (SA) Configuration" item from the "Chipset" tab.



2. Click on the "Graphics Configuration" item.



3. Select the "LCD Control" item.

