

Industrial Motherboard Selection Guide

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Model Name	IMBA-C604EP	IMBA-C2360-i2	IMBA-Q170-i2	IMBA-H110	IMBA-BDE
CPU Socket	LGA2011	LGA1151	LGA1151	LGA1151	On board
CPU Type	Intel® Xeon® E5 series 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® C604	Intel® C236	Intel® Q170	Intel® H110	Intel® Xeon processor D-1500 product family
Memory	Quad-channel memory architecture (2 DIMMs per channel), 240-pin 1600/1333 MHz DDR3 SDRAM ECC UDIMMs or non-ECC RDIMMs/ LRDIMMs supported (system max. 64GB UDIMMs or 128GB RDIMMs or 256GB LRDIMMs)	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	1 x VGA driver form Aspeed AST2300	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	Dual Intel® 82574L PCIe controller	LAN1: Intel® I210-AT PCIe controller with NCSI support LAN2: Intel® I219LM with Intel® AMT 11.0 support	LAN1: Intel® I210-AT PCIe controller with NCSI support LAN2: Intel® I219LM with Intel® AMT 11.0 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 5-pin pin header for PSM1 1 x PS/2 KB/MS 1 x RS-232 1 x TPM (2x10 pin) 2 x USB 3.0 11 x USB 2.0	1 x KB/MS 1 x LPT 2 x RS-232/422/485 4 x RS-232 5 x USB 3.0 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 3.0 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 3.0 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 3.0 5 x RS-232 6 x USB 2.0
Storage Interface	4 x SATA 3Gb/s 2 x SATA 6Gb/s 4 x SAS 3Gb/s	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 digital I/O (4-bit input/4-bit output)	8-bit programmable I/O (8-bit GPIO is for programming I/O)			
Power Consumption	Vcore_12V@5.86A, 12V@1.03A, 5V@1.72A, 3.3V@1.01A, 5Vsb@0.47A (Intel® Xeon® E5-2658 2.1GHz with four 1333 MHz 4 GB DDR3 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: -10°C ~ 60°C (14°F ~ 140°F) Relative Humidity: 10% ~ 95%, non-condensing	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	4 x PCIe x8	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-2011A-RS (for 1U chassis)/ CF-2011B-RS	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-RS	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-RS	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-RS	XCF-989A-RS-R12

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Model Name	IMBA-H810	IMBA-C2260-i2-R11	IMBA-Q870-i2	IMBA-Q770
CPU Socket	LGA1150	LGA1150	LGA1150	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 processor
Chipset	Intel®H81	Intel® C226	Intel® Q87	Intel® Q77
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)	Four 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM unbuffered DIMMs supported (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	Triple display supported 2 x HDMI 1 x DVI-I
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: Intel® 82583V PCIe controller LAN2: Intel® 82579L PHY with Intel® AMT 8.0 support
iRIS Remote Management Module	N/A	1 x iRIS-2400 slot	1 x iRIS-2400 slot	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 3.0 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 3.0 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 3.0 5 x RS-232 8 x USB 2.0	1 x I ² C 1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 4 x USB 3.0 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)	2 x SATA 6Gb/s 4 x SATA 3Gb/s
Audio	Realtek ALC662 HD Audio codec			Realtek ALC892 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@1.39A, 5V@4.63A, Vcore@2.25A, 12V@0.47A, 5VSB@0.14A (Intel® 2.4GHz CPU with four 1333 MHz 2 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 1 x PCIe x4 2 x PCIe x1 3 x PCI slot
CPU Cooler	CF-1156A-RS-R11 CF-1156E-R11	CF-1156A-RS-R11 CF-1156E-R11	CF-1156A-RS-R11 CF-1156E-R11	CF-1156A-RS-R11 (for 1U chassis) CF-1156C-RS CF-1156D-RS CF-1156E-R11

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Model Name	IMBA-C2160	IMBA-H610	IMBA-C2060-R20	IMBA-Q670-R30
CPU Socket	LGA1155	LGA1155	LGA1155	LGA1155
CPU Type	Intel® Xeon® E3, Core™ i3 processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Xeon® E3, Core™ i3, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium® Dual, Celeron® processor
Chipset	Intel® C216	Intel® H61	Intel® C206	Intel® Q67
Memory	Four 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM ECC and non-ECC unbuffered DIMMs supported (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 ECC Registered and non-ECC unbuffered DIMM (system max. 32 GB)	Four 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMM (system max. 32 GB)
Display Interface	Dual display supported 1 x VGA	Dual display supported 1 x VGA 1 x DVI-D	Dual display supported 1 x VGA 1 x HDMI 1 x DVI-D	Dual display supported 1 x VGA 1 x HDMI 1 x DVI-D
Ethernet	LAN1: Intel® 82579 PHY with Intel® AMT 8.0 support LAN2: Intel® 82574L PCIe controller	LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support LAN2: Realtek RTL8111E PCIe GbE controller	LAN1: Intel® 82574L PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support	LAN1: Intel® 82583V PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support
iRIS Remote Management Module	N/A			
I/O Interface	1 x I ² C 1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 4 x USB 3.0 5 x RS-232 10 x USB 2.0	1 x I ² C 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 I ² C 1 x LPT 1 x PS/2 for KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 2 x USB 3.0 5 x RS-232 10 x USB 2.0	1 x I ² C 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 3.0 5 x RS-232 10 x USB 2.0
Storage Interface	2 x SATA 6Gb/s 4 x SATA 3Gb/s	4 x SATA 3Gb/s	2 x SATA 6Gb/s 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@1.55A, 5V@3.43A, Vcore@3.12A, 12V@0.20A, 5VSB@0.18A (Intel® Xeon® 2.2GHz CPU with two 1333 MHz 4 GB 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@1.61, 5V@2.79A 12V@0.50A, Vcore@5.59A, 5VSB@0.16A (Intel® Xeon® E3-1275 3.40GHz CPU with four 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: -10°C ~ 60°C (14°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing			
Expansion Slot	2 x PCIe x16 (share 1 PCIe x 16 signal) 2 x PCIe x4 1 x PCIe x1 2 x PCI	1 x PCIe x16 2 x PCIe x1 4 x PCI	2 x PCIe x16 (share 1 PCIe x 16 signal) 2 x PCIe x4 3 x PCI	1 x PCIe x16 1 x PCIe x4 1 x PCIe x1 4 x PCI
CPU Cooler	CF-1156A-RS-R11 (for 1U chassis) CF-1156C-RS CF-1156D-RS CF-1156E-R11			

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Model Name	IMB-H110	IMB-Q870-i2	IMB-H810-i2-R11	IMB-Q770	IMB-H610	IMB-Q670-R30
CPU Socket	LGA1151	LGA1150	LGA1150	LGA1155	LGA1155	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 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® Q77	Intel® H61	Intel® Q67
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)	Four 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM unbuffered DIMMs supported (system max. 32 GB)	Two 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMM supported (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 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	Triple display supported 2 x HDMI 1 x DVI-I	Dual display supported 1 x VGA (up to 2048x1536@75Hz) 1 x DVI-D (up to 1920x1200@60Hz)	Dual display supported 1 x VGA 1 x HDMI 1 x DVI-D
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: Intel® 82583V PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 8.0 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		N/A		
I/O Interface	1 x KB/MS 1 x LPT 2 x RS-232/422/485 4 x USB 3.0 8 x USB 2.0 10 x RS-232	1 x PS/2 for KB/MS 1 x RS-422/485 4 x USB 3.0 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 3.0 8 x RS-232 10 x USB 2.0	1 x I²C 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 4 x USB 3.0 6 x USB 2.0 9 x RS-232	1 x I²C 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	1 x I²C 1 x Infrared interface 1 x PS/2 for KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 2 x USB 3.0 9 x RS-232 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)	2 x SATA 6Gb/s 4 x SATA 3Gb/s	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
Digital I/O	8-bit programmable digital I/O	8-bit programmable I/O (8-bit GPIO is for programming I/O)	N/A	24-bit digital I/O (12-bit input/12-bit output)	8-bit digital I/O (4-bit input/4-bit output)	24-bit digital I/O (12-bit input/12-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@0.31A, 5V@2.91A, 12V@0.51A, 12V@2.12A, -12V@0.10A (Intel® Core™ i3 3200 3.2GHz CPU with four 1333 MHz 1 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)	3.3V@1.75A, 5V@6.61A, 12V@3.68A, 12V@0.09A, 5VSB@0.12 (Intel® Core™ i3-2100 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 x16 1 x PCIe x4 1 x PCIe x1 1 x PCI	1 x PCIe x 16 3 x PCIe x 1	1 x PCIe x16 1 x PCIe x4 1 x PCIe x1 2 x PCI slot
CPU Cooler	CF-1156A-RS-R11 CF-1156E-R11	CF-1156A-RS-R11 CF-1156E-R11		CF-1156A-RS-R11 (for 1U chassis) CF-1156C-RS CF-1156D-RS CF-1156E-R11		

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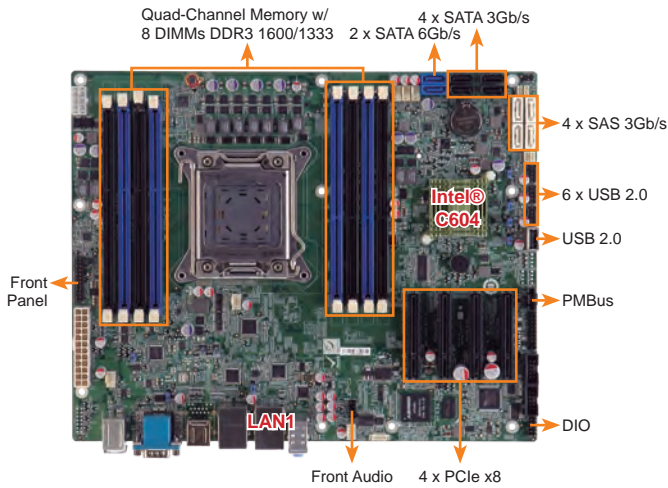
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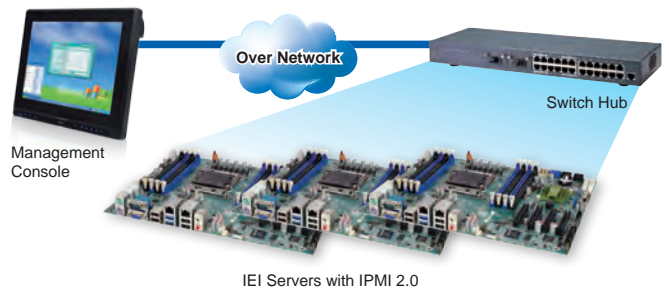
All-in-One System

IMBA-C604EP

ATX Server Board Supports 32nm LGA2011 Intel® Xeon® E5 Series up to 8 Cores CPU with Intel® C604, DDR3, VGA, Dual Intel® PCIe GbE, PCIe Gen 3.0, SAS 3Gb/s, SATA 6Gb/s, SATA 3Gb/s, USB 2.0 and Audio



Server management platform with universal processor



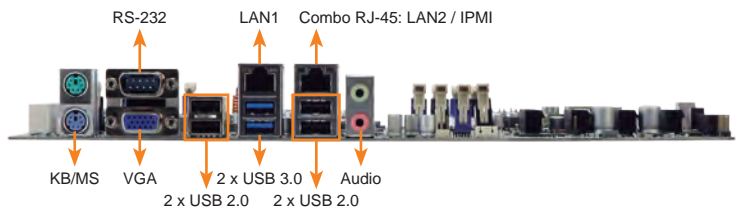
Server management features are supported by IPMI & iKVM protocols

