

**ATX motherboard supports 22nm LGA1150 Intel® Xeon E3/Core™ i3/  
Pentium® and Celeron® per Intel® C226, DDR3, VGA, Dual Intel® PCIe  
GbE, Four USB 3.0, Six SATA 6Gb/s, HD Audio, iRIS-2400 and RoHS**

# **IMBA-C2260-i2**

## **Quick Installation Guide**

**Version 1.1**

Nov24, 2014.

### **Package List**

IMBA-C2260-i2 package includes the following items:

- I 1 x IMBA-C2260-i2 single board computer
- I 1 x I/O shielding (P/N: 45014-0034C0-00-RS)
- I 2 x SATA cable
- I 1 x Utility CD
- I 1 x QIG (Quick Installation Guide)



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## Specifications

- I CPU:  
LGA1150 Intel® Xeon® E3/Core™ i3/Pentium® or Celeron® processor supported
- I System Chipset: Intel® C226
- I Memory:  
Four 240-pin 1600/1333MHz dual-channel DDR3 SDRAM  
ECC and non-ECC unbuffered DIMMs supported (system max. 32GB)
- I BIOS: UEFI BIOS
- I Graphic Engine:  
Intel® HD Graphics Gen 7.5 support for DX11.1 and OpenCL 1.2, OpenGL 3.2 Full MPEG2, VC1, AVC Decode
- I Display Output:  
VGA (Up to 1920x1200 @ 60 Hz)  
iDP interface for HDMI, LVDS, VGA, DVI, DP  
(Up to 3840x2160 @60 Hz)
- I Ethernet:  
LAN1: Intel® I210 PCIe controller  
LAN2: Intel® I217LM with Intel® AMT 9.0 support
- I Super IO: Fintek F81866
- I EC: IWDD
- I Digital I/O: 8-bit digital I/O (4-bit input / 4-bit output)
- I Audio:  
Realtek ALC662 HD Audio codec (Line-in, Line-out, Mic)
- I I/O Interface:  
5 x RS-232  
1 x RS-422/485  
6 x SATA 6Gb/s  
1 x LPT  
4 x USB 3.0 (rear IO)  
8 x USB 2.0 (4 x rear IO, 4 by pin header)

- 1 x mSATA (colay SATA port)
- 1 x 6-pin wafer for PS/2 KB/MS
- I Watchdog Timer:
  - Software programmable support 1~255 sec. system reset
- I FAN:
  - 1 x 4-pin CPU fan connector
  - 2 x 3-pin system fan connectors
- I Front Audio:
  - 1 x 10-pin (2x5) header
- I Front Panel:
  - 1 x Front Panel
  - (Power LED, HDD LED, Speaker, Power Button, Reset Button)
- I LAN LED: 2 x 2-pin (1x2) header for LAN1 LED, LAN2 LED
- I TPM: 1 x 20-pin (2x10) header
- I SMBus: 1 x 4-pin (1x4) wafer
- I I2C: 1 x 4-pin (1x4) wafer
- I IPMI: 1 x DDR3 SO-DIMM slot supports iRIS-2400
- I Expansion:
  - 2 x PCI slots
  - 1 x PCIe x1 slot
  - 3 x PCIe x4 slots (support PCIe x1)
  - 1 x PCIe x16 slot (with x8 signal)
- I Power supply: ATX Power Supply
- I Power Consumption:
  - 3.3V@0.57A, 5V@4.50A, 12V@0.14A, Vcore@5.20A, 5VSB@0.19A
  - (Intel® 3.10GHz CPU with four 1333MHz 2GB DDR3 memory)
- I Operation Temperature: -20°C ~ 60°C
- I Operation Humidity: 5% ~ 95%, non-condensing
- I Dimensions: 244mm x 305mm
- I Weight GW/NW: 1200g / 700g

