MX67QM

Intel® Core™ i3, i5, i7 Mobile Processor

User's Quick Start Card	Version 1.0	http://www.bcmcom.com

Inspect the Package:
One **MX67QM Motherboard**
One **Standard I/O Shield**
One **CPU Cooler**
One **COM Port Cables**
Two **SATA Cables**
One **Driver CD**
One **User's Quick Start Card**

CPU Cooler

MX67QM

Responsibility:
This manual is provided "As-Is" with no warranties of any kind, expressed or implied, including, but not limited to the implied warranties or conditions of this product's fitness for any particular purpose. In no event shall we be liable for any loss of profits, loss of business, loss of data, interruption of business, or indirect, special, incidental, or consequential damages of any kind, even the possibility of such damages arising from any defect or error in this manual or product. We reserve the right to modify and update the user manual without prior notice.

⚠ WARNING: CMOS Battery Damage
Replace your system's CMOS RAM battery only with the identical CR-2032 3V Lithium-Ion coin cell (or equivalent) battery type to avoid risk of personal injury or physical damage to your equipment. Improper installation might cause battery to explode. Always dispose of used batteries according to the manufacturer's instructions, or as required by the local ordinance (where applicable).   The damage due to not following this warning will void your motherboard's manufacturer warranty.

Perchlorate Material- Special Handling May Apply.
See http://www.dtsc.ca.gov/hazardouswaste/perchlorate/

Additional Information:
Additional information on setting this board up can be found in the User's Manual in the provided CD or DVD ROM.   The Online User's Manual and FAQ/Knowledge Base can be found on our website by visiting our website: **http://www.bcmcom.com**.   If your question is not answered in our FAQ/Knowledge Base, visit our forums and post your messages or submit a new FAQ through FAQ Submittal form for us to add your question in our FAQ with our answer.

⚠ ATTENTION: Incorrect BIOS Setup
If you do not know how to handle BIOS setup or how to set it up properly, it is strongly advisable that you do not modify any of the settings than otherwise instructed in the User's Quick Start Card.   Even a seemingly small incorrect adjustment or modification in the BIOS setup can render your system unstable or unusable. Incorrect BIOS setup is not covered by your motherboard's manufacturer warranty. Try Clear CMOS information when system does not boot after BIOS settings change.

> ⚡ **WARNING: Electrostatic Sensitive Device (ESD)**
> Static electricity can easily damage your motherboard and will void your motherboard warranty.   Keep the motherboard and other system components in their anti-static packaging until you are ready to install them.   Touch a grounded surface before you remove any system component from its protective anti-static packaging.   Unpacking and installation should be done on a grounded, anti-static mat.   The operator should be wearing an anti-static wristband, grounded at the same points as the anti-static mat.   During configuration and installation touch a grounded surface frequently to discharge any static electrical charge that may have built up in your body.   Avoid touching the components when handling the motherboard or a peripheral card.   Handle the motherboard and peripheral cards either by the edges or by the peripheral card case-mounting bracket.

> ⚠ **WARNING: Misplaced Jumper Damage**
> Incorrect jumpers and connectors settings may lead to damage to your motherboard and will void your motherboard warranty. Please pay special attention to not connect these headers in the wrong direction. DO NOT change ANY jumpers while the motherboard has power.

Jumpers

Label	Function
JCMOS1	Clear CMOS Jumper
JAT1	AT/ATX Select Jumper
J1	COM port Power Jumper
JCMV2	COM port Power Jumper
J2	LVDS power jumper