Specifications

- ◆ CPU
LGA2011 socket supports Intel® Xeon® E5-16xx, E5-26xx, E5-46xx series (up to 8 cores) processor
- ◆ Chipset
Intel® C604
- ◆ Memory
Eight 240-pin 1600/1333 MHz quad-channel DDR3 SDRAM ECC UDIMMs or non-ECC RDIMMs/LRDIMMs support up to 256GB (system max. 64GB UDIMMs ,128GB RDIMMs or 256GB LRDIMMs)
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
Dual Intel® 82574L PCIe controller
- ◆ Server Management
1 x RJ-45 for Intelligent Platform Management Interface (IPMI) v.2.0
IPMI 2.0 with virtual media over LAN and iKVM-over-LAN support
- ◆ Graphics Engine
ASPEED AST2300
PCIe VGA/2D controller, 1920x1200@60Hz 32bpp
- ◆ Display Output
1 x VGA (up to 1920x1200@60Hz)
- ◆ Audio
Realtek ALC662 HD Audio codec supports 5.1-channel
2 x Audio jacks (line-out, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ External I/O Interface

1 x KB/MS	2 x USB 3.0
1 x RS-232	4 x USB 2.0
- ◆ Internal I/O Interface

1 x KB/MS (1x6 pin)	1 x USB 2.0 (180° Type-A)
2 x SATA 6Gb/s (RAID 0/1/10/5)	6 x USB 2.0 (2x4 pin, P=2.54)
4 x SATA 3Gb/s (RAID 0/1/10/5)	4 x SAS 3Gb/s (RAID 0/1/10)
- ◆ Front Panel
1 x Front panel connector (2x7 pin, Power LEC, HDD LED, LAN LED, speaker, power button, reset button)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ SMBus
1 x SMBus (1x5 pin)
- ◆ Expansion
4 x PCIe x8 slots
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
5 x System smart fan (1x4 pin)
- ◆ Power Supply
ATX/AT power supply
- ◆ Power Consumption
Vcore_12V@5.86A, 12V@1.03A, 5V@1.72A, 3.3V@1.01A, 5VSb@0.47A (Intel® Xeon® E5-2658 2.1GHz with four 1333 MHz 4 GB DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Storage Temperature
20°C ~ 70°C
- ◆ Operating Humidity
10% ~ 95%, non-condensing
- ◆ Dimensions: 244 mm x 305 mm
- ◆ Weight: GW: 1200g / NW: 700g



Features

1. High performance LGA2011 Xeon® E5 series CPU (up to 8 cores) supported
2. Support Quad-Channel memory technology, two DDR3 1600/1333MHz DIMM slots per channel up to 64GB UDIMMs, 128GB RDIMMs or 256GB LRDIMMs
3. Server management features are supported by IPMI & iKVM protocols
4. Integrated PCI Express Gen 3 for improved bandwidth and connectivity support up to 40 lanes at 8GT/s
5. Intel® Matrix RAID supports 0/1/10/5 for SATA and 0/1/10 for SAS hard drive interfaces
6. VGA display output driver form on-board IC via AST1300 for all Xeon® E5 series CPU
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x IMBA-C604EP single server board computer	
1 x I/O shielding	1 x Mini jumper pack
4 x SATA cable	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IMBA-C604EP-R10	ATX server board supports 32nm LGA2011 Intel® Xeon® E5 series up to 8 cores CPU with Intel® C604, DDR3, VGA, dual Intel® PCIe GbE, PCIe Gen 3.0, SAS 3Gb/s, SATA 6Gb/s, SATA 3Gb/s, USB 2.0, HD Audio and RoHS
19800-003100-100-RS	Dual port USB cable with bracket, 30mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
CF-2011A-RS	High performance LGA2011 cooler kit, 1U chassis compatible, 130W
CF-2011B-RS	High performance LGA2011 cooler kit, 2U chassis compatible, 130W
TPM-IN01-R20	20-pin Infineon TPM module, SW management tool, firmware V3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

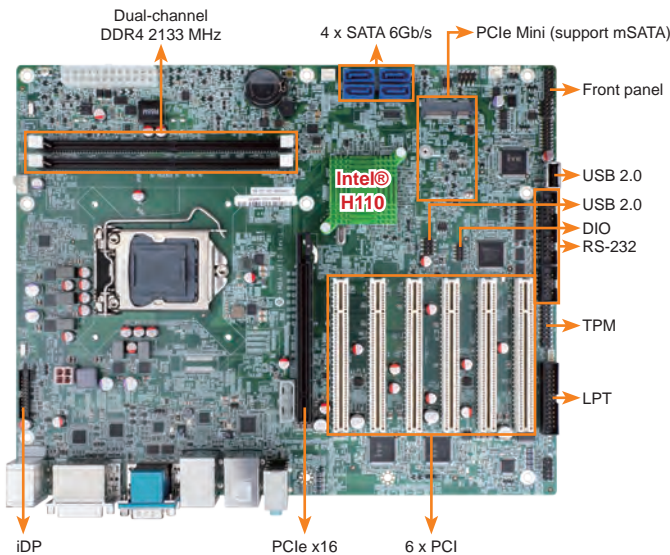
4 Open Frame Monitor

5 Power Supply/ Peripherals

6 All-in-One System

IMBA-H110

ATX motherboard supports 14nm LGA1151 6th Generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor, DDR4, dual independent displays DVI-I/HDMI/iDP, dual Intel® GbE LAN, USB 3.0, SATA 6Gb/s, HD Audio and RoHS

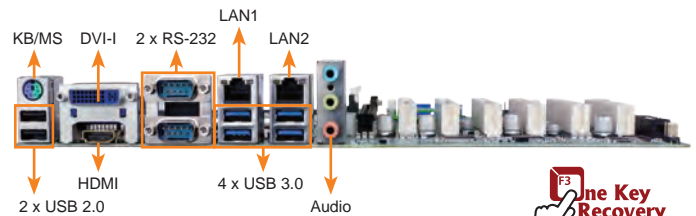
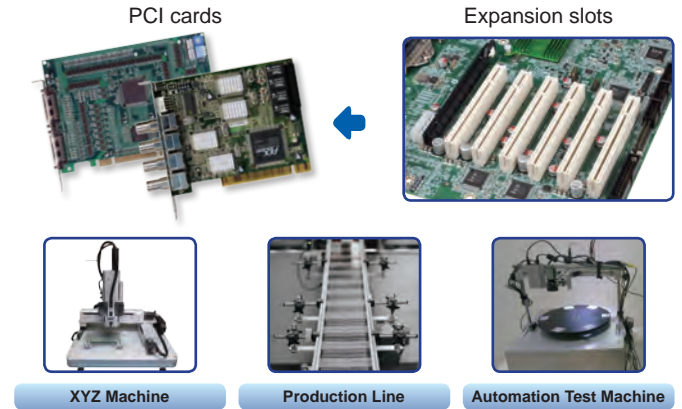


Specifications

- ◆ CPU
LGA1151 socket supports 6th generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor
- ◆ Chipset
Intel® H110
- ◆ Memory
Two 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs support up to 64 GB
- ◆ BIOS
AMI UEFI BIOS
- ◆ Graphics Engine
Intel® HD Graphics Gen 9 engine with 16 low-power execution units supports DX2015, OpenGL 5.X and OpenCL2.x, ES 2.0
- ◆ Display Output
Dual independent display
1 x DVI-I (up to 1920x 1200@60Hz)
1 x HDMI 1.4 (up to 3840x2160@60Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 1920x1200@60Hz)
- ◆ Ethernet
LAN1: Intel® I219LM PCIe controller
LAN2: Intel® I211 PCIe controller
- ◆ External I/O Interface
4 x USB 3.0
2 x USB 2.0
2 x RS-232
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin)
1 x LPT (2x13 pin, P=2.54)
1 x RS-232/422/485 (2x5 pin, P=2.54)
1 x USB 2.0 (180° Type-A)
2 x RS-232 (2x5 pin, P=2.54)
2 x USB 2.0 (2x4 pin, P=2.54)
4 x SATA 6Gb/s
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion
1 x Full-size PCIe Mini card slot (support mSATA)
1 x PCIe x16 slot (Gen3)
6 x PCI slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
2 x System fan (1x3 pin)
- ◆ Power Supply: ATX/AT power supply
- ◆ Power Consumption
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)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g

Multiple PCI Expansion Support

New



Features

- LGA1151 6th generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor
- Dual-channel DDR4 2133 MHz
- Support dual displays with DVI-I/HDMI/iDP
- Support USB 3.0 and SATA 6Gb/s
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x IMBA-H110 single board computer	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

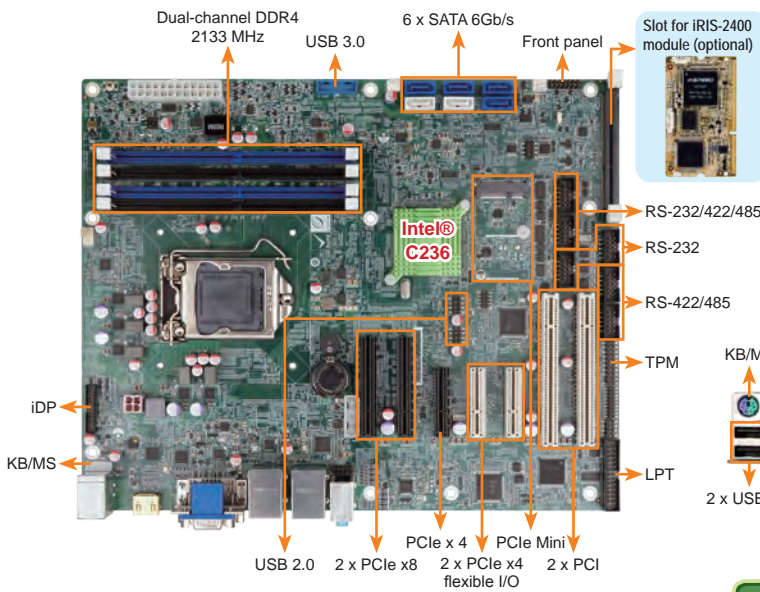
Ordering Information

Part No.	Description
IMBA-H110-R10	ATX motherboard supports 14nm LGA1151 6th Generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor, DDR4, dual independent displays DVI-I/HDMI/iDP, dual Intel® GbE LAN, SATA 6Gb/s, USB 3.0, HD Audio and RoHS
IMBA-H110-ECO-R10	ATX motherboard supports 14nm LGA1151 6th Generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor, DDR4, dual independent displays DVI-I/HDMI/iDP, dual Intel® GbE LAN, SATA 6Gb/s, USB 3.0, HD Audio, ECO packing and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-020100-100-RS	RS-232 cable, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN02-R20	20-pin Infineon TPM 2.0 module, software management tool, firmware v5.5

1 Industrial Computing Solutions
2 Video Capture Solutions
3 Industrial Computer Chassis
4 Open Frame Monitor
5 Power Supply/Peripherals
6 All-in-One System

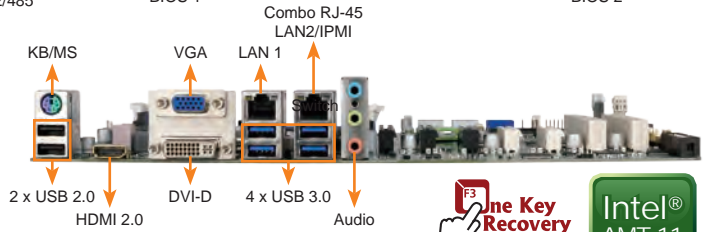
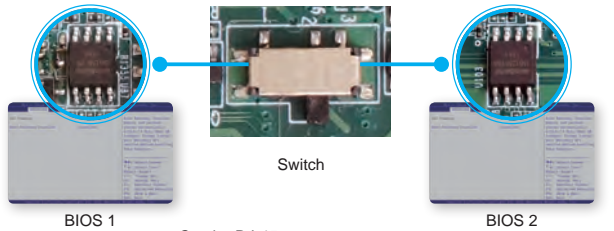
IMBA-C2360-i2

