

**mircoATX Mother board Supports Intel® LGA-775 CPU with a 800/1066/1333MHz FSB, Intel® Q35 & ICH9DO Platform.**

# **IMB-Q354**

## **Quick Installation Guide**

### **Version 1.2**

Sep. 1, 2015

### **Package Contents**

IMB-Q354-R12 package includes the following items:

- 1 x IMB-Q354-R12 single board computer
- 1 x Mini jumper pack
- 1 x Dual RS232 cable
- 1 x USB cable
- 6 x SATA cable
- 3 x SATA power cable
- 1 x I/O shielding
- 1 x Utility CD
- 1 x QIG (quick installation guide)



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## Specifications

- CPU:LGA775 45nm Intel® Core™2 Quad(Yorkfield), Core™2 Duo(Wolfdale), Core2 Duo, Celeron® processor with a 800/1066/1333MHz FSB
- System Chipset: Intel® Q35 + ICH9-DO
- BIOS: AMI BIOS Label with 4MB SPI EEPROM
- System memory: Four 240pin 800/667MHz dual-channel DDR2 DIMM sockets (system max. 8GB)
- Ethernet: Dual GbE  
LAN: Intel® 82573L (MAC + PHY)
- I/O Interface:
  - 1 x FDD
  - 1 x LPT
  - 1 x PS/2 for KB/MS
  - 4 x RS-232
  - 6 x SATA 3Gb/s support RAID 0, 1, 10, 5
  - 12 x USB 2.0(4 on the edge, 8 on board by pitch2.54mm header)
- Digital I/O: 8-bit Digital I/O, 4-bit input / 4-bit output
- Infrared Interface: One Infrared Interface by pin header
- Display: VGA integrated in Intel® Q35
- Audio: Realtek ALC662
- TPM1.2: One 20-pin header on board for TPM
- Watchdog Timer: Software programmable supports 1~255 sec. system reset
- Power Supply: ATX support
- Temperature: 0°C ~ 60°C(32°F ~ 140°F)
- Operating Humidity: 5% ~ 95%, non-condensing
- Dimensions: 244 (L) mm x 244 (W) mm
- Weight: GW 1.1Kg

# Ordering Information

## Standard:

### IMBA-Q354-R12

microATX motherboard supports 45nm Intel® LGA775 Core™2 Duo CPU with a 800/1066/1333MHz FSB, Intel® Q35 & ICH9DO platform, single Intel® PCIe GbE, six SATA 3Gb/s with RAID functions.

## Optional:

CF-520-RS, CF-775A-RS, CF-775B-RS: CPU Cooler

TPM-IN01-R10: Infineon 20-pin Trusted Platform Module with S/W Management Tool

TPM-SI01-R10: Sinosun 20-pin Trusted Platform Module with S/W Management Tool

TPM-WI-1-R10: Winbond 20-pin Trusted Platform Module with S/W Management Tool

## Jumpers Setting

- **J\_COM\_F2 ~ J\_COM\_F4**: Set the function of pin9 as signal or voltage at COM2 ~ COM4

<b>J_COM_F2 ~ J_COM_F4</b>	
1 - 2	Pin9 of COM1 and COM2 as voltage
2 - 3	Pin9 of COM1 and COM2 as signal "RING"

- **J\_COM\_V2 ~ J\_COM\_V4**: Set the voltage level of pin9 at COM2 ~ COM4

<b>J_COM_V2 ~ J_COM_V4</b>	
1 - 2	+5V
2 - 3	+12V

- **J\_CMOS1**: Clear CMOS setup

<b>JSPI_SEL1</b>	<b>DESCRIPTION</b>
Short 1-2	Keep CMOS Setup(default)
Short 2-3	Clear CMOS Setup

- **JSPI\_SEL1**: To select which one device will be programming

<b>JSPI_SEL1</b>	<b>DESCRIPTION</b>
1-2	SPI1
Short 2-3	SPI2

## Connection

- **KB MS1A (Purple):** 6-pin Mini-DIN Keyboard Connector

PIN NO.	DESCRIPTION
1	Keyboard Data
2	NC
3	GND
4	VCC
5	Keyboard Clock
6	NC

- **KB MS1B (Green):** 6-pin Mini-DIN Mouse Connector

PIN NO.	DESCRIPTION
1	Mouse Data
2	NC
3	GND
4	VCC
5	Mouse Clock
6	NC

- **VGA:** 15-pin Female Connector

PIN	DESCRIPTION	PIN	DESCRIPTION
35	RED	36	GREEN
37	BLUE	38	NC
39	GROUND	40	GROUND
41	GROUND	42	GROUND
43	VCC / NC	44	GROUND
45	NC	46	DDC DAT
47	HSYNC	48	VSYNC
49	DDCCLK		

- **COM1:** D-SUB Serial Port Connector

PIN	DESCRIPTION	PIN	DESCRIPTION
26	(DCD)	31	(DSR)
27	(RXD)	32	(RTS)
28	(TXD)	33	(CTS)
29	(DTR)	34	(RI)
30	GROUND		

- **LPT: Parallel Port Connector**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	STROBE#	2	DATA 0
3	DATA 1	4	DATA 2
5	DATA 3	6	DATA 4
7	DATA 5	8	DATA 6
9	DATA 7	10	ACKNOWLEDGE
11	BUSY	12	PAPER EMPTY
13	PRINTER SELECT	14	AUTO FORM FEED #
15	ERROR#	16	INITIALIZE
17	PRINTER SELECT IN#	18	GROUND
19	GROUND	20	GROUND
21	GROUND	22	GROUND
23	GROUND	24	GROUND
25	GROUND		