Connectors & Headers

Label	Function
ATX Power Connector	ATX1
DC Power Connector:	JPWR1
JCASE1	Chassis Intrusion Pin header:
SATA1	Serial ATA Connector
SATA2	Serial ATA Connector
SATA3	Serial ATA Connector
SATA4	Serial ATA Connector
JAMP1	Audio Amplifier Pin header:
CPUFAN1	Fan Power Connector:
SYSFAN1	Fan Power Connector:
JGPIO1	GPIO Pin header:
JFP1	Front Panel Pin header:
JUSB1	Front USB Pin header:
JUSB2	Front USB Pin header:
COM2	Serial Port Connector
COM3	Serial Port Connector
COM4	Serial Port Connector
COM5	Serial Port Connector
JINV1	LVDS Inverter Connector:
JLVDS1	LVDS Connector:
JSPDI1	S/PDIF Pin header:
JAUD1	Front Audio Pin header:
JDP1	Port 80 Pin header:

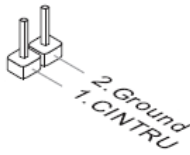## Internal Connector Pin Assignment

ATX Power Connector
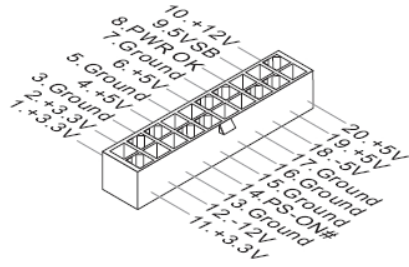
Pin	Signal Name	Signal Name	Pin
1	+3.3V	+3.3V	11
2	+3.3V	+12V	12
3	GND	GND	13
4	+5V	PS-ON#	14
5	GND	GND	15
6	+5V	GND	16
7	GND	GND	17
8	PWR OK	-5V	18
9	5VSB	+5V	19
10	+12V	+5V	20

DC Power Connector
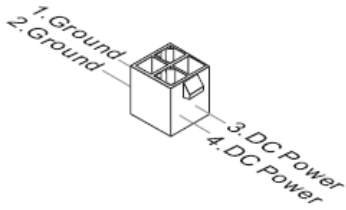
Pin	Signal
1	GND
2	GND
3	DC Power
4	DC Power

JCASE1

Pin	Signal
1	CINTRU
2	GND

JSPDI1
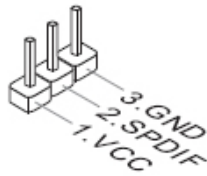
Pin	Signal
1	VCC
2	SPDIF
3	GND

SATA1, SATA2, SATA3, SATA4
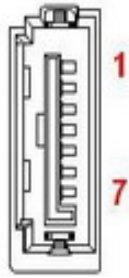
Pin	Signal Name
1	GND
2	TX+
3	TX-
4	GND
5	RX-
6	RX+
7	GND

JAMP1
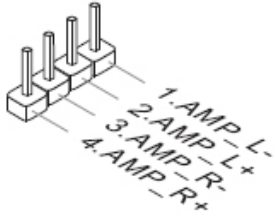
Pin	Signal
1	AMP_L-
2	AMP_L+
3	AMP_R-
4	AMP_R+

CPUFAN1
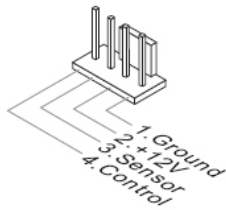
Pin	Signal
1	GND
2	12V
3	Sensor
4	Control

SYSFAN1

Pin	Signal
1	GND
2	+12V
3	Sensor

5
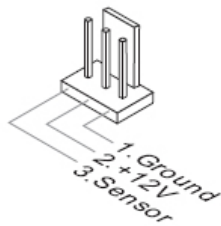
JGPIO1
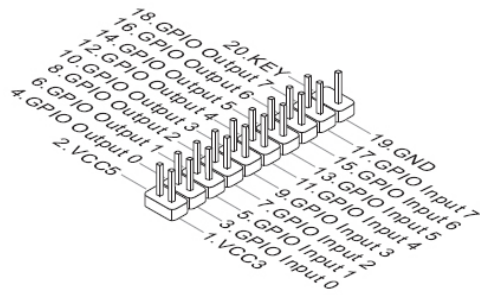
Pin	Signal Name	Signal Name	Pin
1	VCC3	VCC5	2
3	GPIO INPUT0	GPIO OUTPUT0	4
5	GPIO INPUT1	GPIO OUTPUT1	6
6	GPIO INPUT2	GPIO OUTPUT2	8
9	GPIO INPUT3	GPIO OUTPUT3	10
11	GPIO INPUT4	GPIO OUTPUT4	12
13	GPIO INPUT5	GPIO OUTPUT5	14
15	GPIO INPUT6	GPIO OUTPUT6	16
17	GPIO INPUT7	GPIO OUTPUT7	18
19	GND	KEY	20