ATX motherboard supports 14nm LGA1151 Intel® Xeon® E3 v5 series, Core™ i3, Pentium®, Celeron® processor per Intel® C236, DDR4, triple independent display, HDMI 2.0, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI 2.0 and RoHS



Dual BIOS (for flexible I/O only)

Easy for customer to switch different ME firmware to achieve I/O flexibility



Specifications

- ◆ CPU
LGA1151 6th generation Intel® Xeon® E3-1200 v5, Core™ i3, Pentium® and Celeron® processor
- ◆ Chipset
Intel® C236
- ◆ Memory
Four 288-pin 2133 MHz dual-channel DDR4 SDRAM ECC and non-ECC unbuffered DIMMs support up to 64 GB
- ◆ BIOS
UEFI BIOS
- ◆ Graphics Engine
Intel® HD Graphics Gen 9 engine with 16 low-power execution units, supports DX11/12, OpenGL 4.3/4.4 and OpenCL2.x, ES 2.0
- ◆ Display Output
Triple independent display
1 x VGA (up to 1920x1200@60Hz)
1 x DVI-D (up to 1920x1200@60Hz)
1 x HDMI 2.0 (up to 4096x2160@60Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 4096x2304@60Hz)
- ◆ Ethernet
LAN1: Intel® I219LM PCIe controller
LAN2: Intel® I210AT PCIe with Intel® AMT 11.0 support
- ◆ External I/O Interface
2 x USB 2.0
4 x USB 3.0
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin) 4 x RS-232 (2x5 pin, P=2.0)
1 x LPT (2x13 pin, P=2.54) 4 x USB 2.0 (2x4 pin, P=2.0)
1 x USB 3.0 (2x10 pin, P=2.0) 6 x SATA 6Gb/s (RAID 0/1/5/10 supported)
2 x RS-232/422/485 (2x5 pin, P=2.54)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion
1 x Full-size PCIe Mini card slot (support mSATA) 2 x PCIe x8 slot (Gen3)
2 x PCI slot 3 x PCIe x4 slot (Gen3)
- ◆ iRIS Remote Management Module: 1 x iRIS-2400 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
2 x System smart fan (1x3 pin)
- ◆ Power Supply: ATX/AT power supply
- ◆ Power Consumption
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)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g

Features

- LGA1151 6th generation Intel® Xeon® E3-1200, Core™ i3, Pentium® and Celeron® processor supported
- Dual-channel DDR4 2133 MHz
- Intel® PCIe GbE with Intel® AMT11.0 support
- Support independent triple display with HDMI, DVI and VGA
- Support PCI Express generation 3.0 at 8GT/s I/O bandwidth
- USB 3.0 and SATA 6Gb/s
- Support IPMI 2.0 via iRIS-2400
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x IMBA-C2360-i2 single board computer	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
IMBA-C2360-i2-R10	ATX motherboard supports 14nm LGA1151 Intel® Xeon® E3 v5 series, Core™ i3, Pentium®, Celeron® processor per Intel® C236, DDR4, triple independent display VGA/DVI-D/HDMI 2.0, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI 2.0 and RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
PCIES-2PIMSATA-R10	Peripheral card for flexible I/O, 1 x PCIe Mini, 2 x mSATA expansion
PCIES-USB3-R10	Peripheral card for flexible I/O, USB 3.0 expansion
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-100-RS	Dual port USB cable with bracket, 30mm, P=2.54
19800-010500-200-RS	USB 3.0 cable with bracket, 457mm
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN02-R20	20-pin Infineon TPM 2.0 module, software management tool, firmware v5.5

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

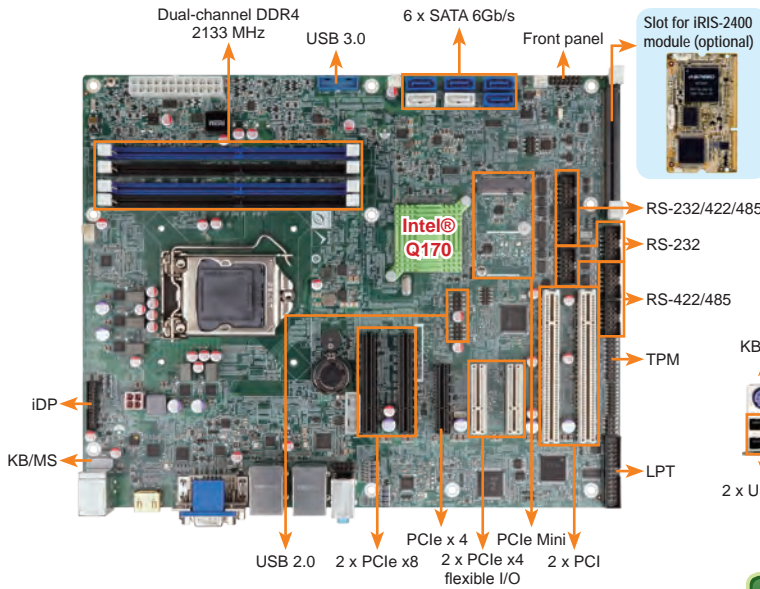
4 Open Frame Monitor

5 Power Supply/ Peripherals

6 All-in-One System

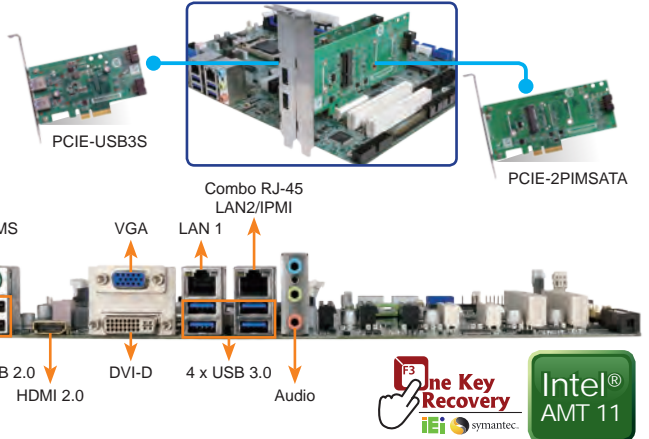
IMBA-Q170-i2

ATX motherboard supports 14nm LGA1151 Intel® CPU, Intel® Q170, DDR4, triple independent display VGA/ DVI-D/ HDMI 2.0, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI 2.0 and RoHS



Flexible I/O support

IEI USB 3.0 & mSATA/PCIe Mini expansion card
The expansion card can provide more choices to meet users demand



Specifications

- ◆ CPU
LGA 1151 6th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor
- ◆ Chipset
Intel® Q170
- ◆ Memory
Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs support up to 64 GB
- ◆ BIOS: UEFI BIOS
- ◆ Graphics Engine
Intel® HD Graphics Gen 9 engine with 16 low-power execution units, supports DX11/12, OpenGL 4.3/4.4 and OpenCL2.x, ES 2.0
- ◆ Display Output
Triple independent display
1 x VGA (up to 1920x1200@60Hz)
1 x DVI-D (up to 1920x1200@60Hz)
1 x HDMI 2.0 (up to 4096x2160@60Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 4096x2304@60Hz)
- ◆ Ethernet
LAN1: Intel® I219LM PCIe controller
LAN2: Intel® I210AT PCIe with Intel® AMT 11.0 support
- ◆ External I/O Interface
2 x USB 2.0
4 x USB 3.0
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin) 4 x RS-232 (2x5 pin, P=2.54)
1 x LPT (2x13 pin, P=2.54) 4 x USB 2.0 (2x4 pin, P=2.0)
1 x USB 3.0 (2x10 pin, P=2.0) 6 x SATA 6Gb/s (RAID 0/1/5/10 supported)
2 x RS-232/422/485 (2x5 pin, P=2.54)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion
1 x Full-size PCIe Mini card slot (support mSATA)
2 x PCI slot
2 x PCIe x 8 slot (Gen3)
3 x PCIe x 4 slot (Gen3)
- ◆ iRIS Remote Management Module: 1 x iRIS-2400 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
2 x System smart fan (1x3 pin)
- ◆ Chassis Open: 1 x Chassis intrusion (1x2 pin)
- ◆ Power Supply: ATX/AT power supply
- ◆ Power Consumption
3.3V@1.65A, 5V@3.4A, 12V@8.58A, 5VSB@3.4A
(Intel® Core™ i7 6700K 4.0GHz CPU with 32 GB (four 4 GB) 2133 MHz DDR4 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g

Features

- LGA1151 6th generation Intel® Core™ i7/i5/i3, Celeron® and Pentium® processor
- Dual-channel DDR4 2133 MHz
- Support triple display with HDMI, DVI and VGA
- Support USB 3.0, SATA 6Gb/s and PCI Express Gen3
- Support IPMI 2.0 via iRIS-2400 module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

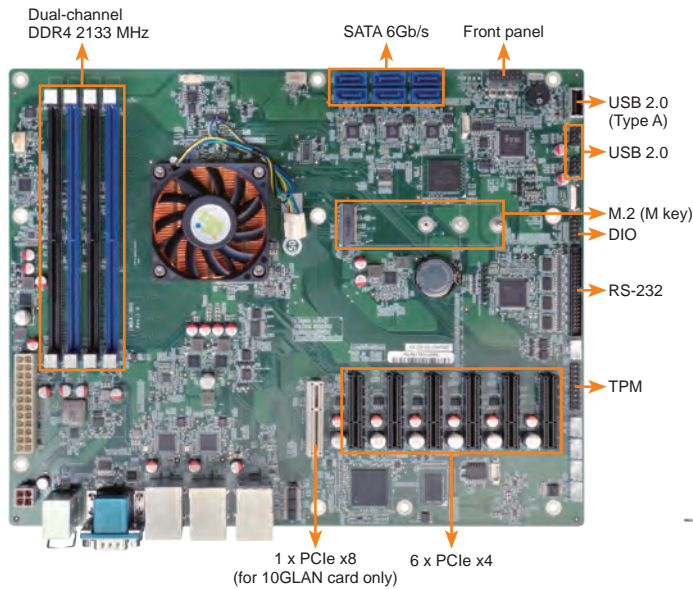
1 x IMBA-Q170-i2 single board computer	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
IMBA-Q170-i2-R10	ATX motherboard supports 14nm LGA1151 Intel® CPU, Intel® Q170, DDR4, triple independent display VGA/ DVI-D/ HDMI 2.0, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, IPMI 2.0 and RoHS
IMBA-Q170-ECO-R10	ATX motherboard supports 14nm LGA1151 Intel® CPU, Intel® Q170, DDR4, triple independent display VGA/ DVI-D/ HDMI 2.0, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, ECO packing and RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
PCIES-2PIMSATA-R10	Peripheral card for flexible I/O, 1 x PCIe Mini, 2 x mSATA expansion
PCIES-USB3-R10	Peripheral card for flexible I/O, USB 3.0 expansion
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-100-RS	Dual port USB cable with bracket, 30mm, P=2.54
19800-010500-200-RS	USB 3.0 cable 457mm with bracket
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-000702-100-RS	RS-232 cable, 230mm, P=2.54
CF1156A-RS-R11	High-performance LGA1155/1156 cooler kit, 1U chassis compatible 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN02-R20	20-pin Infineon TPM 2.0 module, software management tool, firmware v5.5

IMBA-BDE

ATX motherboard supports 14nm Intel® Xeon® D1500 family, DDR4, VGA, dual Intel® GbE/dual Intel® 10GbE, four USB 3.0, six SATA 6Gb/s, HD Audio, and RoHS



