ERX-Q67

Intel® Q67 with Core™ i7/ i5 /i3 Micro-ATX Motherboard

Quick Installation Guide

2nd Ed – 25 February 2014

ERX-Q67

Life Support Policy

Avalue Technology's PRODUCTS ARE NOT FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE PRIOR WRITTEN APPROVAL OF Avalue Technology Inc.

As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into body, or (b) support or sustain life and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

A Message to the Customer

Avalue Customer Services

Each and every Avalue's product is built to the most exacting specifications to ensure reliable performance in the harsh and demanding conditions typical of industrial environments. Whether your new Avalue device is destined for the laboratory or the factory floor, you can be assured that your product will provide the reliability and ease of operation for which the name Avalue has come to be known.

Your satisfaction is our primary concern. Here is a guide to Avalue's customer services. To ensure you get the full benefit of our services, please follow the instructions below carefully.

Technical Support

We want you to get the maximum performance from your products. So if you run into technical difficulties, we are here to help. For the most frequently asked questions, you can easily find answers in your product documentation. These answers are normally a lot more detailed than the ones we can give over the phone. So please consult the user's manual first.

To receive the latest version of the user's manual; please visit our Web site at:
http://www.avalue.com.tw/

If you still cannot find the answer, gather all the information or questions that apply to your problem, and with the product close at hand, call your dealer. Our dealers are well trained

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and ready to give you the support you need to get the most from your Avalue's products. In fact, most problems reported are minor and are able to be easily solved over the phone.

In addition, free technical support is available from Avalue's engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

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1. Getting Started

1.1 Safety Precautions

Warning!

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

Caution!

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

1.2 Packing List

Before you begin installing your single board, please make sure that the following parts have been shipped.
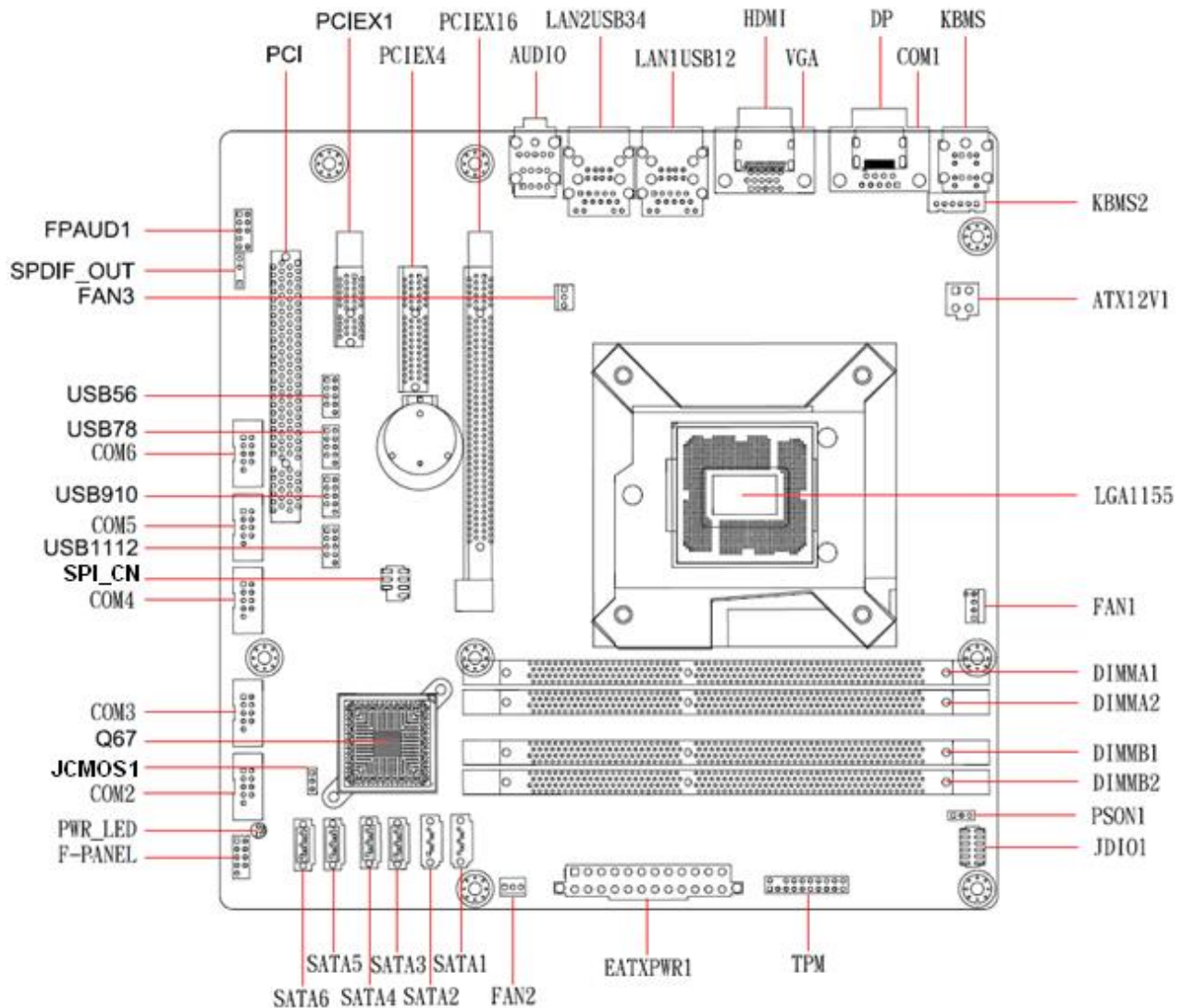
- 1 x ERX-Q67 Micro-ATX Main board
- 1 x CD-ROM contains OS drivers
- 1 x COM cable
- 2 x SATA cable
- 1 x I/O Shield
- 1 x Startup Manual