## Ordering Information

- I **IMBA-C2260-i2-R11:**  
ATX motherboard supports 22nm LGA1150 Intel® Xeon E3/  
Core™ i3/Pentium® and Celeron® per Intel® C226, DDR3, VGA,  
Dual Intel® PCIe GbE, four USB 3.0, six SATA 6Gb/s, HD Audio,  
iRIS-2400 and RoHS
- I **19800-003100-200-RS:** Dual ports USB cable with bracket
- I **19800-010500-100-RS:** USB 3.0 cable with bracket
- I **32205-003800-100-RS:** RS-422/485 cable, 200mm
- I **19800-000051-RS:** RS-232 cable, 230mm (P=2.54)
- I **32102-000100-200-RS:**  
SATA power cable, MOLEX 5264-4P to SATA15P
- I **19800-000075-RS:** PS/2 KB/MS Y-cable with bracket, 220mmz
- I **19800-000049-RS:** LPT Cable
- I **CF-1156A-RS-R11:**  
High performance LGA1155/LGA1156 cooler kit, 1U chassis  
compatible, 73W
- I **CF-1156E-R11:**  
High performance LGA1155/LGA1156 cooler kit, 95W
- I **DP-LVDS-R10:**  
DisplayPort to 24 bit dual channel LVDS converter board  
(For iEi IDP connector)
- I **DP-HDMI-R10:**  
DisplayPort to HDMI converter board (For iEi IDP connector)
- I **DP-DVI-R10:**  
DisplayPort to DVI-D converter board (For iEi IDP connector)
- I **DP-VGA-R10:**  
DisplayPort to VGA converter board (For iEi IDP connector)
- I **DP-DP-R10:**  
DisplayPort to DisplayPort converter board (For iEi IDP connector)
- I **TPM-IN01-R11:** 20-Pin Infineon TPM module, software management  
tool, firmware V3.17

## Jumpers setting and connectors

LABEL	FUNCTION
J_ATX_AT1	AT/ATX mode select switch
J_CMOS1	Clear CMOS button
PCIE x16 Power	PCIEX16 channel mode setting
USB SW1, USB SW2	USB power setting
J_FLASH1	Flash descriptor security override
BAT1	Battery connector
CHASSIS1	Chassis status connector
CPU_FAN1	CPU fan connector
CPU12V1	+12V power source connector
ATX1	24-pin ATX power source connector
CHA_DIMM1, CHA_DIMM2 CHB_DIMM1, CHB_DIMM2	DDR3 DIMM slots
DIO1	Digital I/O connector
DP1	Display port connector
F_PANEL1	Front panel connector
FRONT_PANEL1	Front panel audio connector
IPMI1	Collocation IPMI module(iRIS-2400)
CN5	I2C connector
KB_MS1	Keyboard and mouse connector
LED_LAN1	LAN1 link LED connector
LED_LAN2	LAN2 link LED connector
LPT1	Parallel port connector
CN2	M-SATA card connector
COM2, COM3, COM5, COM6	Internal RS-232 serial port connectors
COM4	Internal RS-422/485 serial port connector
SATA1, SATA2, SATA3 SATA4, SATA5, SATA6	Serial ATA 3.0 connectors
CN1	SMBUS connector
SPDIF1	SPDIF connector
SYS_FAN1, SYS_FAN2	System fan connector
TPM1	TPM connector
USB1, USB2	Internal USB 2.0 connectors

CN4	Internal USB 3.0 connector
AUDIO_CV1	HD audio connector
LAN1_USB1	RJ45 LAN and USB 3.0 connectors
LAN2_USB2	RJ45 LAN and USB 3.0 connectors
K/M_USB1	Keyboard & Mouse and USB 2.0 connectors
CNUSB1	USB 2.0 connectors
VGACOM1	VGA and RS-232 serial port connectors

#### J\_ATX\_AT1: AT/ATX mode select switch

PIN NO.	DESCRIPTION
Short 1 - 2	ATX Mode (default)
Short 2 - 3	AT Mode

#### J\_CMOS1: Clear CMOS button

PIN NO.	DESCRIPTION
NC (default)	Keep CMOS Setup (Normal Operation)
Press button	Clear CMOS Setup

#### PCIEX16 Power: PCIEX16 channel mode setting

PCIEX16	DESCRIPTION
1 x16 PCIe (default)	1 x16 PCIe
2 x8 PCIe	2 x8 PCIe
1 x8 , 2x4 PCIe	1 x8 , 2x4 PCIe

Aptio Setup Utility - Copyright (C) 2012 American Megatrends, Inc.