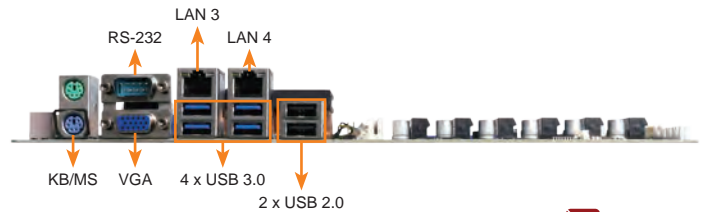
High-speed 10GbE Add-on Card Support

Integrated 10GbE LAN Interface

10GbE LAN card meets customer demand for high-speed internet



10G2SF-BDE-R10



New

Specifications

- ◆ CPU
Intel® Xeon processor D-1500 product family
- ◆ Memory
Four 288-pin 2133 MHz dual-channel DDR4 SDRAM unbuffered DIMMs support up to 128 GB
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
LAN1: Intel® I211-AT PCIe controller
LAN2: Intel® I210-AT PCIe controller
LAN3&4: Inphi CS4227 PHY (optional)
- ◆ Display Output
1 x VGA (up to 1920x1200@60 Hz)
- ◆ Audio
Realtek ALC662 HD Audio codec supports 5.1-channel
1 x Front audio (2x5 pin)
- ◆ External I/O Interface

1 x KB/MS	2 x USB 2.0
1 x RS-232	4 x USB 3.0
- ◆ Internal I/O Interface

1 x KB/MS (1x6 pin)	1 x RS-232/RS-422/485 (2x5 pin, P=2.54)
1 x USB 2.0 (180° Type-A)	4 x RS-232 (2x5 pin, P=2.54)
4 x USB 2.0 (2x4 pin, P=2.54)	4 x SATA 6Gb/s (RAID 0/1/5/10 supported)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ Expansion
1 x 10GbE LAN card slot
1 x M.2 connector (M key, 2242-2280, SATA & PCIe x2 signal)
1 x PCIe x4 Gen 2
5 x PCIe x4 Gen 3
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
1 x System smart fan (1x4 pin)
- ◆ Power Supply
ATX power supply, ATX/AT mode support
- ◆ Power Consumption
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)
- ◆ Operating Temperature
0°C ~ 60°C
- ◆ Storage Temperature
-10°C ~ 70°C
- ◆ Operating Humidity
5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g



Features

- Intel® Xeon processor D-1500 product family
- Dual-channel 2133 MHz DDR4 up to 128 GB (ECC SO-DIMM, UDIMM, RDIMM)
- Intel® 10 GbE supported
- Support PCI Express generation 3.0 at 8GT/s I/O bandwidth
- High speed interface for USB 3.0 and SATA 6Gb/s
- IEI jumper-less function
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x IMBA-BDE single board computer
1 x I/O shielding
2 x SATA cable
1 x Utility CD
1 x QIG
1 x One Key Recovery CD

Ordering Information

Part No.	Description
IMBA-BDE-1548-R10	ATX motherboard supports 14nm Intel® Xeon® D-1548, DDR4, VGA, dual Intel® GbE/dual 10GbE, four USB 3.0, six SATA 6Gb/s, HD Audio and RoHS
IMBA-BDE-1518-R10	ATX motherboard supports 14nm Intel® Xeon® D-1518, DDR4, VGA, dual Intel® GbE/dual 10GbE, four USB 3.0, six SATA 6Gb/s, HD Audio and RoHS
10G2SF-BDE-R10	10 GbE LAN card, dual port support, RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-100-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-020100-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

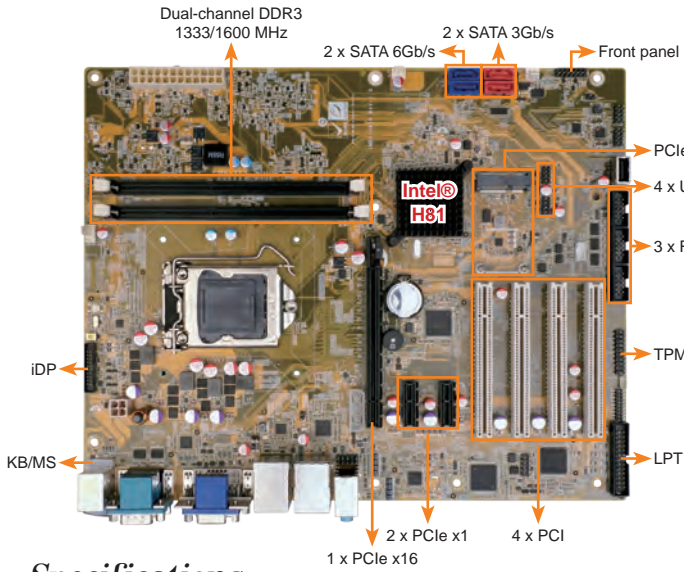
Power Supply/Peripherals

6

All-in-One System

IMBA-H810

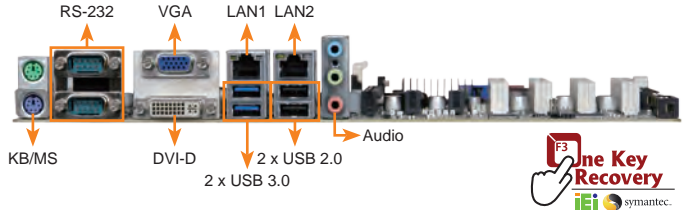
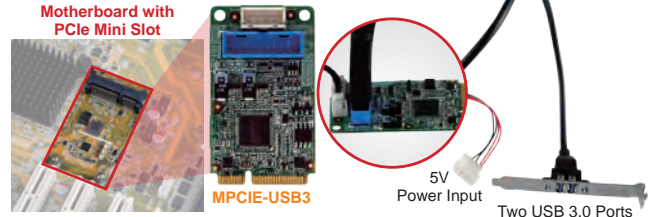
ATX motherboard supports 22nm LGA 1150 4th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU with Intel® H81, DDR3, VGA/DVI-D/iDP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS



PCIe Mini Add-on Value

IEI USB 3.0 Expanded Solution

The MPCIE-USB3 board can be installed to add two additional SuperSpeed USB 3.0 ports for the motherboard via the PCIe Mini slot.



Specifications

- ◆ CPU: LGA1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® processor supported
- ◆ Chipset: Intel® H81
- ◆ Memory: Two 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM ECC and non-ECC unbuffered DIMMs support up to 16GB
- ◆ BIOS: UEFI
- ◆ Graphics Engine: Intel® HD Graphics Gen 7.5 supports DX11.1 and OpenCL 1.2, OpenGL 3.2 Full MPEG2, VC1, AVC Decode
- ◆ Display Output: Dual independent display
 - 1 x VGA (up to 1920x1200@60 Hz)
 - 1 x DVI-D (up to 2560x1600@60 Hz)
 - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60 Hz)
- ◆ Ethernet: LAN1: Intel® I217-LM with Intel® AMT9.0 support; LAN2: Intel® I211-AT PCIe Controller
- ◆ External I/O Interface:
 - 1 x KB/MS
 - 2 x RS-232
 - 2 x USB 2.0
 - 2 x USB 3.0
- ◆ Internal I/O Interface:
 - 1 x KB/MS (1x6 pin)
 - 1 x LPT (2x13 pin)
 - 1 x mSATA (share with SATA4)
 - 1 x RS-422/485 (1x4 pin, P=2.0)
 - 2 x SATA 6Gb/s (SATA1, SATA2) (AHCI supported, no RAID) (Blue)
 - 1 x USB 2.0 (180° Type-A)
 - 2 x SATA 3Gb/s (SATA3, SATA4) (Red)
 - 3 x RS-232 (2x5 pin, P=2.54)
 - 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Audio: Realtek ALC662 HD codec supports 5.1-channel; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO; 1 x Front audio (2x5 pin)
- ◆ Front Panel: 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ Infrared Interface: 1 x Infrared Interface (1x5 pin)
- ◆ Expansion: 1 x Full-size PCIe Mini card slot (support mSATA); 2 x PCIe x1; 1 x PCIe x16; 4 x PCI
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x 4 pin); 1 x System fan (1x 3 pin)
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Power Supply: ATX power supply, ATX/AT mode support
- ◆ Power Consumption: 3.3V@0.83A, 5V@2.2A, 12V@3.88A, 5VSB@0.3A (Intel® Core™ i7-4770K 3.90GHz CPU with 8 GB (two 4 GB) 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244 mm x 305 mm
- ◆ Weight: GW: 1200g / NW: 700g



Features

- 4th generation LGA1150 Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- Dual-channel DDR3 1333/1600 MHz support up to 16 GB
- Intel® HD Graphics technology integrates high-performance graphics and media processing
- USB 3.0, and SATA supported
- TPM V1.2 hardware security function supported by TPM module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

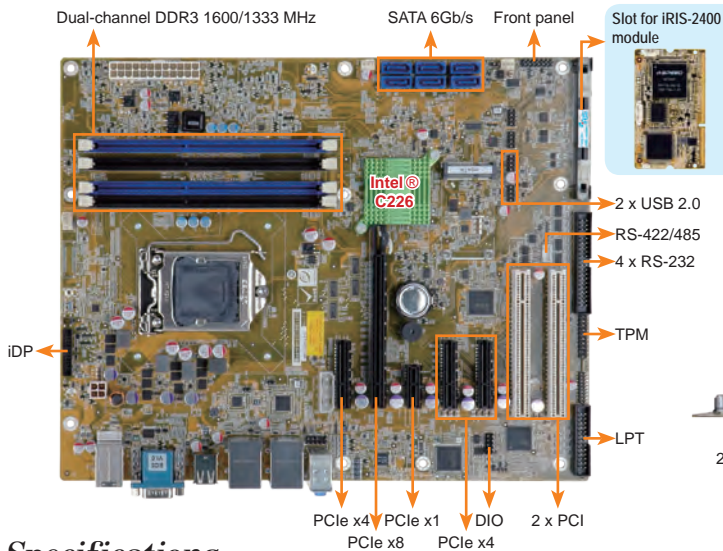
1 x IMBA-H810 single board computer	
1 x I/O shielding	
2 x SATA cable	1 x QIG
1 x One Key Recovery CD	1 x Utility CD

Ordering Information

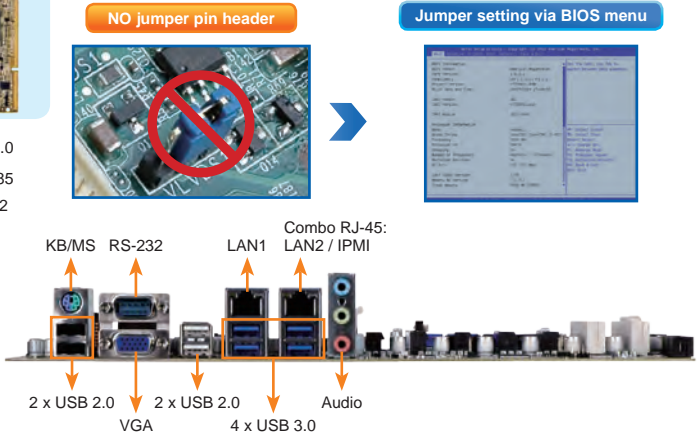
Part No.	Description
IMBA-H810-R10	ATX motherboard supports 22nm LGA 1150 4th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU with Intel® H81, DDR3, VGA/DVI-D/iDP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS
IMBA-H810-ECO-R10	ATX motherboard supports 22nm LGA 1150 4th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU with Intel® H81, DDR3, VGA/DVI-D/iDP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, ECO packing, RoHS (10 pce/pack)
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-010500-200-RS	USB 3.0 cable with bracket, 450mm
19800-020100-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32205-003800-200-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

IMBA-C2260-i2-R11

ATX motherboard supports 22nm LGA1150 Intel® Xeon E3, Core™ i3, Pentium® and Celeron®, DDR3, VGA, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, iRIS-2400 and RoHS



