

**Full-size PICMG 1.0 with Intel® G41 supports socket LGA775 Intel® Core™ 2 Quad CPU card with VGA, Dual PCIe GbE, SATAII, COM, USB 2.0 and Audio, RoHS**

# **WSB-G41A**

## **Quick Installation Guide**

### **Version 1.0**

Apr. 07, 2010

### **Package Contents**

WSB-G41A package includes the following items:

- 1 x WSB-G41A Single Board Computer
- 1 x Mini Jumper Pack
- 4 x SATA Cable
- 1 x Dual RS-232 Cable
- 1 x USB Cable
- 1 x IO-KIT-001-R20 ( DVI Model Only )
- 1 x Utility CD
- 1 x QIG (Quick Installation Guide)



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## Specifications

- CPU: LGA775 45nm Intel®Core™ 2 Extreme/Quad/Duo, Celeron processors with 1333/1066/800MHz FSB supports
- System Chipset: Intel® G41+ICH7
- BIOS: AMI BIOS
- System Memory: 2 x 240-pin dual-channel DDR3  
800/1066MHz SDRAM up to 4GB
- Ethernet: Dual PCIe Intel® 82583V GbE Controller (PCIe x1 Interface)
- I/O Interface:
  - 2 x RS-232
  - 7 x USB2.0 (1 on bracket, 6 on board by 2x4-pin pin header)
  - 4 x SATA II
  - 1 x IDE
  - 1 x FDD
  - 1 x LPT
  - 1 x 6-pin pin header for PS/2 KB/MS
  - 1 x PS/2 KB/MS
- Super I/O: ITE IT8718F
- Digital I/O: 8-bit Digital I/O, 4-bit input / 4-bit output
- Infrared Interface: 1 x 5-pin pin header
- Graphic:
  - Intel® Graphics Media Accelerator X4500 (Intel®GMA X4500)
- Display:
  - VGA Integrated in Intel® G41
  - DVI by Silicon Image SIL1362 (WSB-G41A-DVI only)
- Audio:
  - 10-pin on board header connects to the IEI Audio kit (AC-KIT-883HD-RD / AC-KIT08R-R10)
- Watchdog timer: Software programmable 1-255 sec. by Super I/O:ITE IT8718F
- Power supply: ATX Power Support
- Power Consumption:
  - 5V@7.13, 12V @0.27A, 5V @0.11A, Vcore\_12V@3.02A

(Running 3D Mark20001SE with Intel®Core™2 Duo E8500  
3.16GHz 1333MHz FSB CPU with 2\*2GB DDR3 SDRAM)

- Operation Temperature: 0 ~ 60°C( 32°F ~ 140°F)
- Operation Humidity: 5% ~ 95%, non-condensing
- Dimensions: 338mm X 122mm
- Weight: 1.1Kg

## **Ordering Information**

### **WSB-G41A-R10:**

Full-size PICMG 1.0 with Intel® G41 supports socket LGA775 Intel® Core™2 Quad CPU card with VGA, Dual PCIe GbE, SATAII, COM, USB 2.0 and Audio, RoHS

### **WSB-G41A-DVI-R10:**

Full-size PICMG 1.0 with Intel® G41 supports socket LGA775 Intel® Core™2 Quad CPU card with VGA / DVI, Dual PCIe GbE, SATAII, COM, USB 2.0 and Audio, RoHS

### **AC-KIT883HD-R10:**

7.1Channel HD Audio kit with Realtek ALC883 support dual audio streams

### **AC-KIT08R-R10:**

5.1Channel AC' 97 audio kit with Realtek ALC655

### **CF-775A-RS:**

High performance CPU cooler (92mm x 92mm x 73mm , 130W)

### **CF-520-RS-R11:**

High performance CPU cooler (115mm x 115mm x 67mm , 115W)