#### Chipset

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Auto Power Button Status          [Disabled(ATX)]
Restore AC Power Loss             [Last State]
> PCI Express Configuration
> PCI Azalia Configuration

Power Saving Function(ERP)       [Disabled]

PCIEX16 Power                     [1 x16 PCIe]
USB SW1                          [+5V DUAL]
USB SW2                          [+5V DUAL]

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USB SW1, USB SW2: USB power setting	
PCIE x16	DESCRIPTION
+5V DUAL (default)	+5V DUAL
+5V	+5V

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Chipset

Auto Power Button Status	[Disabled(ATX)]	
Restore AC Power Loss	[Last State]	-----
> PCI Express Configuration		
> PCI Azalia Configuration		
Power Saving Function(ERP)	[Disabled]	
PCIEX16 Power	[1 x16 PCIE]	
USB SW1	[+5V DUAL]	
USB SW2	[+5V DUAL]	

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J_FLASH1: Flash descriptor security override	
PIN NO.	DESCRIPTION
Short 1 - 2	Disabled (default)
Short 2 - 3	Enabled

BAT1: Battery connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	VBATT	2	GND

CHASSIS1: Chassis status connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	+3.3VSB	2	CHASSIS OPEN

CPU_FAN1: CPU fan connector			
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	GND	2	+12V
3	FANIO	4	PWM

<b>CPU12V1: +12V power source connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	GND
3	+12V	4	+12V

<b>ATX1: 24-pin ATX power source connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
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>DIO1: Digital I/O connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	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



<b>DP1: Display port connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	+5V	2	LANE1N
3	LANE1P	4	GND
5	LANE3N	6	LANE3P
7	GND	8	AUX_CTRL_DET_D
9	GND	10	HPD
11	AUXP	12	AUXN
13	GND	14	LANE2P
15	LANE2N	16	GND
17	LANE0P	18	LANE0N
19	+3.3V	20	NC

<b>FRONT_PANEL1: Front audio connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	MIC2-L	2	GND
3	MIC2-R	4	Presence#
5	LINE2-R	6	MIC2-JD
7	FRONT-IO	8	NC
9	LINE2-L	10	LINE2-JD

<b>F_PANEL1: Front panel connector</b>					
	<b>PIN</b>	<b>DESCRIPTION</b>	<b>PIN</b>	<b>DESCRIPTION</b>	
PWR LED	1	+5V	2	BEEP_PWR	SPKR
	3	NC	4	IPMI ID_LED+	IPMI LED
	5	GND	6	IPMI ID_LED-	
PWR BTN	7	PWRBTN_SW#	8	PC_BEEP	SPKR
	9	GND	10	NC	RESET
HDD LED	11	+5V	12	EXTRST-	
	13	SATA_LED#	14	GND	

<b>CN5: I2C connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	PCH_GP38
3	PCH_GP39	4	+5V

<b>KB_MS1: Keyboard and mouse connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC	2	MSDATA
3	MCLK	4	KBDATA
5	KBCLK	6	GND

<b>LED_LAN1: LAN1 link LED connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	+3.3V	2	LAN1_LED_LNK#_ACT

<b>LED_LAN2: LAN2 link LED connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	+3.3V	2	LAN2_LED_LNK#_ACT

<b>LPT1: Parallel port connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	STROBE#	2	DATA0
3	DATA1	4	DATA2
5	DATA3	6	DATA4
7	DATA5	8	DATA6
9	DATA7	10	ACKNOWLEDGE#
11	BUSY	12	PAPER EMPTY
13	PRINTER SELECT	14	AUTO FORM FEED #
15	ERROR#	16	INITIALIZE#
17	PRINTER SELECT LN#	18	GND
19	GND	20	GND
21	GND	22	GND
23	GND	24	GND
25	GND	26	NC

<b>CN2: M-SATA card connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	PCIE_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	MSATA_CLK#	12	N/C
13	MSATA_CLK	14	N/C
15	GND	16	N/C
17	PLTRST_N	18	GND
19	N/C	20	+3.3V
21	GND	22	PLTRST_N
23	SATA_RX+	24	+3.3V
25	SATA_RX-	26	GND
27	GND	28	1.5V
29	GND	30	SMB_CLK
31	SATA_TX-	32	SMB_DATA
33	SATA_TX+	34	GND
35	GND	36	USB_DATA-
37	GND	38	USB_DATA+
39	+3.3V	40	GND
41	+3.3V	42	N/C
43	+3.3V	44	N/C
45	CLINK_CLK	46	N/C
47	CLINK_DATA	48	1.5V
49	CLINK_RST#	50	GND
51	MSATA_DET	52	+3.3V