Fully Jumper-less Support



Specifications

- ◆ CPU
LGA1150 Intel® Xeon® E3, Core™ i3, Pentium® or Celeron® processor supported
- ◆ Chipset
Intel® C226
- ◆ Memory
Four 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM ECC and non-ECC unbuffered DIMMs support up to 32 GB
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
LAN1: Intel® I217LM with Intel® AMT 9.0 support
LAN2: Intel® I210-AT PCIe controller with NCSI support
- ◆ Graphics Engine
Intel® HD Graphics Gen 7.5 supports DX11.1 and OpenCL 1.2, OpenGL 3.2 Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA (up to 1920x1200@60 Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60 Hz)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear I/O
1 x Front audio (2x5 pin)
- ◆ External I/O Interface

1 x KB/MS	4 x USB 2.0
1 x RS-232	4 x USB 3.0
- ◆ Internal I/O Interface

1 x KB/MS (1x6 pin)	1 x RS-422/485 (1x4 pin, P=2.0)
1 x LPT (2x13 pin, P=2.54)	4 x RS-232 (2x20 pin, P=2.54)
1 x mSATA (colay SATA 6)	4 x USB 2.0 (2x4 pin, P=2.54)
6 x SATA 6Gb/s (RAID 0/1/5/10 supported)	
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ iRIS Remote Management Module: 1 x iRIS-2400 slot
- ◆ Expansion
1 x PCIe x16 slot
3 x PCIe x4 slot (support PCIe x1)
Default setting: 1 x PCIe x8 Gen 3 + 2 x PCIe x4 Gen 3 signal
Optional setting: 1 x PCIe x16 Gen 3 by BIOS setting
1 x PCIe x1 slot
2 x PCI slot
- ◆ Watchdog Timer: Software programmable, support 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU fan (1x4 pin)
2 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption
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 (4x4 GB) 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g



Features

1. LGA1150 Intel® Xeon® E3/Core™ i3/Pentium®/Celeron® processor supported
2. Dual-channel DDR3 1600/1333 MHz support up to 32 GB
3. Intel® PCIe GbE with Intel® AMT 9.0 support
4. Support PCI Express generation 3.0 at 8GT/s I/O bandwidth
5. USB 3.0, SATA 6Gb/s and mSATA supported
6. High-speed interface for one PCIe x8 or two PCIe x4 add-on cards
7. IEI jumper-less function
8. IEI One Key Recovery solution allows you to create rapid OS backup and recovery
9. Support IPMI 2.0 via iRIS-2400 module

Packing List

1 x IMBA-C2260-i2 single board computer	
1 x I/O shielding	1 x Utility CD
2 x SATA cable	1 x QIG

Ordering Information

Part No.	Description
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
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19800-00049-RS	LPT flat cable, 240mm, P=2.54
19800-00075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0 cable 457mm with bracket
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

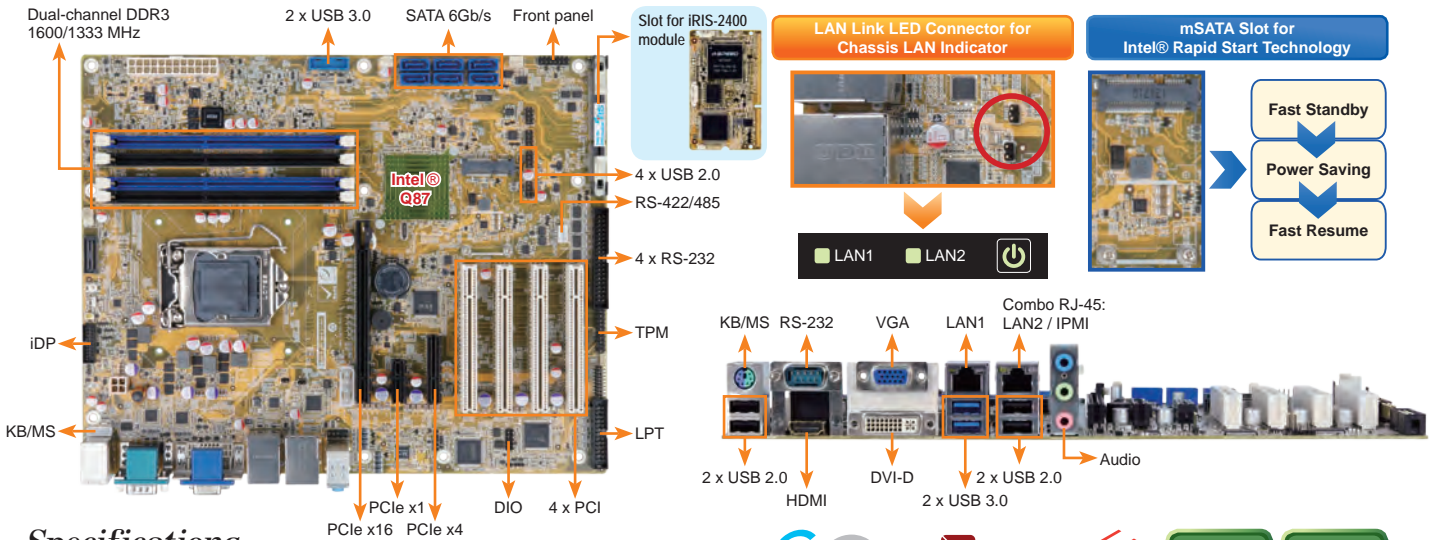
4 Open Frame Monitor

5 Power Supply/Peripherals

6 All-in-One System

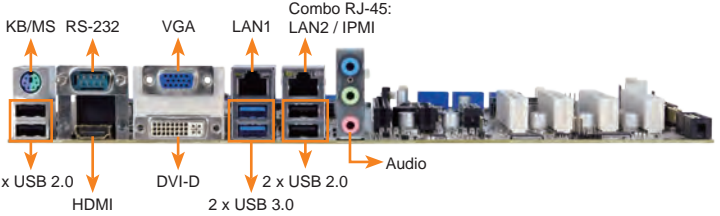
IMBA-Q870-i2

ATX motherboard supports 22nm LGA1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU per Intel® Q87, DDR3, triple independent display VGA, DVI-D, HDMI, iDP, USB 3.0, SATA 6Gb/s, iRIS-2400



Specifications

- ◆ CPU
LGA1150 4th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- ◆ Chipset
Intel® Q87
- ◆ Memory
Four 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs support up to 32 GB
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
LAN1: Intel® I217LM with Intel® AMT 9.0 support
LAN2: Intel® I210-AT PCIe controller with NCSI support
- ◆ Graphics Engine
Intel® HD Graphics Gen 7.5 supports DX11.1 and OpenCL 1.2, OpenGL 3.2 Full MPEG2, VC1, AVC Decode
- ◆ Display Output
1 x VGA (up to 1920x1200@60 Hz)
1 x DVI-D (up to 2560x1600@60 Hz)
1 x HDMI (up to 2560x1600@60 Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60 Hz)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ External I/O Interface
1 x KB/MS 2 x USB 3.0
1 x RS-232 4 x USB 2.0
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin) 2 x USB 3.0 (2x10 pin, P=2.0)
1 x LPT (2x13 pin, P=2.54) 4 x RS-232 (2x20 pin, P=2.54)
1 x mSATA (colay SATA 6) 4 x USB 2.0 (2x4 pin, P=2.54)
1 x RS-422/485 (1x4 pin, P=2.54) 6 x SATA 6Gb/s (RAID 0/1/5/10 supported)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ iRIS Remote Management Module
1 x iRIS-2400 slot
- ◆ Expansion
1 x PCIe x16 slot (Gen 3) 1 x PCIe x4 slot
1 x PCIe x1 slot 4 x PCI slots
- ◆ Watchdog Timer
Software programmable, support 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
2 x System fan (1x3 pin)
- ◆ Power Supply: ATX Power Supply
- ◆ Power Consumption
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 16 GB (4x4 GB) 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g



Features

- LGA1150 4th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- Dual-channel DDR3 1600/1333 MHz
- Intel® PCIe GbE with Intel® AMT 9.0 support
- Support triple independent display with HDMI, DVI and VGA and iDP
- Support PCI Express generation 3.0 at 8GT/s I/O bandwidth
- USB 3.0 and SATA 6Gb/s mSATA supported
- IEI jumper-less function
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery
- Support IPMI 2.0 via iRIS-2400 module

Packing List

1 x IMBA-Q870-i2 single board computer	
1 x I/O shielding	1 x Utility CD
2 x SATA cable	1 x QIG

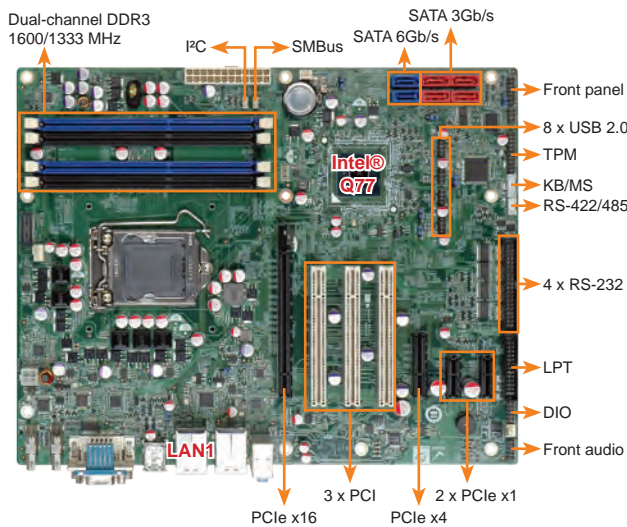
Ordering Information

Part No.	Description
IMBA-Q870-i2-R10	ATX motherboard supports 22nm LGA1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU per Intel® Q87, DDR3, triple independent display VGA/DVI-D/HDMI/iDP, dual Intel® GbE, USB 3.0, SATA 6Gb/s, audio, iRIS-2400 and RoHS
IMBA-Q870-ECO-R10	LGA1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU per Intel® Q87, DDR3, triple independent display VGA, DVI-D, HDMI, iDP, USB 3.0, SATA 6Gb/s, ECO packing, RoHS (10 pce/pack)
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0 cable 457mm with bracket
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

- Industrial Computing Solutions
- Video Capture Solutions
- Industrial Computer Chassis
- Open Frame Monitor
- Power Supply/Peripherals
- All-in-One System

IMBA-Q770

ATX motherboard supports 22nm LGA1155 Intel® Core™ i7/i5/i3 CPU with Intel® Q77, DDR3, triple independent display via dual HDMI/DVI-I, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS



Specifications

- ◆ CPU
LGA1155 socket supports Intel® Core™ i7/i5/i3 quad/dual core processor
- ◆ Chipset
Intel® Q77
- ◆ Memory
Four 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 32 GB
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
LAN1: Intel® 82583V PCIe controller
LAN2: Intel® 82579L PHY with Intel® AMT 8.0 support
- ◆ Graphics Engine
Intel® HD Graphics Gen 7 supports DX11 and OpenCL 1.1
Full MPEG-2, VC1, AVC Decode
- ◆ Display Output
2 x HDMI (up to 1920x1200@60Hz)
1 x DVI-I (up to 1920x1200@60Hz)
- ◆ Audio
Realtek ALC662 HD Audio codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ External I/O Interface
1 x KB/MS 4 x USB 2.0
1 x RS-232 4 x USB 3.0
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin) 2 x SATA 6Gb/s (RAID 0/1/5/10 supported)
1 x LPT(2x13 pin, P=2.54) 4 x SATA 3Gb/s (RAID 0/1/5/10 supported)
1 x RS-422/485 (1x4 pin, P=2.0) 8 x USB 2.0 (2x4 pin, P=2.54)
4 x RS-232 (2x20 pin, P=2.54)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ Expansion
1 x PCIe x16 slot 2 x PCIe x1 slot
1 x PCIe x4 slot 3 x PCI slot
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
2 x System fan (1x3 pin)
- ◆ Power Supply
ATX power supply
- ◆ Power Consumption
3.3V @ 1.39A, 5V @ 4.63A, Vcore @ 2.25A, 12V @ 0.47A, 5VSB @ 0.14A
(Intel® 2.4GHz CPU with four 1333 MHz 2 GB DDR3 memory)
- ◆ Operating Temperature
-10°C ~ 60°C
- ◆ Storage Temperature
-20°C ~ 70°C
- ◆ Operating Humidity
5% ~ 95%, non-condensing
- ◆ Dimensions: 244 mm x 305 mm
- ◆ Weight: GW: 1200g / NW: 700g

Evolutionary I/O Features for Display and USB Capabilities

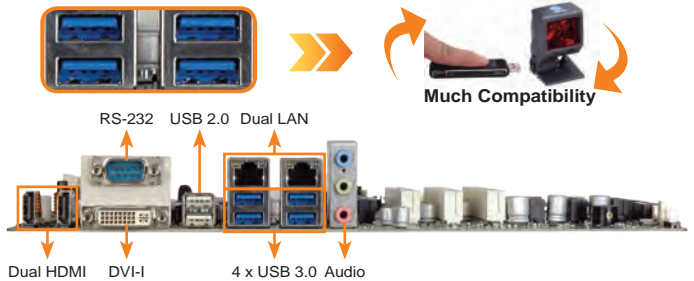
1. Three independent displays improve multimedia application with different contents.
2. More compatibility support for USB devices with the innovation native USB 3.0 interface.

