

**ATX Form Factor with Intel® Core 2 Duo, Pentium®  
D/Pentium® 4/Celeron® D CPU FSB 533/800/1066MHz,  
Dual VGA, PCIe GbE, USB2.0, SATA and Audio**

# **IMBA-9454B-R11**

## **Quick Installation Guide**

### **Version 1.0**

May. 30, 2011

### **Package Contents**

IMBA-9454B package includes the following items:

- 1 x IMBA-9454B single board computer
- 2 x Quad ports RS-232 cable
- 4 x SATA cable
- 1 x ATA66 IDE Flat cable
- 1 x I/O shielding
- 1 x Mini Jumper Pack
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)



©2011 Copyright by IEI Technology corp.  
All rights reserved.

## Specifications

- CPU  
LGA 775 Intel®Core 2 Duo, Pentium®4/ Celeron®D processor, FSB 533/800/1066MHz
- System Chipset  
Intel®945G + ICH7
- BIOS  
AMI BIOS
- System Memory  
2 x 240-pin Dual-Channel DDR2 400/533/667MHz up to 4GB
- Ethernet  
Realtek PCIe RTL8111CP GbE Controller
- I/O Interface:
  - 6 x USB 2.0(4 on rear, 2 by pin-header)
  - 4 x SATA II
  - 1 x LPT
  - 1 x FDD
  - 8 x RS-232 (COM1~COM4 pin9 jump select for 5V/12V/Ring)
  - 1x IDE
  - 2 x PS/2 for KB / MS
- Display Output  
VGA1 integrated in Intel®945G  
VGA2 supported by SDVO to VGA Transmitter Chrontel CH7021A
- Expansion
  - 3 x PCI Slot
  - 1 x PCIe x1 Slot
  - 1 x PCIe mini card Slot
- Super I/O  
First Super I/O : ITEIT8718F  
Second/Third Super I/O : Fintek F81216AD
- Audio  
Realtek ALC655 AC'97 codec
- Watch Dog Timer  
Software programmable 1-255 sec. system reset
- Power Supply  
AT/ATX support
- Power Consumption  
5V@2.11A, 12V@10.44A, 3.3V@ 6.07A  
(Intel® Pentium® D Processor 960 3.6 GHz 800 MHz 4MB CPU with 2GB DDR2 800MHz)

- Temperature  
Operation 0°C ~ 60°C (32°F ~ 140°F)
- Humidity  
Operation: 5% ~ 95% non-condensing
- Dimension  
190mm x 304mm
- Weight  
GW: 1200g/NW: 650 g

## Ordering Information

**IMBA-9454B-R10**: ATX Form Factor with Intel®Core 2 Duo, Pentium® D/Pentium®4/Celeron®D CPU FSB 533/800/1066MHz, Dual VGA, PCIe GbE, USB2.0, SATA and Audio.

**32200-000017-RS**: FDD Cable

**CB-USB02-RS**: Dual Ports USB Cable

**32100-088600-RS**: SATA Power Cable

**CF-775A-RS / CF-520-RS**: CPU Cooler

**WMPCIE-V01-R10**: 802.11b+g PCIe mini card wireless LAN module with Atheros

**WMUSB-V01-R10**: 802.11b+g USB embedded module with VIA

## Jumpers Setting

LABEL	FUNCTION
CLR_CMOS1	CMOS state setting
JP2	AT & ATX Power Mode Setting
J_COM_F1~J_COM_F4	Set the function of pin9 as signal or voltage (+12V/+5V Voltage Select by J_COM_V1~J_COM_V4)
J_COM_V1~J_COM_V4	Set the voltage level of pin9 at COM1 ~ COM4

CLR_CMOS1 : Clear CMOS Setup(P=2.54mm)	
CLR_CMOS1	DESCRIPTION
Short 1-2 (default)*	Keep CMOS Setup (Normal operation)
Short 2-3	Clear CMOS Setup

JP2: ATX/AT mode setting (P=2.54mm)	
PIN	DESCRIPTION
Open	AT mode
Short(default)*	ATX mode

J_COM_F1~J_COM_F4 : Set the function of pin9 as signal or voltage	
J_COM_F1~F4	DESCRIPTION
1-2	Pin9 of COM1~COM4 as voltage (+12V/+5V Voltage Select by J_COM_V1~J_COM_V4)
2-3(default)*	Pin9 of COM1~COM4 as signal (RING)

J_COM_V1~J_COM_V4 : Set the voltage level of pin9 at COM1 ~ COM4	
J_COM_V1~V4	DESCRIPTION
1-2(default)*	+5V
2-3	+12V