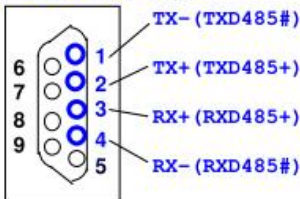
**COM2, COM3, COM5, COM6: Internal RS-232 serial port connectors**

Function	PIN	DESCRIPTION	PIN	DESCRIPTION
COM2	1	DCD	2	DSR
	3	RXD	4	RST
	5	TXD	6	CTS
	7	DTR	8	RI
	9	GND	10	GND
COM3	11	DCD	12	DSR
	13	RXD	14	RST
	15	TXD	16	CTS
	17	DTR	18	RI
	19	GND	20	GND
COM5	21	DCD	22	DSR
	23	RXD	24	RST
	25	TXD	26	CTS
	27	DTR	28	RI
	29	GND	30	GND
COM6	31	DCD	32	DSR
	33	RXD	34	RST
	35	TXD	36	CTS
	37	DTR	38	RI
	39	GND	40	GND

**COM4: RS-422/485 serial port connector**

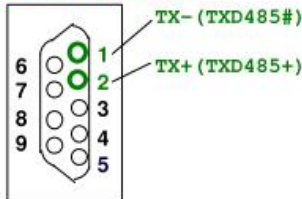
PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1	RXD485#	2	RXD485+
3	TXD485+	4	TXD485#

**RS422 Pin define**



D-SUB 9PIN MALE

**RS485 Pin define**



D-SUB 9PIN MALE

<b>SATA1, SATA2, SATA3, SATA4, SATA5, SATA6: Serial ATA 3.0 connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	SATA_TX+
3	SATA_TX-	4	GND
5	SATA_RX-	6	SATA RX+
7	GND		

<b>CN1: SMBUS connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	SMB_DATA
3	SMB_CLK	4	+5V

<b>SPDIF1: SPDIF connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	+5V	2	NC
3	SPDIFOUT	4	GND
5	SPDIFIN		

<b>SYS_FAN1, SYS_FAN2: System fan connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	FANIO	2	+12V (PWM)
3	GND		

<b>TPM1: TPM connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	LCLK	2	GND
3	LFRAME#	4	NC
5	LRERST#	6	+5V
7	LAD3	8	LAD2
9	+3.3V	10	LAD1
11	LAD0	12	GND
13	SCL	14	SDA
15	SB3V	16	SERIRQ
17	GND	18	GLKRUN#
19	LPCPD#	20	LDRQ#

<b>USB1, USB2: Internal USB 2.0 connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC	2	GND
3	USB_DATA-	4	USB_DATA+
5	USB_DATA+	6	USB_DATA-
7	GND	8	VCC

<b>CN4: Internal USB 3.0 connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC	2	USB3_RX-
3	USB3_RX+	4	GND
5	USB3_TX-	6	USB3_TX+
7	GND	8	USB_DATA-
9	USB_DATA+	10	NC
11	USB_DATA+	12	USB_DATA-
13	GND	14	USB3_TX+
15	USB3_TX-	16	GND
17	USB3_RX+	18	USB3_RX-
19	VCC	20	NC

<b>LAN1_USB1, LAN2_USB2: Ethernet and USB 3.0 connectors</b>			
<b>USB1: External USB 3.0 connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC	10	VCC
2	USB_DATA-	11	USB_DATA-
3	USB_DATA+	12	USB_DATA+
4	GND	13	GND
5	USB3_RX-	14	USB3_RX-
6	USB3_RX+	15	USB3_RX+
7	GND	16	GND
8	USB3_TX-	17	USB3_TX-
9	USB3_TX+	18	USB3_TX+
<b>LAN1: RJ45 LAN connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
20	LAN1_MDI0P	24	LAN1_MDI2P
21	LAN1_MDI0N	25	LAN1_MDI2N
22	LAN1_MDI1P	26	LAN1_MDI3P
23	LAN1_MDI1N	27	LAN1_MDI3N