Configuration of three independent displays



#	1	2	3	4
#1	HDMI	HDMI	HDMI	VGA
#2	HDMI	HDMI	HDMI	DVI-D

Native USB 3.0 Interface



Intel® AMT 8.0

DDR3 1333

Triple Display

USB 3.0

SATA 6Gb/s

Gigabit Ethernet PCIe GbE

Features

1. LGA1155 Intel® Core™ i7/i5/i3 processor supported
2. Dual-channel DDR3 1600/1333 MHz supports up to 32 GB
3. Intel® PCIe GbE with Intel® AMT 8.0 supported
4. Supports 3 displays with 2 displays in combination of HDMI, DVI and VGA
5. Supports PCI Express generation 3.0 at 8GT/s I/O bandwidth
6. USB 3.0 and SATA 6Gb/s supported
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x IMBA-Q770 single board computer	
1 x DVI-I to VGA adapter	
1 x I/O shielding	1 x Mini jumper pack
4 x SATA cable	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IMBA-Q770-R10	ATX motherboard supports 22nm LGA1155 Intel® Core™ i7/i5/i3 CPU with Intel® Q77, DDR3, three independent displays via Dual HDMI/ DVI-I, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

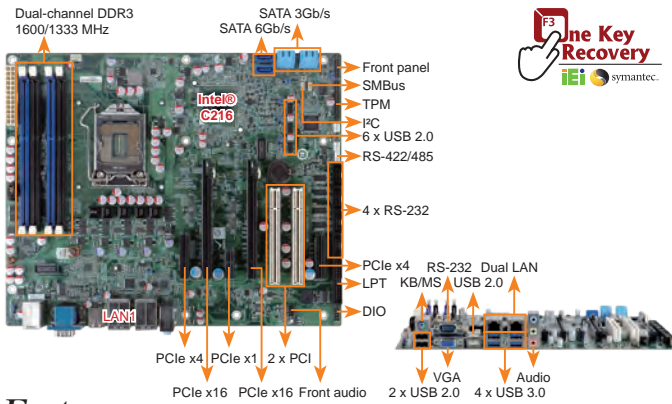
Power Supply/ Peripherals

6

All-in-One System

IMBA-C2160

ATX motherboard supports 22nm LGA1155 Intel® Xeon® E3/ Intel® Core™ i3 CPU with Intel® C216, DDR3, VGA, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS



Features

- LGA1155 Xeon® E3 and Intel® Core™ i3 processor supported
- Dual-channel DDR3 1600/1333 MHz supports up to 32 GB
- Intel® PCIe GbE with Intel® AMT 8.0 supported
- Supports PCI Express generation 3.0 at 8GT/s I/O bandwidth
- USB 3.0 and SATA 6Gb/s supported
- High speed interface usage for two PCIe x8/two PCIe x4 add-on cards
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA1155 socket supports Xeon® E3 and Intel® Core™ i3 quad/dual core processor
- ◆ Chipset: Intel® C216
- ◆ Memory
Four 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM ECC and non-ECC unbuffered DIMMs support up to 32 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet
LAN1: Intel® 82579 PHY with Intel® AMT 8.0 supported
LAN2: Intel® 82574L PCIe controller
- ◆ Graphics Engine
Intel® HD Graphics 2000 / 3000 Supports DX10.1 and OpenGL 3.0 Full MPEG-2, VC1 and AVC Decode
- ◆ Display Output
1 x VGA (up to 2048x1536@75Hz)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel 3 x Audio jacks (line-out, line-in, mic-in) on rear I/O
1 x Front audio (2x5 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ PC: 1 x PC (1x4 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ External I/O Interface
1 x KB/MS 4 x USB 2.0
1 x RS-232 4 x USB 3.0
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin)
1 x LPT (2x13 pin, P=2.54)
1 x RS-422/485 (1x4 pin, P=2.0)
2 x SATA 6Gb/s (RAID 0/1/5/10 supported)
4 x RS-232 (2x5 pin, P=2.54)
4 x SATA 3Gb/s
- ◆ Expansion
2 x PCI slot
1 x PCIe x1 slot
2 x PCIe x4 slot
2 x PCIe x16 (share 1 PCIe x16 signal)
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector
1 x CPU fan (1x4 pin) 2 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption
3.3V@1.55A, 5V@3.43A, Vcore@3.12A, 12V@0.20A, 5VSB@0.18A (Intel® Xeon® 2.2GHz CPU with two 1333 MHz 4 GB DDR3 memory)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244 mm x 305 mm
- ◆ Weight: GW: 1200g / NW: 700g

Packing List

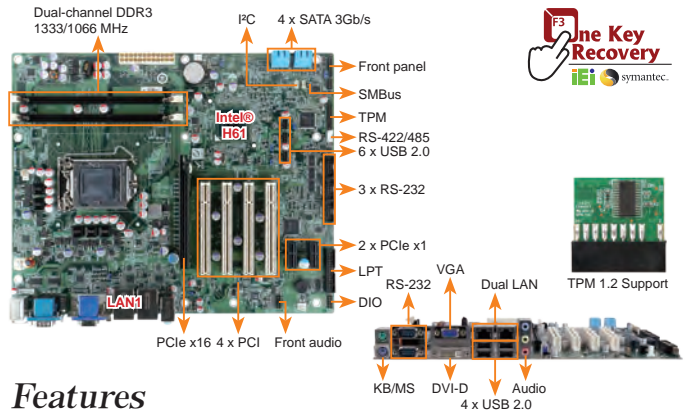
1 x IMBA-C2160 single board computer	
4 x SATA cable	1 x Mini jumper pack
1 x I/O shielding	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IMBA-C2160-R10	ATX motherboard supports 22nm LGA1155 Intel® Xeon® E3/ Intel® Core™ i3 CPU with Intel® C216, DDR3, VGA, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-100-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-020100-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32006-000300-100-RS	PS/2 KB/MS Y-cable without bracket, 140mm/120mm
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

IMBA-H610

ATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, dual Realtek PCIe GbE, SATA 3Gb/s, USB 2.0, HD Audio and RoHS



Features

- LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
- Up to 32GB 1333 MHz dual-channel DDR3 SDRAM
- Intel® HD Graphics technology integrates high-performance graphics and media processing
- TPM V1.2 hardware security provided by the TPM module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU
LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ Chipset: Intel® H61
- ◆ Memory
Two 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet
LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ Graphics Engine
Intel® HD Graphics 2000/3000 (based on CPU type) Supports DX10.1 and OpenGL 3.0 Full MPEG2, VC1, AVC Decode
- ◆ Display Output
Dual display supported
1 x VGA (up to 2048x1536@75Hz)
1 x DVI-D (up to 1920x1200@60Hz)
- ◆ Audio
Realtek ALC662 HD codec supports 5.1-channel 3 x Audio jacks (line-out, line-in, mic-in) on rear I/O
1 x Front audio (2x5 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ PC: 1 x PC (1x4 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ External I/O Interface
1 x KB/MS 2 x RS-232 4 x USB 2.0
- ◆ Internal I/O Interface
1 x KB/MS (1x6 pin)
1 x LPT(2x13 pin, P=2.54)
1 x RS-422/485 (1x4 pin, P=2.0)
4 x RS-232 (2x5 pin, P=2.54)
4 x SATA 3Gb/s (AHCI supported)
6 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ Expansion
1 x PCIe x16 slot 2 x PCIe x1 slot
4 x PCI slot
- ◆ Watchdog Timer
Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
2 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption
3.3V@1.27A, 5V@3.87A, 12V@0.54A, Vcore@0.767A, 5VSB@0.15A (Intel® Core™ i7-2600K 3.40GHz CPU with two 1333 MHz 2 GB DDR3 memory)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244 mm x 305 mm
- ◆ Weight: GW: 1200g / NW: 700g

Packing List

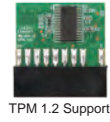
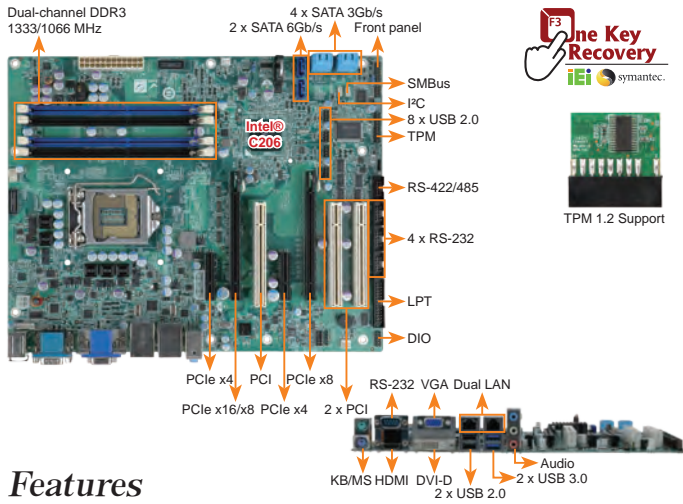
1 x IMBA-H610 single board computer	
4 x SATA cable	1 x Mini jumper pack
1 x I/O shielding	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IMBA-H610-R10	ATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, dual Realtek PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-003100-100-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-020100-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

IMBA-C2060-R20

ATX motherboard supports 32nm LGA1155 Intel® Xeon® E3/Core™ i3/ Celeron® CPU per Intel® C206, DDR3, VGA/DVI/HDMI, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, audio and RoHS



Features

- LGA1155 Intel® Xeon® E3 and Intel® Core™ i3 processor supported
- Dual-channel 1333 MHz DDR3 supports up to 32 GB memory
- Intel® PCIe GbE with Intel® AMT 7.0 support
- Providing high-speed graphics interface by two PCIe x8/PCIe x4 add-on cards
- USB 3.0 and SATA 6Gb/s supported
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA1155 socket supports Intel® Xeon® E3 quad-/dual-core, Core™ i3 dual-core, Celeron® dual-core
- ◆ Chipset: Intel® C206
- ◆ Memory: Four 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM ECC and non-ECC unbuffered DIMMs support up to 32 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Intel® 82574L PCIe controller; LAN2: Intel® 82579 PHY with Intel® AMT 7.0 supported
- ◆ Graphics Engine: Support for DX10.1 and OpenGL3.0, Full MPEG2, VC1, AVC Decode
- ◆ Display Output: Dual Independent Display; 1 x VGA (up to 2048x1536@75Hz); 1 x HDMI (up to 1920x1200@60Hz); 1 x DVI-D (up to 1920x1200@60Hz)
- ◆ Expansion: 2 x PCIe x16 (share 1 PCIe x16 signal); 2 x PCIe x4 slots; 3 x PCI slots
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ Audio: Realtek ALC892 HD Audio codec; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO
- ◆ External I/O Interface: 1 x Front audio (2x5 pin); 1 x KB/MS; 2 x USB 2.0; 1 x RS-232; 2 x USB 3.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin); 1 x LPT (2x13 pin, P=2.54); 1 x RS-422/485 (1x4 pin, P=2.0); 2 x SATA 6Gb/s (RAID 0/1/5/10 supported); 4 x RS-232 (2x5 pin, P=2.54); 4 x SATA 3Gb/s (RAID 0/1/5/10 supported); 8 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 2 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 3.3V@1.61, 5V@2.79A 12V@0.50A, Vcore@5.59A, 5VSb@0.16A (Intel® Xeon® E3-1275 3.40GHz CPU with four 1333 MHz 2 GB DDR3 memory)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g