## Table of Connectors

LABEL	FUNCTION
KBMS1	PS/2 MOUSE & KEYBOARD Connectors
LPT1	Parallel Port Connector
VGA1	VGA 15-pin Female Connector (from Intel®945G)
VGA2	VGA 15-pin Female Connector (from Chrontel CH7021A)
USB1	External Dual Ports USB Connectors
LAN/USB1	RJ-45 LAN Connector, and External Dual Ports USB Connectors
CN1	Extend Audio Connector
LINE_OUT1	Internal audio line-out
CPU12V1	+12V Main Power Input Connector
CPU_FAN1	CPU FAN Connector
PWR1	System Main Power input Connector
FDC1	Floppy Connector
IDE1	IDE Connector
CN2	PWR & RST Buttons & Speaker and Indicators
SYS_FAN1	System FAN Connector
JSPI1	SPI flash connector
SATA1/SATA 2 SATA 3/SATA 4	Serial ATA Connectors
MINI-PCIE1	PCI-E Mini Card connector
USB2	internal 2 Ports USB Connectors
COM5~COM8	Internal Serial Port Connectors
COM1-COM4	Internal Serial Port Connectors
DIMM1~2	DDR2 Slots
PCIE 1	PCIe x 4 Slot
PCI1~3	PCI Slots

CPU12V1 : CPU Power Input Connector			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	GND	2	GND
3	+12V	4	+12V

<b>LINE_OUT1 : Internal audio line-out (P=2.54mm)</b>	
PIN	DESCRIPTION
1	LINEOUT-L
2	AGND
3	AGND
4	LINEOUT-R

<b>PWR1: System Main Power input Connector</b>			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	3.3V	13	3.3V
2	3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Power Good	20	-5V
9	5VSB	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	3.3V	24	GND

<b>CPU_FAN1:CPU Fan Connector</b>	
PIN	DESCRIPTION
1	GND
2	+12V
3	Sensor
4	Speed control

<b>SYS_FAN1 : System FAN Connector.</b>	
PIN	DESCRIPTION
1	GND
2	+12V(FAN PWM2)
3	Speed Sensor

<b>FDC1: Floppy Connector</b>			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	GND	2	REDWC-
3	GND	4	N/C
5	N/C	6	N/C
7	GND	8	INDEX-
9	GND	10	MOTEA-
11	GND	12	N/C
13	GND	14	DRVSA-
15	GND	16	N/C
17	GND	18	DIR--
19	GND	20	STEP-
21	GND	22	WDATA -
23	GND	24	WGATE -
25	GND	26	TRK0-
27	GND	28	WPT-
29	GND	30	RDATA -
31	GND	32	SIDE1-
33	GND	34	DSKCHG-

<b>CN2: PWR &amp; RST Buttons &amp; Speaker and Indicators (P=2.54mm)</b>			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	Power LED+ (5V)	2	Speaker+
3	N/C	4	N/C
5	Power LED-	6	N/C
7	Power Button-	8	Speaker-
9	Power Button+	10	N/C
11	IDE LED+	12	Reset Button+
13	IDE LED-	14	Reset Button-
<p>1-3-5 Power LED  7-9 Power Button  11-13 HD LED  2-4-6-8 Speaker  12-14 Reset Button</p>			

<b>JSPI1=SPI flash connector(P=2.54mm)</b>			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	SPI_VCC(+3.3V)	2	GND
3	SPICS-	4	SPICLK
5	SPIMISO	6	SPIMOSI
7	NC	8	NC

<b>USB2 : Internal 2 Port USB Connectors</b>			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	USB PWR	2	GND
3	USBP4-	4	USBP5+
5	USBP4+	6	USBP5-
7	GND	8	USB PWR

<b>IDE1 (Blue): IDE Interface Connector</b>			
PIN	DESCRIPTION	PIN	DESCRIPTION
1	RESET#	2	GND
3	DATA 7	4	DATA 8
5	DATA 6	6	DATA 9
7	DATA 5	8	DATA 10
9	DATA 4	10	DATA 11
11	DATA 3	12	DATA 12
13	DATA 2	14	DATA 13
15	DATA 1	16	DATA 14
17	DATA 0	18	DATA 15
19	GND	20	N/C
21	IDE DRQ	22	GND
23	IOW#	24	GND
25	IOR#	26	GND
27	IDE CHRDY	28	GND
29	IDE DACK	30	GND
31	INTERRUPT	32	N/C
33	SA 1	34	N/C
35	SA 0	36	SA 2
37	HDC CS0#	38	HDC CS1#
39	HDD ACTIVE#	40	GND



