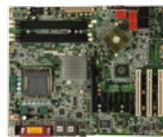


# Industrial Motherboard Selection Guide



Model Name	IMBA-Q454	IMBA-XQ354	IMBA-X9654	IMBA-9654	IMBA-9454
<b>CPU Socket</b>	Intel® LGA 775	Intel® LGA 775	Intel® LGA 775	Intel® LGA 775	Intel® LGA 775
<b>CPU Type</b>	Intel® Core™ 2 Quad/Duo, Pentium® D/4/Celeron® D	Intel® Core™ 2 Quad/Duo, Pentium® D/4/Celeron® D	Intel® Core™ 2 Quad/Duo, Pentium® D/4/Celeron® D	Intel® Core™ 2 Quad/Duo, Pentium® D/4/Celeron® D	Intel® Core™ 2 Duo, Pentium® D/4/Celeron® D
<b>FSB</b>	800/1066/1333 MHz	800/1066/1333 MHz	533/800/1066 MHz	533/800/1066 MHz	533/800/1066 MHz
<b>Chipset</b>	Intel® Q45 + ICH10DO	Intel® Q35 + ICH9DO	Intel® Q965 + ICH8DO	Intel® Q965 + ICH8DO	Intel® 945G + ICH7
<b>Memory</b>	4 x 240-pin, Max.16GB, 667/800 MHz dual-channel DDR2 DIMMs	4 x 240-pin, Max.8GB, 667/800 MHz dual-channel DDR2 DIMMs	4 x 240-pin, Max.8GB, 533/667/800 MHz dual-channel DDR2 DIMMs	4 x 240-pin, Max.8GB, 533/667/800 MHz dual-channel DDR2 DIMMs	4 x 240-pin, Max.4GB, 533/667/800 MHz dual-channel DDR2 DIMMs
<b>Display Interface</b>	VGA integrated in the Intel® Q45	VGA integrated in the Intel® Q35	VGA integrated in the Intel® Q965	VGA integrated in the Intel® Q965	VGA integrated in the Intel® 945G
<b>Ethernet</b>	LAN1: Intel® 82574L (MAC + PHY) LAN2: Intel® 82567LM (PHY)	LAN1: Intel® 82573L (MAC + PHY) LAN2: Intel® 82566DM (PHY)	Dual PCIe GbE Broadcom BCM5787M chipsets with ASF 2.0 support	Dual PCIe GbE Broadcom BCM5787M chipsets with ASF 2.0 support	Dual PCIe GbE Broadcom BCM5787M chipsets with ASF 2.0 support
<b>I/O Interface</b>	6 x RS-232 12 x USB 2.0 1 x LPT 1 x Infrared Interface 2 x PS/2 for KB/MS	6 x RS-232 12 x USB 2.0 1 x LPT 2 x PS/2 for KB/MS 1 x 20-pin LPC (TPM V1.2 Module)	5 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 1 x Infrared Interface 2 x PS/2 for KB/MS 1 x 20-pin LPC (TPM V1.2 Module)	5 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 1 x Infrared Interface 2 x PS/2 for KB/MS 1 x 20-pin LPC (TPM V1.2 Module)	5 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 2 x PS/2 for KB/MS 1 x Infrared Interface 1 x 20-pin LPC (TPM V1.2 Module)
<b>Drive Interface</b>	6 x SATA II with RAID 1 x FDD	6 x SATA II with RAID 1 x FDD	6 x SATA II with RAID	6 x SATA II with RAID	4 x SATA II 1 x CF Type II 1 x IDE 1 x FDD
<b>Audio</b>	Realtek ALC888 HD Audio codec	Realtek ALC888 HD Audio codec	Realtek ALC883 HD Audio codec	Realtek ALC883 HD Audio codec	Realtek ALC655 with AC'97 codec
<b>Digital I/O</b>	8-bit digital I/O (4 input/4 output)	8-bit digital I/O (4 input/4 output)	8-bit digital I/O (4 input/4 output)	8-bit digital I/O (4 input/4 output)	8-bit digital I/O (4 input/4 output)
<b>Power Consumption</b>	3.3V@2.64A, 5V@5.4A, 12V@0.28A (Intel® Core™ 2 Duo E8500 3.16GHz with DDR2 800MHz 4*2GB)	3.3V@2.96A, 5V@6.92A, 12V@2.77A (Intel® Core™ 2 Duo E6850 CPU with 800MHz 8GB DDR2 DIMM)	5V@4.62A, 12V@9.71A, 3.3V@ 5.74A (Pentium® 4 3.73GHz, 1G 667MHz DDR2)	5V@4.62A, 12V@9.71A, 3.3V@ 5.74A (Intel® Core™ 2 Duo E6400 2.13G with 6GB DDR2 800Mhz)	5V@4.25A, 12V@10.17A, 3.3V@ 6.07A (Pentium® D 960 3.6 GHz, 2GB*2 800MHz DDR2)
<b>Watchdog Timer</b>	software programmable and supports 1~255 sec. system reset				
<b>Operation Environment</b>	Temperature Range 0°C ~ 60°C (32°F ~ 140°F) Relative Humidity 5% ~ 95% non- condensing				
<b>Expansions Slot</b>	1 x PCIe x16 1 x PCIe x1 4 x PCI	1 x PCIe x16 3 x PCIe x4 3 x PCI	1 x PCIe x16 3 x PCIe x4 3 x PCI	1 x PCIe x16 1 x PCIe x4 5 x PCI	1 x PCIe x16 6 x PCI
<b>CPU Cooler</b>	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11