Packing List

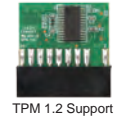
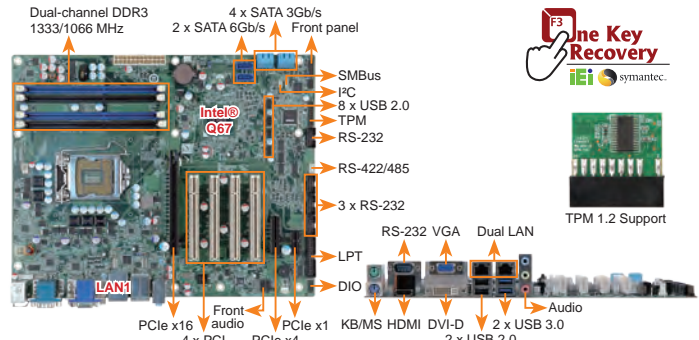
IMBA-C2060-R20 single board computer	
1 x I/O shielding	1 x Mini jumper pack
4 x SATA cable	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IMBA-C2060-R20	ATX motherboard supports 32nm LGA1155 Intel® Xeon® E3/Core™ i3/Celeron® CPU per Intel® C206, DDR3, VGA/DVI/HDMI, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, Audio and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-003100-100-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-020100-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooling kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooling kit, 95W
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

IMBA-Q670-R30

ATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, VGA/DVI-D/HDMI, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS



Features

- LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
- Up to 32 GB 1333 MHz dual-channel DDR3 SDRAM
- Intel® PCIe GbE with Intel® AMT 7.0 support
- USB 3.0 and SATA 6Gb/s supported
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ Chipset: Intel® Q67
- ◆ Memory: Four 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 32 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Intel® 82583V PCIe controller; LAN2: Intel® 82579 PHY with Intel® AMT 7.0 supported
- ◆ Graphics Engine: Support for DX10.1 and OpenGL3.0; Full MPEG2, VC1, AVC Decode
- ◆ Display Output: Dual Independent Display; 1 x VGA (up to 2048x1536@75Hz); 1 x HDMI (up to 1920x1200@60Hz); 1 x DVI-D (up to 1920x1200@60Hz)
- ◆ Audio: Realtek ALC662 HD Audio codec; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ External I/O Interface: 1 x KB/MS; 2 x USB 2.0; 1 x RS-232; 2 x USB 3.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin); 1 x LPT (2x13 pin, P=2.54); 1 x RS-422/485 (1x4 pin, P=2.0); 2 x SATA 6Gb/s (RAID 0/1/5/10 supported); 4 x RS-232 (2x5 pin, P=2.54); 4 x SATA 3Gb/s (RAID 0/1/5/10 supported); 8 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Expansion: 1 x PCIe x16 slot; 1 x PCIe x4 slot; 4 x PCI slots
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 2 x System fan (1x3 pin)
- ◆ Power Supply: ATX/AT power supply
- ◆ Power Consumption: 3.3V@1.65A, 5V@6.31A, 12V@0.18A, Vcore@7.88A, 5VSb@0.15 (Intel® Core™ i5-2400 3.10GHz CPU with four 4 GB 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 305mm
- ◆ Weight: GW: 1200g / NW: 700g

Packing List

1 x IMBA-Q670 single board computer	
1 x I/O shielding	1 x Mini jumper pack
4 x SATA cable	1 x Utility CD
1 x One Key Recovery CD	1 x QIG

Ordering Information

Part No.	Description
IMBA-Q670-R30	ATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, VGA/DVI-D/HDMI, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-020100-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

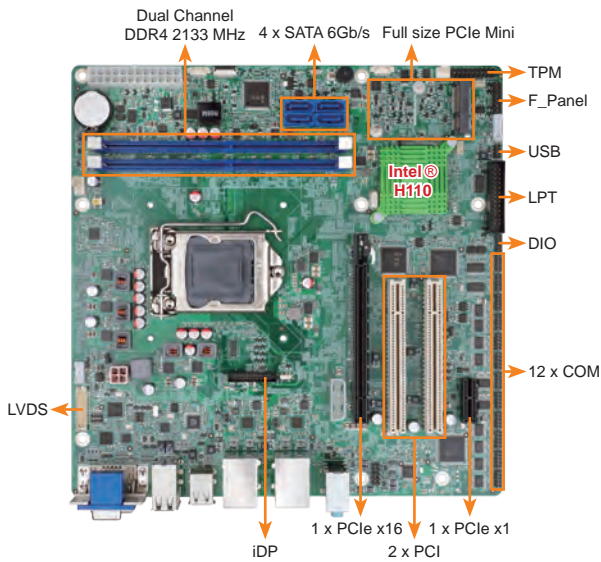
4 Open Frame Monitor

5 Power Supply/Peripherals

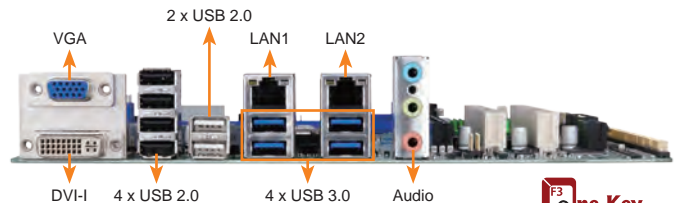
6 All-in-One System

IMB-H110

microATX Motherboard supports 14nm LGA1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor, DDR4, Dual Independent Displays VGA/ DVI-I/LVDS, Dual GbE LAN, USB 3.0, SATA 6Gb/s, HD Audio and RoHS



Multiple Expansion Support



Specifications

- ◆ CPU: LGA1151 socket supports 6th generation Intel® Core™ i7/i5/i3, Celeron®, and Pentium® processor
- ◆ Chipset: Intel® skylake H110
- ◆ Memory: Two 288-pin 2133MHz Dual-Channel DDR4 SDRAM Unbuffered DIMM supported up to 64GB
- ◆ BIOS: AMI UEFI BIOS
- ◆ Graphics Engine: Intel® HD Graphics Gen 9 Engines with Low power 16 execution unit, supports DX2015, OpenGL 5.X and OpenCL2.x, ES 2.0
- ◆ Display Output: Dual Independent Display
 - 1 x VGA (up to 1920x1200@60Hz)
 - 1 x DVI-I (up to 1920x1200@ 60Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
 - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 1920x1200@60Hz)
- ◆ Ethernet: LAN1: RTL 8111GN controller; LAN2: RTL 8111GN controller
- ◆ External I/O Interface: 4 x USB 3.0; 6 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin); 1 x LPT (2x13 pin, P=2.54); 4 x SATA 6Gb/s; 2 x RS-232/422/485 (2x5 pin, P=2.0); 2 x USB 2.0 (2x4 pin, P=2.0); 10 x RS-232 (2x5 pin, P=2.0)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio: Realtek ALC662 HD Audio codec supports 5.1-channel; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO; 1 x Front audio (2x5 pin)
- ◆ Front Panel: 1 x Front Panel (2x7 pin, Power LED, HDD LED, Speaker, Power Button, Reset Button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ Expansion: 1 x PCIe x16 slot (Gen3); 1 x Full/Half-size PCIe Mini card slot; 1 x PCIe x1 slot (Gen2); 2 x PCI slot
- ◆ Watchdog Timer: Software programmable support 1~255 sec. system reset
- ◆ Digital I/O: 8-bit Digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 1 x System fan (1x3 pin)
- ◆ Power Supply: ATX/AT Power Supply
- ◆ 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)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 9%, non-condensing
- ◆ Weight: GW: 1200g / NW: 700g



Features

- 6th generation LGA1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- Dual-channel DDR4 2133MHz support up to 64GB
- Support Dual displays via VGA/DVI-I/LVDS
- USB 3.0 and SATA 6Gb/s supported
- 12 COM & 12 USB
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x IMB-H110 motherboard	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

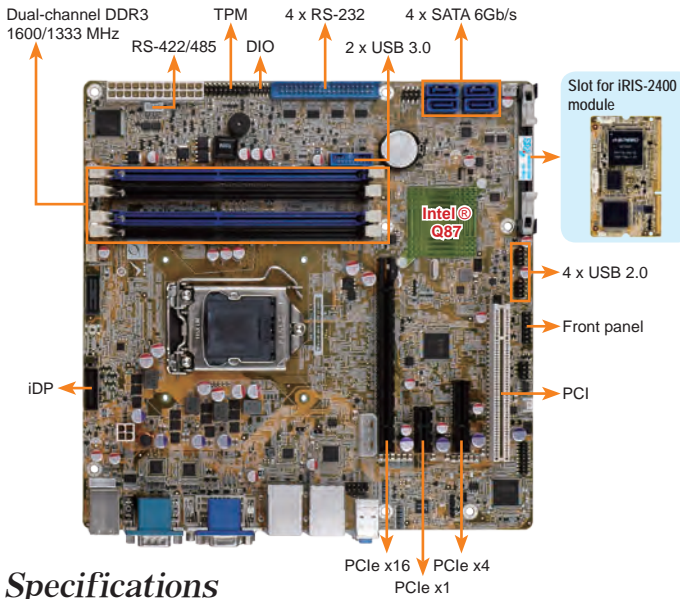
Ordering Information

Part No.	Description
IMB-H110-R10	microATX motherboard supports 14nm LGA1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported, DDR4, Dual independent displays VGA/DVI-I/LVDS, Dual GbE LAN, USB 3.0, SATA 6Gb/s, HD Audio and RoHS
IMB-H110-ECO-R10	microATX motherboard supports 14nm LGA1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported, DDR4, Dual independent displays VGA/DVI-I/LVDS, Dual GbE LAN, USB 3.0, SATA 6Gb/s, HD Audio, ECO packing and RoHS
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-000200-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 300mm, P=2.0
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN02-R20	20-pin Infineon TPM 2.0 module, software management tool, firmware v5.5

- Industrial Computing Solutions
- Video Capture Solutions
- Industrial Computer Chassis
- Open Frame Monitor
- Power Supply/Peripherals
- All-in-One System

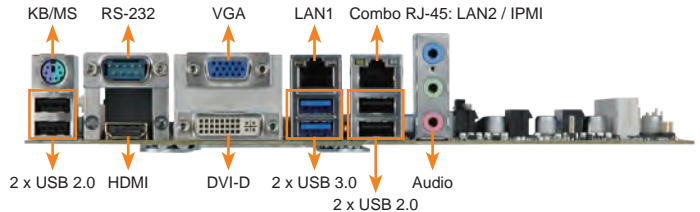
IMB-Q870-i2

microATX motherboard supports 22nm LGA1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU per Intel® Q87, DDR3, HDMI, VGA, iDP, USB 3.0, SATA 6Gb/s, six serial ports, iRIS-2400