JFP1
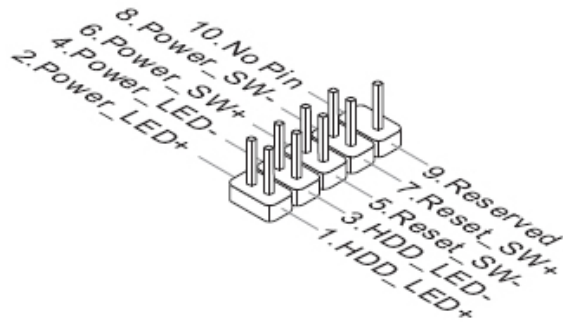
Pin	Signal Name	Signal Name	Pin
1	HDD_LED+	Power_LED+	2
3	HDD_LED-	Power_LED-	4
5	RESET_SW-	Power_SW+	6
7	RESET_SW+	Power_SW-	8
9	Reserved	No Pin	10

JUSB1, JUSB2
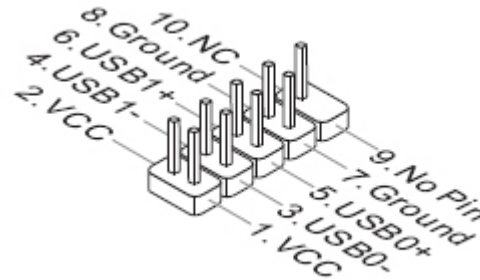
Pin	Signal Name	Pin	Signal Name
1	VCC	2	VCC
3	USB0-	4	USB1-
5	USB0+	6	USB1+
7	GND	8	GND
9	No Pin	10	NC

COM2, COM3, COM4, COM5
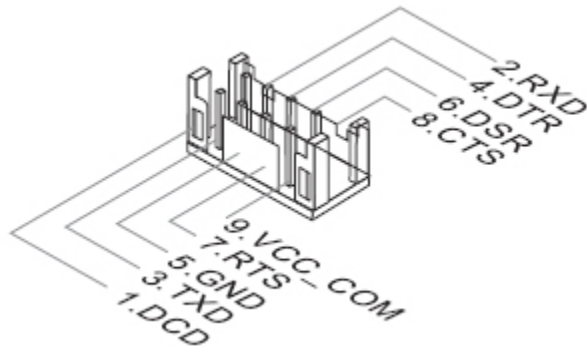
Pin	Signal Name	Pin	Signal Name
1	DCD	2	RXD
3	TXT	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	VCC_COM		

JINV1
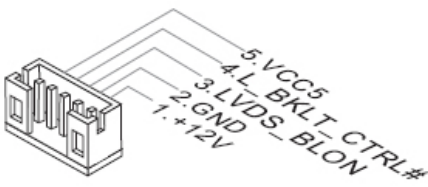
Pin	Signal
1	+12V
2	GND
3	LVDS_BLON
4	L_BKLT+CTRL#
5	VCC5