If any of the above items is damaged or missing, contact your retailer.

2. Hardware Configuration

2.1 Product Overview

2.2 Jumper and Connector List

You can configure your board to match the needs of your application by setting jumpers. A jumper is the simplest kind of electric switch.

It consists of two metal pins and a small metal clip (often protected by a plastic cover) that slides over the pins to connect them. To "close" a jumper you connect the pins with the clip. To "open" a jumper you remove the clip. Sometimes a jumper will have three pins, labeled 1, 2, and 3. In this case, you would connect either two pins.
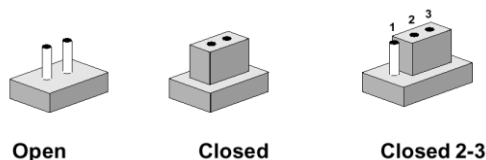
The jumper settings are schematically depicted in this manual as follows:

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

Connectors on the board are linked to external devices such as hard disk drives, a keyboard, or floppy drives. In addition, the board has a number of jumpers that allow you to configure your system to suit your application.

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

The following tables list the function of each of the board's jumpers and connectors.

Slots & socket			
Label	**Function**	**Note**	
LGA1155	LGA1155 socket		
DIMMA1	240-pin DDR3 DIMM Slot A1		
DIMMA2	240-pin DDR3 DIMM Slot A2		
DIMMB1	240-pin DDR3 DIMM Slot B1		
DIMMB2	240-pin DDR3 DIMM Slot B2		
PCIEX16	PCI-e x16 Slot		
PCIEX4	PCI-e x4 Slot		
PCIEX1	PCI-e x1 Slot		
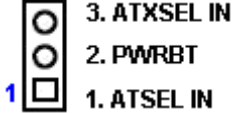
Jumpers		
Label	**Function**	**Note**
JCMOS1	Clear CMOS	3 x 1 header, pitch 2.54mm
PSON1	AT/ATX Mode Select	3 x 1 header, pitch 2.54mm
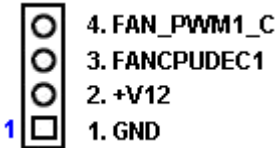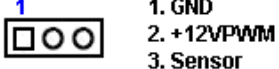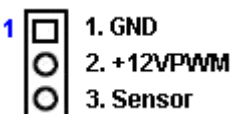
Rear Panel Connector		
Label	**Function**	**Note**
KBMS	PS/2 Keyboard and Mouse	6-pin Mini-Din
COM1	COM1 Connector	D-sub 9-pin, male
DP1	DisplayPort Connector	DisplayPort
VGA1	VGA Port	D-sub 15-pin, female
HDMI1	HDMI Port	HDMI 1.3 19-pin
LAN1USB12	RJ-45 Ethernet Connector x 1 USB 2.0 Connector x 2	
LAN2USB34	RJ-45 Ethernet Connector x 1 USB 2.0 Connector x 2	
Audio1	Audio Line-In , Line-Out , Mic.-In	5.1 Channel Audio I/O (3 jacks)