1

Industrial  
Computing  
Solutions

2

Embedded  
Computing  
Solutions

3

Industrial Data  
Collector  
and Controller

4

Video  
Capture  
Solutions

5

I/O  
Communication  
Solutions

6

Panel  
Solutions

7

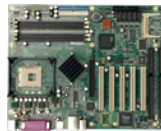
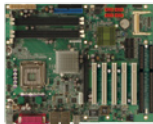
ORing  
Network  
Communication

8

Power Supply/  
Peripherals

# Industrial Motherboard Selection Guide

1

Industrial  
Computing  
Solutions

Model Name	IMBA-9454B	IMBA-9454ISA	IMBA-8650-R22	IMB-G41A	IMB-Q354	IMB-9454G-R20
<b>CPU Socket</b>	Intel® LGA 775	Intel® LGA 775	Socket478	LGA 775	Intel® LGA 775	Intel® LGA 775
<b>CPU Type</b>	Intel® Core™ 2 Duo, Pentium® D/4/ Celeron® D	Intel® Core™ 2 Duo, Pentium® D/4/ Celeron® D	Intel® Pentium® 4/ Celeron® D	Intel® Core™ 2 Quad/ Duo, Pentium® D Dual Core /Celeron	Intel® Core™ 2 Quad/Duo, Pentium® 4/Celeron® D	Intel® Core™ 2 Duo, Pentium® D/4/Celeron® D
<b>FSB</b>	533/800/1066 MHz	533/800/1066 MHz	533/800 MHz	800/1066/1333MHz	800/1066/1333 MHz	533/800/1066 MHz
<b>Chipset</b>	Intel® 945G + ICH7	Intel® 945G + ICH7	Intel® 865G + ICH5	Intel® G41 + ICH7	Intel® Q35 + ICH9-DO	Intel® 945G + ICH7
<b>Memory</b>	2 x 240-pin, Max.4GB, 533/667/800 MHz dual-channel DDR2 DIMMs	4 x 240-pin, Max.4GB, 533/667/800 MHz dual-channel DDR2 DIMMs	4 x 184-pin, Max.4 GB, 333/400 MHz dual-channel DDR DIMM	2 x 240-pin, Max.4GB, 800/1066 MHz dual-channel DDR3 DIMMs	4 x 240-pin, Max.8 GB, 533/667/800 MHz dual-channel DDR2 DIMM	4 x 240-pin, Max.4 GB, 533/667/800 MHz dual-channel DDR2 DIMM
<b>Display Interface</b>	VGA1 intrgated in the Intel® 945G VGA2 supported by Chronlet CH7021	VGA intrgated in the Intel® 945G	VGA intrgated in the Intel® 865G	VGA intrgated in the Intel® G41	VGA intrgated in the Intel® Q35	VGA intrgated in the Intel® 945G
<b>Ethernet</b>	Dual PCIe GbE Realtek RTL 8111CP chipset	Dual PCIe GbE Broadcom BCM5787M chipsets with ASF 2.0 support	Intel® 82541 GbE chipset (IMBA-8650GN) Realtek 8110SC GbE chipset (IMBA-8650GR)	Dual PCIe Realtek RTL8111CP GbE Controllers	LAN1: Intel® 82573L (MAC + PHY) LAN2: Intel® 82566DM (PHY)	Dual PCIe GbE Broadcom BCM5787M chipset