JAUD1
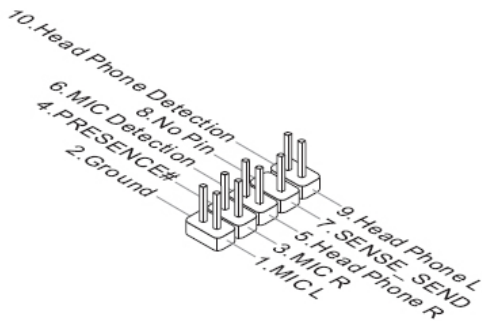
Pin	Signal Name	Pin	Signal Name
1	MIC L	2	GND
3	MIC R	4	PRESENCE #
5	HEAD PHONE R	6	MIC DETECTION
7	SENSE_SEND	8	NO PIN
9	HEAD PHONE L	10	HEAD PHONE DETECTION

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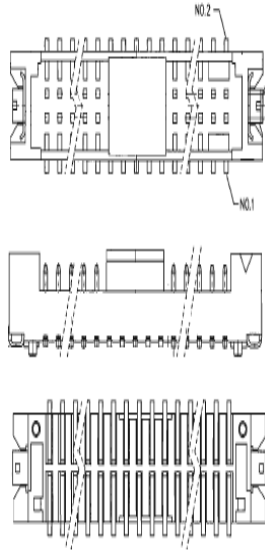
JLVDS1

Pin	Signal Name	Pin	Signal Name
1	+12V	2	+12V
3	+12V	4	+12V
5	+12V	6	GND
7	+3.3V	8	GND
9	LCD_VDD	10	LCD_VDD
11	LDDC_CLK	12	LDDC_DATA
13	BACKLIGHT CONTROL	14	LVDS_VDDEN
15	BACKLIGHT ENABLE	16	GND
17	LVDS1_DATA0 N	18	LVDS1_DATA0 P
19	LVDS1_DATA1 N	20	LVDS1_DATA1 P
21	LVDS1_DATA2 N	22	LVDS1_DATA2 P
23	LVDS1_CK N	24	LVDS1_CK P
25	LVDS1_DATA3 N	26	LVDS1_DATA3 P
27	GND	28	GND
29	LVDS2_DATA0 N	30	LVDS2_DATA0 P
31	LVDS2_DATA1 N	32	LVDS2_DATA1 P
33	LVDS2_DATA2 N	34	LVDS2_DATA2 P
35	LVDS2_CK N	36	LVDS2_CK p
37	LVDS2_DATA3 N	38	LVDS2_DATA3 P
39	GND	40	GND

JDP1
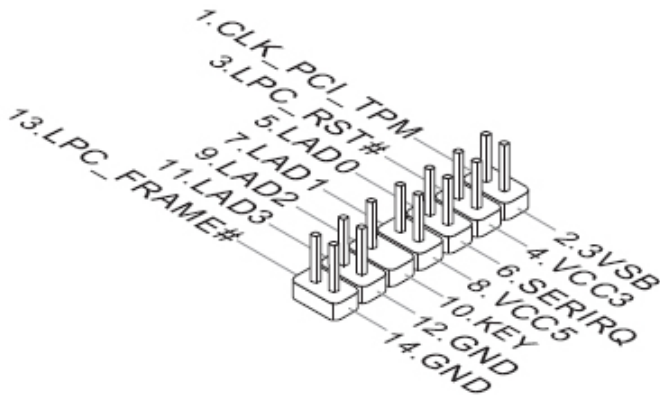
Pin	Signal Name	Pin	Signal Name
1	CLK_PCI_TPM	2	3VSB
3	LPC_RST#	4	VCC3
5	LAD0	6	SERIRQ
7	LAD1	8	VCC5
9	LAD2	10	KEY
11	LAD3	12	GND
13	LPC_FRAME#	14	GND

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Rear Panel Connector List

AUDIO1   Audio Phone Jack
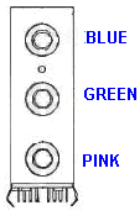
	Signal Name
BLUE	LINE IN
GREEN	LINE OUT
PINK	MIC IN