2.2.1   Internal Connectors

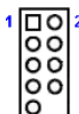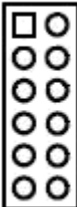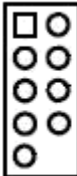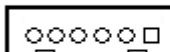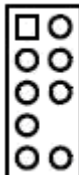| Internal Connector		
Label	**Function**	**Note**
FAN1	CPU Fan Connector	4 x 1 wafer, pitch 2.54mm
FAN2	System Fan Connector	3 x 1 wafer, pitch 2.54mm
FAN3	Chassis Fan Connector	3 x 1 wafer, pitch 2.54mm
COM2 ~ 6	Serial Port Connector * 5	5 x 2 header, pitch 2.54mm
JDIO1	Digital I/O Connector	6 x 2 header, pitch 2.54mm
F_PANEL	Front Panel connector	5 x 2 header, pitch 2.54mm
EATXPWR1	ATX power connectors	10 x 2 header
KBMS2	PS2 Keyboard & mouse connector	5 x 2 header, pitch 2.54mm
FPAUD1	Audio Mic.-In & Line-Out Connector	5 x 2 header, pitch 2.54mm
SPDIF_OUT1	Digital Audio connector	4 x 1 header, pitch 2.54mm
TPM	TPM Connector	10 x 2 header, pitch 2.54mm
SPI_CN	SPI Connector	4 x 2 header, pitch 2.54mm
SATA1 ~ 6	SATA Data Connector * 6	7P Male connector
USB56 USB78 USB910 USB1112	USB Connector * 8	5 x 2 header, pitch 2.54mm
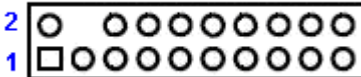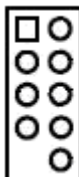
2.3 Setting Jumpers & Connectors

Jumpers

Label	Function	Note	
JCMOS1	Clear CMOS	**Normal ***	**Clear CMOS**
PSON1	Select AT/ATX mode	**AT MODE**	**ATX MODE**

PSON1:
3. ATXSEL IN
2. PWRBT
1. ATSEL IN

Connectors

Label	Function	Note	
FAN 1	CPU Fan Connector	4. FAN_PWM1_C / 3. FANCPUDEC1 / 2. +V12 / 1. GND	
FAN 2	System Fan Connector	1. GND / 2. +12VPWM / 3. Sensor	
FAN 3	Chasis Fan Connector	1. GND / 2. +12VPWM / 3. Sensor	

Connectors

Label	Function	Note	
COM2	Serial Port	1. COM_C-DCD3#	2. COM_C-RXD3
COM3	Connector	3. COM_C-TXD3	4. COM_C-DTR3#
COM4		5. GND	6. COM_C-DSR3#
COM5		7. COM_C-RTS3#	8. COM_C-CTS3#
COM6		9. RI3xPOWERxJMP	

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JDIO1	**Digital I/O Connector**	1. SIO_GPIO0 2. SIO_GPIO4 3. SIO_GPIO1 4. SIO_GPIO5 5. SIO_GPIO2 6. SIO_GPIO6 7. SIO_GPIO3 8. SIO_GPIO7 9. SMB_CLK_MAIN 10. SMB_DATA_MAIN 11. GND 12. N52792386
F_PANEL	**Front Panel connector**	1. HDDLED+ 2. POWERLED+ 3. HDDLED- 4. POWERLED- 5. GND 6. PWSWITCH 7. RESET 8. GND 9. NC
KBMS2	**PS2 Keyboard & mouse connector**	1. KB_A_CLK# 2. KB_A_DAT# 3. MS_A_DAT# 4. GND 5. KBMS1_VCC 6. MS_A_CLK#
FPAUD1	**Audio Mic.-In & Line-Out Connector**	1. MIC2_L 2. GND 3. MIC2_R 4. PRESENSE 5. LIN2_R 6. SENSE1_RTN 7. SENSE_B 8. NC 9. LIN2_L 10. SENSE2_RTN
SPDIF_OUT	**SPDIF OUT**	4. GND 3. SPDIF_O 1. +5V
TPM	**TPM Connector**	1. PCICLK2 3. LPC_FRAME# 5. PLTRST_SIO# 7. LPC_AD3 9. +V3.3 2. GND 4. NC 6. NC 8. LPC_AD2 10. LPC_AD1 11. LPC_AD2 13. NC 15. +V3.3_DUAL 17. GND 19. LPCPD# 12. GND 14. NC 16. PCI_SERIRQ 18. GND 20. NC
USB56 **USB78** **USB910** **USB1112**	**USB 2.0 Connector**	1. USB+5V 2. USB+5V 3. USB - 4. USB - 5. USB + 6. USB + 7. GND 8. GND 9. NC