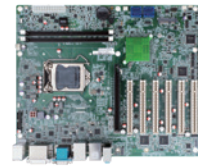


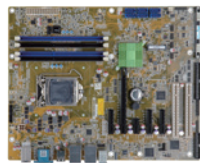
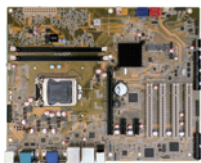
Industrial Motherboard Selection Guide

New



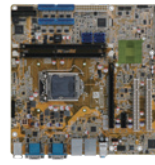
Model Name	IMBA-Q370	IMBA-C2360-i2	IMBA-Q170-i2	IMBA-H110	IMBA-BDE
CPU Socket	LGA1151	LGA1151	LGA1151	LGA1151	On board
CPU Type	8th generation Intel® Core™ i7/i5/i3/Pentium® and Celeron® processor	Intel® Xeon® E3, Core™ i3, Pentium®, Celeron® processor	6th generation Intel® Core™ i7/ i5/i3 Pentium® and Celeron® processor	6th generation Intel® Core™ i7/ i5/i3, Celeron® and Pentium® processor	Intel® Xeon processor D-1500 product family
Chipset	Intel® Q370	Intel® C236	Intel® Q170	Intel® H110	Intel® Xeon processor D-1500 product family
Memory	Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs (systemMax. 64 GB)	Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs (system Max. 64 GB)	Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs (system Max. 64 GB)	Two 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs (system Max. 64 GB)	Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs (system max. 128 GB)
Display Interface	Triple independent display support 1 x HDMI 2.0 1 x DVI-I 1 x iDP interface	Triple independent display support 1 x HDMI 2.0 1 x DVI-D 1 x VGA 1 x iDP interface	Triple independent display support 1 x HDMI 2.0 1 x DVI-D 1 x VGA 1 x iDP interface	Dual independent display support 1 x DVI-I 1 x HDMI 1 x iDP interface	VGA via AST2510
Ethernet	LAN1: Intel® I210-AT PCIe controller with NCSI support LAN2: Intel® I219LM with Intel® AMT 11.0 support	LAN1: Intel® I219LM with Intel® AMT 11.0 support LAN2: Intel® I210-AT PCIe controller with NCSI support	LAN1: Intel® I219LM with Intel® AMT 11.0 support LAN2: Intel® I210-AT PCIe controller with NCSI support	LAN1: Intel® I219V PHY LAN2: Intel® I211 PCIe Controller	LAN1: Intel® I211-AT PCIe controller LAN2: Intel® I210-AT PCIe controller LAN3&4: Inphi CS4227 PHY (optional)
iRIS Remote Management Module	N/A	1 x iRIS-2400 slot	1 x iRIS-2400 slot	N/A	N/A