LAN1, LAN2   RJ-45 + USB Port-0&1 Connector
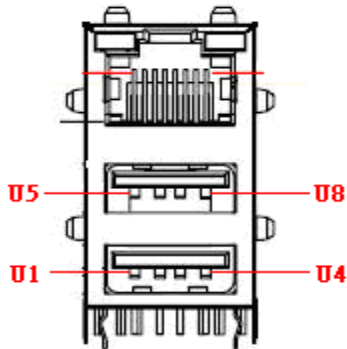
Pin	Signal	Pin	Signal
1	VCC	12	Yellow LED
2	D0+	13	Green LED#
3	D0-	14	Orange LED#
4	D1+	U1	USB_PWR
5	D1-	U2	USB_N0
6	D2+	U3	USB_P0
7	D2-	U4	GND
8	D3+	U5	USB_PWR
9	D3-	U6	USB_N1
10	GND	U7	USB_P1
11	Yellow LED#	U8	GND

COM1   RS-232 DB-9 Connector
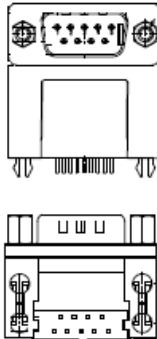
Pin	Signal
1	DCD, Data carrier detect
2	RXD, Receive data
3	TXD, Transmit data
4	DTR, Data terminal ready
5	GND, ground
6	DSR, Data set ready
7	RTS, Request to send
8	CTS, Clear to send
9	RI, Ring indicator

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Hdmi1 Connector
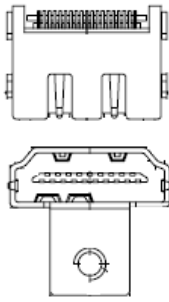
Signal Name	Pin	Pin	Signal Name
TMD_DATA2+	1	2	GND
TMD_DATA2-	3	4	TMD_DATA1+
GND	5	6	TMD_DATA1-
TMD_DATA0+	7	8	GND
TMD_DATA0-	9	10	HDMI_TCLP
GND	11	12	HDMI_TCLN
NC	13	14	NC
DDC_CLK	15	16	DDC_DATA
GND	17	18	+5V
HPDET	19		

PS-KBMS1   Internal PS/2 Keyboard & Mouse
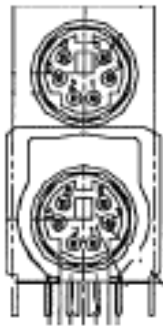
Pin	Signal Name	Pin	Signal Name
1	KB_DATA	2	NC
3	GND	4	KB_PWR
5	KB_CLK	6	NC
7	MS_DATA	8	NC
9	GND	10	KB_PWR
11	MS_CLK	12	NC
13	GND	14	GND
15	GND	16	GND

Jumper Settings

JCMOS1
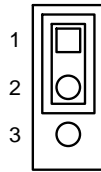
Jumper	Status
1-2 (Default)	CLEAR CMOS
2-3	KEEP CMOS

JAT1 : AT/ATX SELECT JUMPER
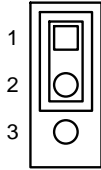
Jumper	Status
1-2 (Default)	AT POWER
2-3	ATX POWER

J1 : COM PORT POWER JUMPER
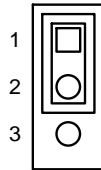
Jumper	Status
1-2 (Default)	5V
2-3	12V

JCMV2 : COM PORT POWER JUMPER
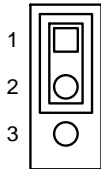
Jumper	Status
1-2 (Default)	12V
2-3	5V

J2 : LVDS POWER
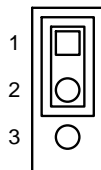
Jumper	Status
1-2 (Default)	3.3V
2-3	5V

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Motherboard Layout:

Amplifier Pinheader
PCIe Slot
Power Connector
GPIO Pinheader
Chassis Intrusion Pinheader
LVDS Inverter Connector
LVDS Connector
Front Panel Pinheader
LVDS Power Jumper
S/PDIF Pinheader
AT/ATX Jumper
Front Audio Pinheader
Clear CMOS Jumper
USB Pin-header
SATA Connector
COM Power Jumper
Mini PCIe Slot
Serial Port Connector
COM Power Jumper
DIMM Slot
Fan Power Connector
Port 80 Pinheader
Power Connector