**MINI-PCIE1: PCI-E Mini Card connector**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	WAKE-	2	+3.3V
3	N/C	4	GND
5	N/C	6	+1.5V
7	N/C	8	N/C
9	GND	10	N/C
11	PCIE_CLK-	12	N/C
13	PCIE_CLK+	14	N/C
15	GND	16	N/C
17	N/C	18	GND
19	N/C	20	W_DISABLE#
21	GND	22	PERST#
23	PERN	24	+3.3V AUX1
25	PERP	26	GND
27	GND	28	+1.5V
29	GND	30	SMB_CLK
31	PETN	32	SMB_DATA
33	PETP	34	GND
35	GND	36	USB_DATA -
37	N/C	38	USB_DATA+
39	N/C	40	GND
41	N/C	42	N/C
43	N/C	44	N/C
45	N/C	46	N/C
47	N/C	48	+1.5V
49	N/C	50	GND
51	N/C	52	+3.3V

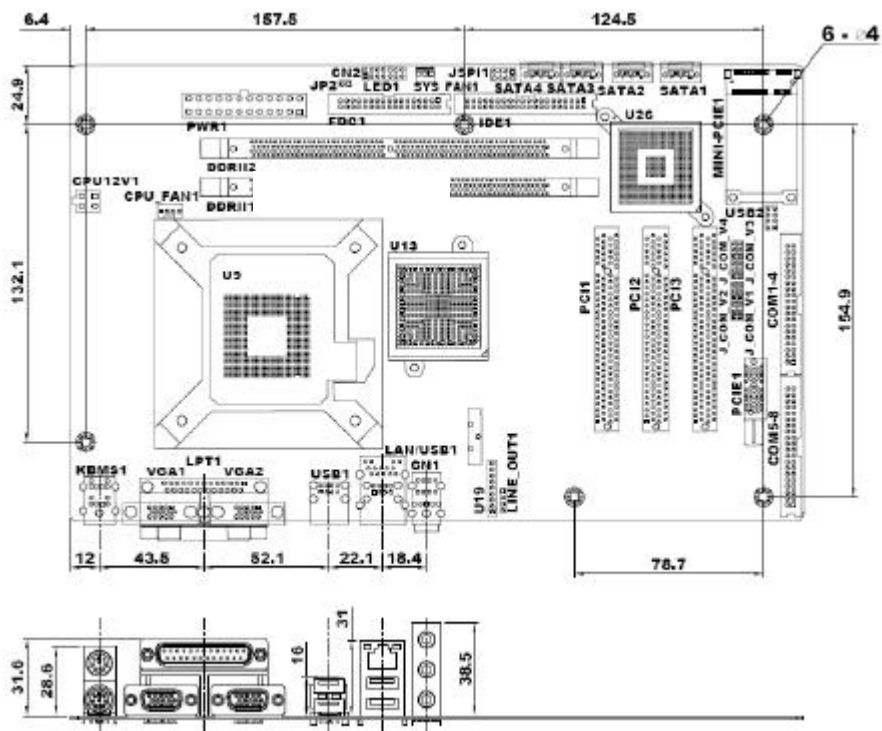
<b>COM1-4 : Internal Serial Port Connectors</b>			
<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>
1	DCD1 #	2	DSR1 #
3	RXD1	4	RTS1 #
5	TXD1	6	CTS1 #
7	DTR1 #	8	RI1 #
9	GND	10	GND
11	DCD2 #	12	DSR2 #
13	RXD2	14	RTS2 #
15	TXD2	16	CTS2 #
17	DTR2 #	18	RI2 #
19	GND	20	GND
21	DCD3 #	22	DSR3 #
23	RXD3	24	RTS3 #
25	TXD3	26	CTS3 #
27	DTR3 #	28	RI3 #
29	GND	30	GND
31	DCD4 #	32	DSR4 #
33	RXD4	34	RTS4 #
35	TXD4	36	CTS4 #
37	DTR4 #	38	RI4 #
39	GND	40	GND

<b>SATA1, 2, 3, 4 : Serial ATA Connectors.</b>	
<b>PIN</b>	<b>DESCRIPTION</b>
1	GND
2	TXP
3	TXN
4	GND
5	RXN
6	RXP
7	GND

**COM5-8 : Internal Serial Port Connectors**

PIN	DESCRIPTION	PIN	DESCRIPTION
1	DCD5 #	2	DSR5 #
3	RXD5	4	RTS5 #
5	TXD5	6	CTS5 #
7	DTR5 #	8	RI5 #
9	GND	10	GND
11	DCD6 #	12	DSR6 #
13	RXD6	14	RTS6 #
15	TXD6	16	CTS6 #
17	DTR6 #	18	RI6 #
19	GND	20	GND
21	DCD7 #	22	DSR7 #
23	RXD7	24	RTS7 #
25	TXD7	26	CTS7 #
27	DTR7 #	28	RI7 #
29	GND	30	GND
31	DCD8 #	32	DSR8 #
33	RXD8	34	RTS8 #
35	TXD8	36	CTS8 #
37	DTR8 #	38	RI8 #
39	GND	40	GND

# Board Layout:



(Unit:mm)