- **LAN1\_USB01、LAN2\_USB23: RJ45 LAN and USB Connector**

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	MDIA3-	5	MDIA1+
2	MDIA3+	6	MDIA2+-
3.	MDIA2-	7	MDIA0-
4.	MDIA1-	8	MDIA0+

USB	
PIN NO.	DESCRIPTION
1	VCC
2	DATA-
3	DATA+
4	GROUND

- **AUDIO\_CV1: Audio Input and Output Connector**

AUDIO_CV1	
PIN NO.	DESCRIPTION
Line-in	CD/DVD or other audio source input port
Line-out	Connect this port to headphone or speaker
Microphone	Connect this port to microphone

- **SATA1~SATA6:** Serial ATA Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	5	RX-
2	TX+	6	RX+
3	TX-	7	GND
4	GND	8	N/C

- **USB45・USB67・USB89・USB1011:** Internal USB Connector

USB45, USB67, USB89, USB1011			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VCC	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	VCC

- **FDD1:** FDD Connector

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	REDUCE WRITE
3	GND	4	N/C
5	N/C	6	N/C
7	GND	8	INDEX#
9	GND	10	MOTOR ENABLE A#
11	GND	12	DRIVE SELECT B#
13	GND	14	DRIVE SELECT A#
15	GND	16	MOTOR ENABLE B#
17	GND	18	DIRECTION#
19	GND	20	STEP#
21	GND	22	WRITE DATA#
23	GND	24	WRITE GATE#
25	GND	26	TRACK 0#
27	GND	28	WRITE PROTECT#
29	GND	30	READ DATA#
31	GND	32	SIDE 1 SELECT#
33	GND	34	DISK CHANGE#

- **SYS\_FAN1:** System Fan Connector

PIN NO.	DESCRIPTION
1	Ground
2	+12V
3	Rotation Signal

- **CPU\_FAN1:** CPU Fan Connector

PIN NO.	DESCRIPTION
1	Ground
2	+12V
3	Rotation Signal
4	Control

- **DIO1: Digital Input / Output Connector**

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	Ground	2	VCC
3	Output 3	4	Output 2
5	Output 1	6	Output 0
7	Input 3	8	Input 2
9	Input 1	10	Input 0

- **F\_PANEL1: External Switches and Indicators Panel**

	PIN	DESCRIPTION	PIN	DESCRIPTION	
Power LED	1	+5V	2	+5V	Speaker
	3	N/C	4	N/C	
	5	GROUND	6	N/C	
PWRBTN	7	PWRBTN+	8	Speaker	RESET
	9	PWRBTN-	10	N/C	
HDDLED	11	+5V	12	Reset-	RESET
	13	HDLED-	14	GND	

- **PCIE\_12V1: PCI-e Power Connector**

PIN NO.	DESCRIPTION
1	VCC12V
2	GND
3	GND
4	VCC5V

- **IR1: Infrared Connector**

PIN NO.	DESCRIPTION
1	VCC
2	NC
3	IR-RX
4	GND
5	IR-TX

- **FRONT-PANEL1: Front Audio Connector**

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	MIC_L	2	GND
3	MIC_R	4	Audio Detect
5	LINE2-R	6	GND
7	Jack Detection	8	N/C
9	LINE2-L	10	GND

- **SPDIF1: Internal SPDIF Connector**

PIN	DESCRIPTION
1	5V
2	N/C
3	SPDIFOUT
4	GND
5	SPDIFIN

- **CD\_IN1: Internal CD In Connector**

PIN	DESCRIPTION
1	CD-L
2	CD-GND
3	CD-GND
4	CD-R

- **COM2 ~ COM4:** Internal Serial Port Connector

PIN NO.	DESCRIPTION
1	DATA CARRIER DETECT (DCD1)
2	RECEIVE DATA (RXD1)
3	TRANSMIT DATA (TXD1)
4	DATA TERMINAL READY (DTR1)
5	GND (GND1)
6	DATA SET READY (DSR1)
7	REQUEST TO SEND (RTS1)
8	CLEAR TO SEND (CTS1)
9	RING INDICATOR (RI1)
10	N/C

- **TPM1:** Trusted Platform Module Connector

DVI Connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	FWHPCLK	2	GND
3	LFRAME#	4	KEY
5	PCIRST#	6	VCC
7	LAD3	8	LAD2
9	VCC3	10	LAD1
11	LAD0	12	GND
13	SMBCLK	14	SMBDATA
15	3VDUAL	16	SERIRQ
17	GND	18	CLKRUN#
19	LPCPD#	20	LDRQ#

- **JSPI1:** SPI Flash Connector

PIN	DESCRIPTION	PIN	DESCRIPTION
1	VCC	2	GND
3	CS#	4	CLOCK
5	SO	6	SI
7	NC	8	NC

- **CPU12V1:** CPU Power Connector

ATX-12V1 (CPU)			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	GND
3	+12V	4	+12V



# Board Layout: Jumper and Connector Locations