I/O Interface	1 x PS/2 KB/MS 1 x LPT 2 x RS-232/422/485 4 x RS-232 4 x USB 2.0 8 x USB 3.1	1 x KB/MS 1 x LPT 2 x RS-232/422/485 4 x RS-232 5 x USB 3.1 Gen 1 7 x USB 2.0	1 x KB/MS 1 x LPT 2 x RS-232/422/485 4 x RS-232 5 x USB 3.1 Gen 1 7 x USB 2.0	1 x KB/MS 1 x LPT 2 x RS-232/422/485 4 x RS-232 4 x USB 3.1 Gen 1 5 x USB 2.0	1 x PS/2 for KM/MS 1 x RS-232/422/485 1 x USB 2.0 Type A 4 x USB 3.1 Gen 1 5 x RS-232 6 x USB 2.0
Storage Interface	6 x SATA 6Gb/s (RAID 0/1/5/10 supported)	6 x SATA 6Gb/s (RAID 0/1/5/10 supported)	6 x SATA 6Gb/s (RAID 0/1/5/10 supported)	4 x SATA 6Gb/s	6 x SATA 6Gb/s
Audio	Realtek ALC662 HD Audio codec				
Digital I/O	8-bit programmable digital I/O	8-bit programmable I/O (8-bit GPIO is for programming I/O)			
Power Consumption	3.3V@1.65A, 5V@3.4A, 12V@8.58A, 5VSV@3.4A (Intel® Core® i7-8700K up to 4.60 GHz CPU with 32GB 2600MHz DDR4 memory)	3.3V@1.51A, 5V@3.31A, 12V@9.02A, 5VSB@3.7A (Intel® Xeon® E3-1275 v5 3.60 GHz CPU with 32 GB (four 8GB) 2133 MHz DDR4 memory)	3.3V@1.65A, 5V@3.4A, 12V@8.58A, 5VSB@3.4A (Intel® Core™ i7 6700K 4.0GHz CPU with 32 GB (Four 8 GB) 2133 MHz DDR4 memory)	3.3V@1.53A, 5V@2.95A, 12V@8.38A, 5VSB@3.2A (Intel® Core™ i7 6700K 4.0GHz CPU with 16GB (two 8GB) 2133 MHz DDR4 memory)	3.3V@0.11A, 5V@2.83A, 12V@3.97A (Intel® Xeon D-1548 2.0GHz CPU with 32GB (four 4 GB) 2133MHz DDR4 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset				
Operation Environment	Temperature Range: -20°C ~ 60°C (-4°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing				Temperature Range: 0°C ~ 60°C (32°F ~ 140°F) Relative Humidity: 10% ~ 95%, non-condensing
Expansion Slot	1 x Full-size PCIe Mini card slot (support mSATA) 1 x M.2 (A key) 1 x M.2 (M Key) 1 x PCIe x16 (Gen3) (share x16 signal with 1 x8 & 1 x4 slot) 1 x PCIe x8 (Gen3) 2 x PCIe x4 (Gen3) 2 x PCI slot	1 x Full-size PCIe Mini card slot (support mSATA) 2 x PCIe x8 (Gen3) 3 x PCIe x4 (Gen3) 2 x PCI slot	1 x Full-size PCIe Mini card slot (support mSATA) 2 x PCIe x8 (Gen3) 3 x PCIe x4 (Gen3) 2 x PCI slot	1 x Full-size PCIe Mini card slot (support mSATA) 1 x PCIe x16 slot (Gen3) 6 x PCI slot	1 x M.2 connector (M key) 1 x PCIe x4 slot (for 10GbE LAN card only) 5 x PCIe x4 Gen3 1 x PCIe x4 Gen2
CPU Cooler	CF-115XA-R10 CF-1156C-R20 CF-1156D-R20 CF-115XE-R10	CF-115XA-R10 CF-1156C-R20 CF-1156D-R20 CF-115XE-R10	CF-115XA-R10 CF-1156C-R20 CF-1156D-R20 CF-115XE-R10	CF-115XA-R10 CF-1156C-R20 CF-1156D-R20 CF-115XE-R10	XCF-989A-RS-R12