<b>I/O Interface</b>	8 x RS-232 6 x USB 2.0 1 x LPT 2 x PS2 for KB/MS	5 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 2 x PS2 for KB/MS 1 x Infrared Interface 1 x 20-pin LPC (TPM V1.2 Module)	5 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 1 x Infrared Interface 2 x PS2 for KB/MS	9 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 1 x Infrared Interface 1 x PS/2 for KB/MS	4 x RS-232 12 x USB2.0 1 x LPT 1 x FDD 1 x Infrared Interface 1 x PS/2 for KB/MS 1 x 20-pin LPC (TPM V1.2 module)	5 x RS-232 1 x RS-232/422/485 8 x USB 2.0 1 x LPT 2 x PS2 for KB/MS 1 x Infrared Interface 1 x 20-pin LPC (TPM V1.2 module)
<b>Drive Interface</b>	4 x SATA II 1 x IDE 1 x FDD	4 x SATA II 1 x CF Type II 1 x IDE 1 x FDD	2 x SATA 1 x CF Type II 1 x IDE 1 x FDD	4 x SATA II 1 x IDE	6 x SATA II support RAID	4 x SATA II 1 x IDE 1 x FDD
<b>Audio</b>	Realtek ALC655 with AC'97 codec	Realtek ALC655 with AC'97 codec	Realtek ALC655 with AC'97 codec	Realtek ALC888 HD Audio codec	Realtek ALC883 HD Audio codec	Realtek ALC655 with AC'97 codec
<b>Digital I/O</b>	NA	8-bit digital I/O (4 input/4 output)	NA	8-bit digital I/O (4 input/4 output)	8-bit digital I/O (4 input/4 output)	8-bit digital I/O (4 input/4 output)
<b>Power Consumption</b>	5V@2.11A, 12V@10.44A, 3.3V@6.07A (Pentium® D 960 3.6GHz,2GB*2, 800MHz DDR2, 3DMark 2001)	5V@4.25A, 12V@10.17A, 3.3V@6.07A (Pentium® 4 3.0GHz, 1G DDR2 667MHz)	12V@7.3A, 5V@4.9A, 3.3V@0.7A, -12V@0.2A, 5VSB@0.7A (Pentium® 4 3.0 GHz, 1G DDR 400 MHz)	5V@7.26A, 12V@0.26A, Vcore_12V@3.24A, 3.3V@0.16A (3.16GHz Intel® Core™2 Duo E8500 with 2GB*2 DDR3 1066MHz)	3.3V@2.41A, 5V@5.71A, 5Vsb@0.13A, 12V@3.69A (Intel® Core™ 2 Duo E6850 3.0 GHz, 8 GB DDR2 800 MHz)	5V@2.09A, 12V@8.9A, 3.3V@3.6A, 5Vsb@0.67A (Pentium® 4 3.2 GHz, DDR2 533 MHz 512 MB*4)
<b>Watchdog Timer</b>	Software programmable and supports 1~255 sec. system reset					
<b>Operation Environment</b>	Temperature Range 0°C ~ 60°C (32°F ~ 140°F) Relative Humidity 5% ~ 95% non-condensing					
<b>Expansions Slot</b>	1 x PCIe x1 1 x PCIe mini 3 x PCI	1 x PCIe x16 4 x PCI 1 x ISA 1 x PCI/ISA	1 x AGP x4/ x8 4 x PCI 1 x ISA 1 x PCI/ISA	1 x PCIe x16 1 x PCIe x1 2 x PCI	1 x PCIe x16 1 x PCIe x4 2 x PCI	1 x PCIe x16 1 x PCIe x1 2 x PCI
<b>CPU Cooler</b>	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11	CF-478A-RS / CF-478B-RS / CF-514-RS / CF-519-RS	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11	CF-775A-RS / CF-520-RS-R11

2

Embedded  
Computing  
Solutions

3

Industrial Data  
Collector and  
Controller

4

Video  
Capture  
Solutions

5

I/O  
Communication  
Solutions

6

Panel  
Solutions

7

ORing  
Network  
Communication

8

Power Supply/  
Peripherals