**CB-USB14-RS:** 4 ports USB cable

### **32102-000100-100-RS/32102-000100-200-RS/32102-000100-300-RS:**

SATA power cable

**19800-000049-RS:** LPT cable

**32200-000052-RS:** ATA66 IDE flat cable

## Jumpers setting and Connectors

<b>LABEL</b>	<b>FUNCTION</b>
J_CMOS1	Clear CMOS setting Jumper
VGA1	External VGA 15-pin Female Connector
USB_C1	External USB Port Connectors
LAN1、 LAN2	External RJ45 LAN Connectors
KB1/MS1	Internal PS/2 KEYBOARD/MOUSE Connector
COM1 COM2	Internal Serial Port Connectors
USB1	Internal USB Connector
J_AUDIO1	External Audio Module Connector
SATA1 SATA2 SATA3 SATA4	Serial ATA Connectors
IR1	Infrared Interface Connector
PIDE	Internal IDE Connector
FDD1	Internal FDD Connector
LPT1	Internal LPT Connector
CPU_FAN1	CPU Fan Connector
DIO1	Digital Input / Output Connector
F_PANEL1	PWR、 RST Buttons、 Speaker and Indicators
CPU12V1	ATX-12V CPU Power Input Connector

<b>J_CMOS1 : Clear CMOS setting Jumper</b>	
<b>J_CMOS1</b>	<b>DESCRIPTION</b>
1-2 (Default)	Normal
2-3	Clear CMOS Data

<b>VGA1 : 15-pin Female Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	RED	2	GREEN
3	BLUE	4	NC
5	GND	6	GND
7	GND	8	GND
9	VCC	10	GND
11	NC	12	DCCDAT
13	HSYNC	14	VSYNC
15	DCCCLK		

<b>USB_C1: USB Connector</b>	
<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC
2	DATA-
3	DATA+
4	GROUND

<b>USB1: Internal USB Connector</b>			
<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>
1	VCC (+5V)	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	VCC (+5V)

<b>LAN1, LAN2: RJ45 LAN Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	MDIA3-	5	MDIA1+
2	MDIA3+	6	MDIA2+-
3.	MDIA2-	7	MDIA0-
4.	MDIA1-	8	MDIA0+

<b>MS/KB1: Internal 6-pin Keyboard Connector</b>	
<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC(+5V)
2	Mouse Data
3	Mouse Clock
4	Keyboard Data
5	Keyboard Clock
6	Ground

<b>COM1,COM2: Internal Serial Port Connector</b>			
<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>
1	DCD#	2	DSR#
3	RXD	4	RTS#
5	TXD	6	CTS#
7	DTR#	8	RI#
9	GND	10	NC

<b>J_AUDIO1 : External Audio Module Connector</b>			
<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>
1	ACZ_SYNC	2	ACZ_BITCLK
3	ACZ_SDOOUT	4	ACZ_PCBEOP
5	ACZ_SDIN	6	ACZ_RST#
7	ACZ_VCC(+5V)	8	ACZ_GND
9	ACZ_12V	10	ACZ_GND

<b>SATA1~SATA4 : Serial ATA Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	5	RX-
2	TX+	6	RX+
3	TX-	7	GND
4	GND	8	N/C

<b>CPU_FAN1 : CPU Fan Connector</b>	
<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	Ground
2	+12V
3	Rotation Signal
4	Control

<b>IR1: IrDA Connector</b>	
<b>PIN</b>	<b>DESCRIPTION</b>
1	VCC (+5V)
2	NC
3	IR-RX
4	GND
5	IR-TX

<b>PIDE1: IDE Interface Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
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	BALE – DEFAULT
29	IDE DACK	30	GND
31	INTERRUPT	32	N/C
33	SA1	34	PDIAG#
35	SA0	36	SA2
37	HDC CS0#	38	HDC CS1#
39	HDD ACTIVE#	40	GND

<b>DIO1 : Digital Input / Output Connector</b>			
<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>
1	Ground	2	VCC (+5V)
3	Output 3	4	Output 2
5	Output 1	6	Output 0
7	Input 3	8	Input 2
9	Input 1	10	Input 0

<b>FDD1: FDC Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
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#

<b>LPT1 : Parallel Port Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	STROBE#	14	AUTO FORM FEED #
2	DATA0	15	ERROR#
3	DATA1	16	INITIALIZE#
4	DATA2	17	PRINTER SELECT LN#
5	DATA3	18	GND
6	DATA4	19	GND
7	DATA5	20	GND
8	DATA6	21	GND
9	DATA7	22	GND
10	ACKNOWLEDGE#	23	GND
11	BUSY	24	GND
12	PAPER EMPTY	25	GND
13	PRINTER SELECT		



<b>F_PANEL1 : PWR, RST Buttons, Speaker and Indicators</b>					
<b>Function</b>	<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>	<b>Function</b>
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	

<b>CPU12V1: ATX-12V CPU Power Input connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	GND
3	+12V	4	+12V

# Board Layout: Jumper and Connector Locations