Mouse Port
VGA Port
Serial Port
LAN Jack
LAN Jack
Line-In Jack
Keyboard Port
DVI-D Port
HDMI Port
USB 2.0 Port
USB 2.0/3.0 Port
Line-Out Jack Mic-In Jack

Note: USB 3.0 port is optional

CPU Installation

This processor is intended to be professionally installed. Take proper electrostatics discharge (ESD) precautions such as using appropriate ground strips, gloves, and ESD mats.

- Insert CPU into CPU socket and turn the screw to the lock position.

Unlock · Pin 1 of the socket · Lock · Gold triangular mark
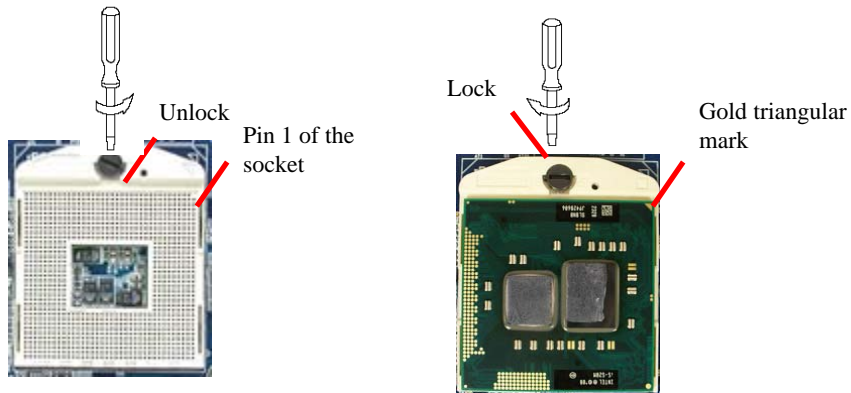
Note: Do not force the CPU into the socket. It may bend the pins and damage the CPU.

Installing the CPU Cooler
- -Insert the retention bracket through the screw hole from bottom side of motherboard.
  -Match and place CPU cooler assembly on the top of CPU and retention bracket.
  -Tighten the screws into the retention bracket.

Screw holes · Retention bracket · CPU cooler & Retention bracket

(rear side)
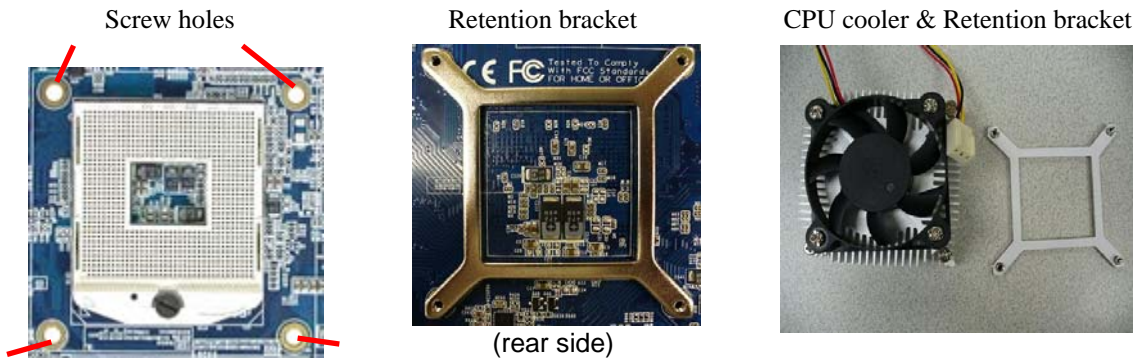
Note: Make sure CPU cooler assembly and CPU top surface are in total contact to avoid CPU overheating problem which would cause the system to hang or unstable.