Industrial Motherboard Selection Guide



Model Name	IMBA-H810	IMBA-C2260-i2-R11	IMBA-Q870-i2	IMBA-H610	IMBA-Q670-R30
CPU Socket	LGA1150	LGA1150	LGA1150	LGA1155	LGA1155
CPU Type	4th generation Intel® Core™ i7/ i5/i3 Pentium® and Celeron® processor	Intel® Xeon® E3, Core™ i3, Pentium®, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium® Dual, Celeron® processor
Chipset	Intel®H81	Intel® C226	Intel® Q87	Intel® H61	Intel® Q67
Memory	Two 240-pin 1333/1600 MHz dual-channel DDR3 SDRAM unbuffered DIMM (system max. 16 GB)	Four 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM ECC and non-ECC unbuffered DIMMs (system max. 32 GB)	Four 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs (system max. 32 GB)	Two 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM DIMM (system max. 16 GB)	Four 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMM (system max. 32 GB)
Display Interface	Dual independent display support 1 x DVI-D 1 x VGA 1 x iDP interface	Dual display supported 1 x VGA 1 x iDP interface	Triple display supported 1 x VGA 1 x DVI-D 1 x HDMI 1 x iDP interface	Dual display supported 1 x VGA 1 x DVI-D	Dual display supported 1 x VGA 1 x HDMI 1 x DVI-D
Ethernet	LAN1: Intel® I217-LM with Intel® AMT 9.0 support LAN2: Intel® I211-AT PCIe controller	LAN1: Intel® I217LM with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller with NCSI support	LAN1: Intel® I217LM with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller with NCSI support	LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support LAN2: Realtek RTL8111E PCIe GbE controller	LAN1: Intel® 82583V PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support
iRIS Remote Management Module	N/A	1 x iRIS-2400 slot	1 x iRIS-2400 slot	N/A	N/A
I/O Interface	1 x IR 1 x PS/2 for KB/MS 1 x RS-232/422/485 1 x USB 2.0 Type A 2 x USB 3.1 Gen 1 5 x RS-232 6 x USB 2.0	1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 4 x USB 3.1 Gen 1 5 x RS-232 8 x USB 2.0	1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 4 x USB 3.1 Gen 1 5 x RS-232 8 x USB 2.0	1 x iPC 1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 5 x RS-232 10 x USB 2.0	1 x iPC 1 x LPT 1 x PS/2 KB & MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 2 x USB 3.1 Gen 1 5 x RS-232 10 x USB 2.0
Storage Interface	2 x SATA 3Gb/s 2 x SATA 6Gb/s	6 x SATA 6Gb/s (RAID 0/1/5/10 supported) 1 x mSATA (colay SATA port 6) (support SATA 6Gb/s signal only)	6 x SATA 6Gb/s (RAID 0/1/5/10 supported) 1 x mSATA (colay SATA port 6) (support SATA 6Gb/s signal only)	4 x SATA 3Gb/s	2 x SATA 6Gb/s 4 x SATA 3Gb/s
Audio	Realtek ALC662 HD Audio codec			Realtek ALC892 HD Audio codec	Realtek ALC662 HD Audio codec
Digital I/O	8-bit programmable I/O (8-bit GPIO is for programming I/O)			8-bit digital I/O (4-bit input/4-bit output)	
Power Consumption	3.3V@0.83A, 5V@2.2A, 12V@3.88A, 5VSB@0.3A (Intel® Core™ i7-4770K 3.90 GHz CPU with 8 GB (two 4 GB) 1333 MHz DDR3 memory)	3.3V@0.57A, 5V@4.50A, 12V@0.14A, Vcore_12V@5.20A, 5VSB@0.19A (Intel® E3-1240 v3 3.4GHz CPU with 16 GB (four 4 GB) 1333 MHz DDR3 memory)	3.3V@0.66A, 5V@4.34A, 12V@0.16A, Vcore_12V@4.01A, 5VSB@0.21A (Intel® Core™ i7-4770K 3.90 GHz CPU with four 1333 MHz 4 GB DDR3 DDR3 memory)	3.3V@1.27A, 5V@3.87A, 12V@0.54A, Vcore@7.67A, 5VSB@0.15A (Intel® Core™ i7-2600K 3.40GHz CPU with two 1333 MHz 2 GB DDR3 Memory)	3.3V@1.65A, 5V@6.31A, 12V@0.18A, Vcore@7.88A, 5VSB@0.15A (Intel® Core™ i5-2400 3.10GHz CPU with four 1333 MHz 4 GB DDR3 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset				
Operation Environment	Temperature Range: -20°C ~ 60°C (-4°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing	Temperature Range: -10°C ~ 60°C (14°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing			
Expansion Slot	1 x PCIe x16 2 x PCIe x1 4 x PCI 1 x PCIe Mini (support mSATA)	1 x PCIe x16 slot 3 x PCIe x4 slot Default setting: 1 x PCIe x8, 2 x PCIe x4 Optional setting: 1 x PCIe x16 by BIOS setting 1 x PCIe x1 slot 2 x PCI slot	1 x PCIe x16 slot (Gen 3) 1 x PCIe x4 slot 1 x PCIe x1 slot 4 x PCI slots	1 x PCIe x16 2 x PCIe x1 4 x PCI	1 x PCIe x16 1 x PCIe x4 1 x PCIe x1 4 x PCI
CPU Cooler	CF-115XA-R10 CF-115XE-R10	CF-115XA-R10 CF-115XE-R10	CF-115XA-R10 CF-115XE-R10	CF-115XA-R10 (for 1U chassis) CF-1156C-R20 CF-1156D-R20 CF-115XE-R10	CF-115XA-R10 (for 1U chassis) CF-1156C-R20 CF-1156D-R20 CF-115XE-R10