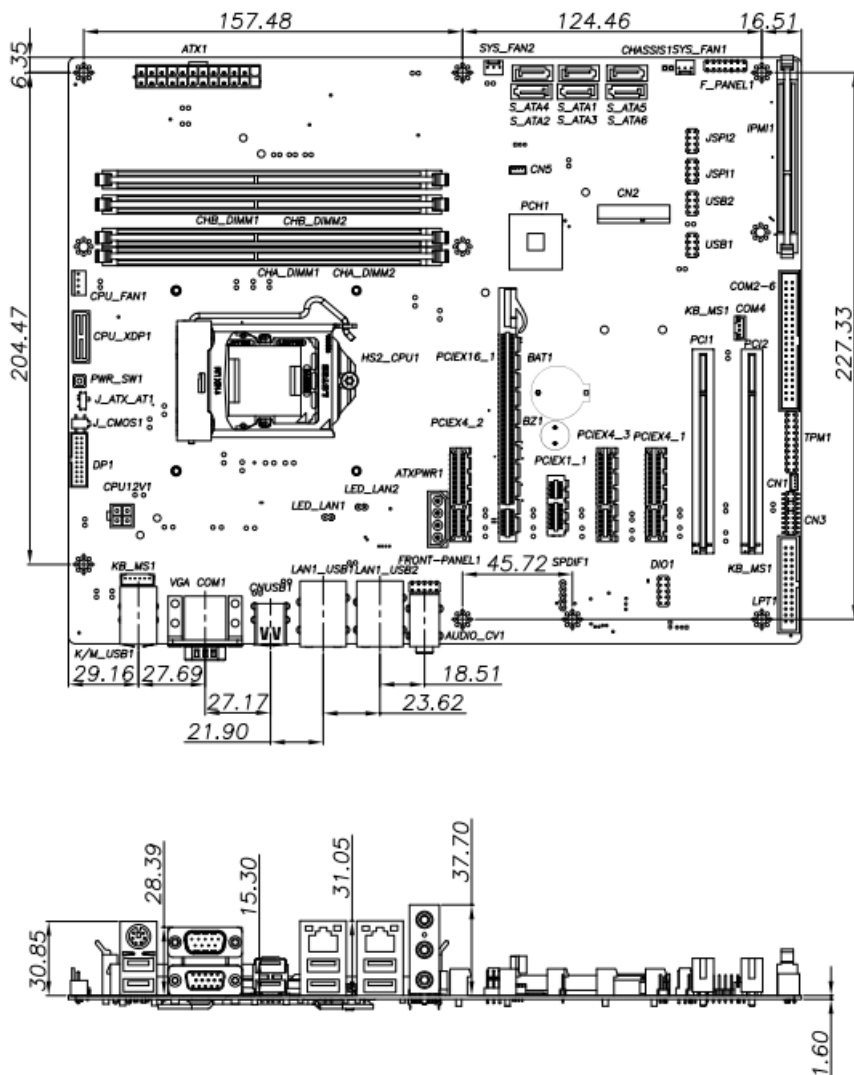
<b>K/M_USB1: Keyboard &amp; Mouse and USB 2.0 connectors</b>			
<b>USB1: External USB 2.0 connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC	5	VCC
2	USB_DATA-	6	USB_DATA-
3	USB_DATA+	7	USB_DATA+
4	GND	8	GND
<b>KB_MS1: Keyboard / Mouse connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
9	GND	10	KEYBOARD DATA
11	MOUSE DATA	12	VCC
13	KEYBOARD CLOCK	14	MOUSE CLOCK

<b>CNUSB1: USB 2.0 connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	VCC	5	VCC
2	USB_DATA-	6	USB_DATA-
3	USB_DATA+	7	USB_DATA+
4	GND	8	GND

<b>VGACOM1: VGA and RS-232 serial port connectors</b>			
<b>VGA: VGA 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	DDCDA
13	HSYNC	14	VSYNC
15	DDCCLK		
<b>COM1: External RS-232 serial port connector</b>			
1	DCD1	2	RXD1
3	TXD1	4	DTR1
5	GND1	6	DSR1
7	RTS1	8	CTS1
9	RI1		



# Board Layout: Jumper and Connector Locations



(Unit: mm)