Industrial Motherboard Selection Guide



Model Name	IMB-H110	IMB-Q870-i2	IMB-H810-i2-R11	IMB-H610
CPU Socket	LGA1151	LGA1150	LGA1150	LGA1155
CPU Type	6th generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor
Chipset	Intel® H110	Intel® Q87	Intel® H81	Intel® H61
Memory	Two 288-pin 2133MHz Dual-Channel DDR4 SDRAM Unbuffered DIMM supported up to 64GB	Four 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs (system max. 32 GB)	Two 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs (system max. 32 GB)	Two 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMM supported (system max. 16 GB)
Display Interface	Dual independent display support 1 x VGA 1 x DVI-I 1 x LVDS 1 x iDP	Triple display supported 1 x VGA 1 x DVI-D 1 x HDMI 1 x iDP interface	Triple display supported 1 x VGA1 1 x VGA2 1 x iDP interface	Dual display supported 1 x VGA (up to 2048x1536@75Hz) 1 x DVI-D (up to 1920x1200@60Hz)
Ethernet	Dual LAN: RTL 8111GN controller	LAN1: Intel® I217LM with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller with NCSI support	LAN1: Intel® I217LM LAN2: Intel® I210-AT PCIe controller with NCSI support	LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support LAN2: Realtek RTL8111E PCIe GbE controller
iRIS Remote Management Module	N/A	1 x iRIS-2400 slot		N/A
I/O Interface	1 x KB/MS 1 x LPT 2 x RS-232/422/485 4 x USB 3.1 Gen 1 8 x USB 2.0 10 x RS-232	1 x PS/2 for KB/MS 1 x RS-422/485 4 x USB 3.1 Gen 1 5 x RS-232 8 x USB 2.0	1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 by s/w selection 2 x RS-232 2 x USB 3.1 Gen 1 8 x RS-232 10 x USB 2.0	1 x iFC 1 x PS/2 KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 5 x RS-232 (for IMB-H610A/ IMB-H612A) 9 x RS-232 (for IMB-H610B/ IMB-H612B) 10 x USB 2.0
Storage Interface	4 x SATA 6Gb/s (RAID 0/1 supported)	4 x SATA 6Gb/s (RAID 0/1/5/10 supported)	2 x SATA 6Gb/s 2 x SATA 3Gb/s (AHCI supported)	4 x SATA 3Gb/s
Audio	Realtek ALC662 HD Audio codec			
Digital I/O	8-bit programmable digital I/O	8-bit programmable I/O (8-bit GPIO is for programming I/O)	N/A	8-bit digital I/O (4-bit input/4-bit output)
Power Consumption	3.3V@ 0.93A, 5V@2.99A, 12V@6.88A, 5VSB@0.02A (Intel® Core™ i7-6700K 4.0GHz CPU with 16GB (two 8GB) 2133 MHz DDR4 memory)	3.3V@0.53A, 5V@4.96A, 12V@0.12A, Vcore_12V@3.95A, 5VSB@0.18A (Intel® Core™ i7-4770K 3.90 GHz CPU with 16 GB four 1333 MHz 4 GB DDR3 memory)	3.3V@0.64A, 5V@4.20A, 12V@0.14A, Vcore_12V@3.88A, 5VSB@0.20A (Intel® Core™ i7-4770K 3.90 GHz CPU with 8 GB two 1333 MHz 4 GB DDR3 memory)	3.3V@1.75A, 5V@6.61A, Vcore@3.68A, 12V@0.09A, 5sb@0.12A (Intel® 2.60GHz CPU with four 1333 MHz 4 GB DDR3 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset			
Operation Environment	Temperature Range: -20°C ~ 60°C (-4°F~140°F) Relative Humidity: 5% ~ 95% non-condensing			Temperature Range: -10°C ~ 60°C (14°F~140°F) Relative Humidity: 5% ~ 95%, non-condensing
Expansion Slot	1 x PCIe x16 slot (Gen3) 1 x Full-size PCIe Mini card slot 1 x PCIe x1 slot (Gen2) 2 x PCI slot	1 x PCIe x16 slot (Gen 3) 1 x PCIe x4 slot 1 x PCIe x1 slot 1 x PCI slot	1 x PCIe x16 slot (Gen 3) 1 x PCIe x1 slot 2 x PCI slot	1 x PCIe x 16 3 x PCIe x 1
CPU Cooler	CF-115XA-R10 CF-115XE-R10	CF-115XA-R10 CF-115XE-R10		CF-115XA-R10 (for 1U chassis) CF-1156C-R20 CF-1156D-R20 CF-115XE-R10