New and More Powerful Graphics

2nd Generation Intel® Core™ Processor (Sandy Bridge)	3rd Generation Intel® Core™ Processor (Ivy Bridge)	4th Generation Intel® Core™ Processor (Haswell)	
Intel® HD Graphics 3000 series	Intel® HD Graphics 4000 series	GT3-Intel® HD Graphics 5000 series	Core i7
Intel® HD Graphics 2000 series	Intel® HD Graphics 2500 series	GT2-Intel® HD Graphics 4000 series	Core i5/ Core i3
Intel® HD Graphics series	Intel® HD Graphics series	GT1-Intel® HD Graphics series	Celeron/ Pentium



Specifications

- ◆ CPU: LGA1150 4th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- ◆ Chipset: Intel® Q87
- ◆ Memory: Four 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs support up to 32 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Intel® I217LM with Intel® AMT 9.0 support; LAN2: Intel® I210-AT PCIe controller with NCSI support
- ◆ Graphics Engine: Intel® HD Graphics Gen 7.5 supports DX11.1 and OpenCL 1.2, OpenGL 3.2; Full MPEG2, VC1, AVC Decode
- ◆ Display Output: Triple independent display; 1 x VGA (up to 1920x1200@60Hz); 1 x DVI-D (up to 2560x1600@60Hz); 1 x HDMI (up to 2560x1600@60Hz); 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60Hz)
- ◆ Audio: Realtek ALC662 HD Audio codec supports 5.1-channel; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO; 1 x Front audio (2x5 pin)
- ◆ External I/O Interface: 1 x KB/MS, 2 x USB 3.0; 1 x RS-232, 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin), 4 x SATA 6Gb/s (RAID 0/1/5/10 supported); 1 x RS-422/485 (1x4 pin, P=2.0), 4 x RS-232 (2x5 pin, P=2.54); 2 x USB 3.0 (2x10 pin), 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Front Panel: 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ iRIS Remote Management Module: 1 x iRIS-2400 slot
- ◆ Expansion: 1 x PCIe x16 slot (Gen 3), 1 x PCIe x4 slot; 1 x PCIe x1 slot, 1 x PCI slot
- ◆ Watchdog Timer: Software programmable, support 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 2 x System smart fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 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 (4x4 GB) 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 244mm
- ◆ Weight: GW: 1200g / NW: 700g



Features

- LGA1150 4th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- Dual-channel DDR3 1600/1333 MHz supported
- Intel® PCIe GbE with Intel® AMT 9.0 support
- Support triple display via HDMI, DVI, VGA and iDP
- Support PCI Express generation 3.0 at 8GT/s I/O bandwidth
- USB 3.0 and SATA 6Gb/s supported
- IEI jumper-less function
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery
- Support IPMI 2.0 via iRIS-2400 module

Packing List

1 x IMB-Q870-i2 single board computer	
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

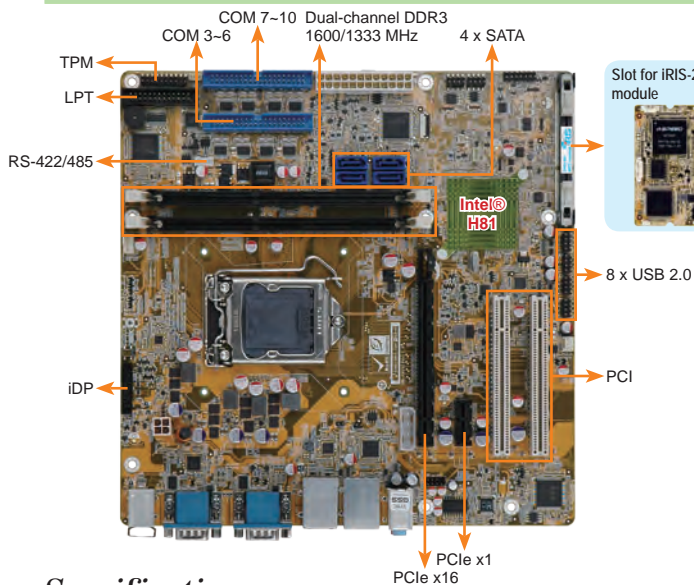
Ordering Information

Part No.	Description
IMB-Q870-i2-R10	microATX motherboard supports 22nm LGA1150 Intel® Core™ i7/i5/i3/Pentium® and Celeron® CPU per Intel® Q87, DDR3, HDMI, DVI-D, VGA, DP, dual Intel® PCIe GbE, USB 3.0, audio, SATA 6Gb/s, six serial ports, iRIS-2400 and RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0 cable with bracket, 450mm
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

- Industrial Computing Solutions
- Video Capture Solutions
- Industrial Computer Chassis
- Open Frame Monitor
- Power Supply/Peripherals
- All-in-One System

IMB-H810-i2-R11

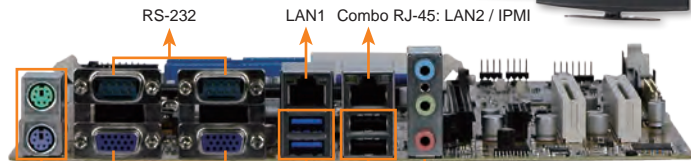
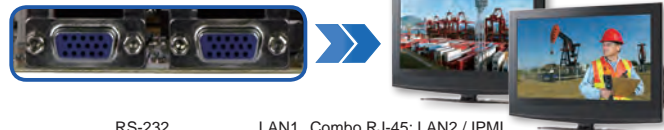
microATX motherboard supports 22nm LGA1150 Intel® Core™ i7/i5/i3, Pentium®, Celeron® CPU per Intel® H81, DDR3, VGA, dual GbE, LPT, COM, SATA 6Gb/s, iRIS-2400



10 COM ports



Easy dual display setup



Specifications

- ◆ CPU
LGA1150 4th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- ◆ Chipset
Intel® H81
- ◆ Memory
Two 240-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs support up to 16 GB
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
LAN1: Intel® I217LM with Intel® AMT9.0 support
LAN2: Intel® I210-AT PCIe controller with NCSI support
- ◆ Graphics Engine
Intel® HD Graphics Gen 7.5 supports DX11.1 and OpenCL 1.2, OpenGL 3.2 Full MPEG2, VC1, AVC Decode
- ◆ Display Output
Dual independent display
2 x VGA (up to 1920x1200@60Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60Hz)
- ◆ Audio
Realtek ALC662 HD Audio codec supports 5.1-channel
3 x Audio jacks (line-out, line-in, mic-in) on rear IO
1 x Front audio (2x5 pin)
- ◆ External I/O Interface

1 x KB/MS	2 x USB 2.0
2 x RS-232	2 x USB 3.0
- ◆ Internal I/O Interface

1 x LPT (2x13 pin, P=2.54)	2 x SATA 6Gb/s
1 x RS-422/485 (1x4 pin, P=2.0)	8 x RS-232 (2x20 pin, P=2.54)
2 x SATA 3Gb/s	8 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ TPM
1 x TPM (2x10 pin)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ iRIS Remote Management Module: 1 x iRIS-2400 slot
- ◆ Expansion
1 x PCIe x16 slot (Gen 3)
1 x PCIe x1 slot
2 x PCI slot
- ◆ Watchdog Timer: Software programmable, supportS 1~255 sec system reset
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
1 x System smart fan (1x3 pin)
- ◆ Power Supply
ATX power supply
- ◆ Power Consumption
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 4 GB) 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 244mm
- ◆ Weight: GW: 1200g / NW: 680g



Features

- LGA1150 4th generation Intel® Core™ i7/i5/i3, Pentium® or Celeron® processor supported
- Dual-channel DDR3 1333/1600 MHz support up to 16 GB
- Intel® HD Graphics technology integrates high-performance graphics and media processing
- Supports legacy PCI 32-bit 33/66 MHz
- Ten COM ports, USB 3.0 and SATA supported
- TPM V1.2 hardware security function supported by TPM module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery
- Support IPMI 2.0 via iRIS-2400 module
- IEI jumper-less function

Packing List

1 x IMB-H810-i2 single board computer	
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
IMB-H810-i2-R11	microATX motherboard supports 22nm LGA1150 Intel® Core™ i7/i5/i3/Pentium® and Celeron® CPU per Intel® H81, DDR3, VGA, Dual Intel® PCIe GbE, USB 2.0, PCI, COM, SATA 6Gb/s, LPT, HD Audio, iRIS-2400 and RoHS
IMB-H810-ECO-R11	LGA1150 Intel® Core™ i7/i5/i3, Pentium® and Celeron® CPU per Intel® H81, DDR3, VGA, Dual PCIe GbE, USB 2.0, COM, LPT, SATA 6Gb/s, HD Audio, ECO packing, RoHS (10 pce/pack)
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19800-000049-RS	LPT flat cable, 240mm, P=2.54
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-003100-100-RS	Dual port USB cable with bracket, 30mm, P=2.54
19800-010500-200-RS	USB 3.0 cable with bracket, 450mm
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1

Industrial
Computing
Solutions

2

Video
Capture
Solutions

3

Industrial
Computer
Chassis

4

Open
Frame
Monitor

5

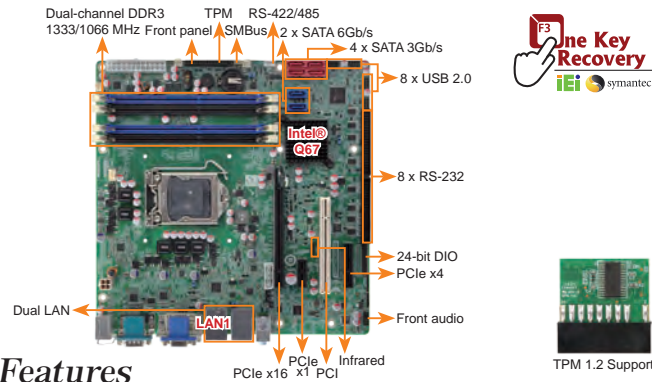
Power Supply/
Peripherals

6

All-in-One
System

IMB-Q670-R30

microATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, VGA/DVI-D/HDMI, dual Intel® PCIe GbE, USB 3.0, COM, SATA 6Gb/s, HD Audio and RoHS



Features

- LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
- Up to 32 GB 1333 MHz dual-channel DDR3 SDRAM
- Intel® PCIe GbE with Intel® AMT 7.0 support
- USB 3.0 and SATA 6Gb/s supported
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3 quad/dual, Pentium® dual, Celeron® dual/single core processor
- ◆ Chipset: Intel® Q67
- ◆ Memory: Four 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 32GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Intel® 82583V PCIe controller; LAN2: Intel® 82579 PHY with Intel® AMT 7.0 support
- ◆ Graphics Engine: Support for DX10.1 and OpenGL3.0; Full MPEG2, VC1, AVC Decode
- ◆ Display Output: Dual display supported; 1 x VGA (up to 2048x1536@75Hz); 1 x HDMI (up to 1920x1200@60Hz); 1 x DVI-D (up to 1920x1200@60Hz)
- ◆ Audio: Realtek ALC892 HD Audio codec; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO; 1 x Front audio (2x5 pin)
- ◆ External I/O Interface: 1 x KB/MS; 2 x USB 2.0; 1 x RS-232; 2 x USB 3.0
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ Internal I/O Interface: 1 x RS-422/485 (1x4 pin, P=2.0); 2 x SATA 6Gb/s (RAID 0/1/5/10 supported); 4 x SATA 3Gb/s (RAID 0/1/5/10 supported); 8 x USB 2.0 (2x4 pin, P=2.54); 8 x RS-232 (2x20 pin, P=2.54)
- ◆ Expansion: 1 x PCIe x16 slot; 1 x PCIe x1 slot; 1 x PCIe x4 slot; 1 x PCI slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 24-bit digital I/O (2x13 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1 x 4 pin); 1 x NB fan (1x3 pin); 2 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 3.3V@1.75A, 5V@6.61A, 12V@3.68A, 12V@0.09A, 5Vsb@0.12 (Intel® 2.60GHz CPU with four 1333 MHz 4 GB DDR3 DIMMs)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244mm x 244mm
- ◆ Weight: GW: 1200g / NW: 680g

Packing List

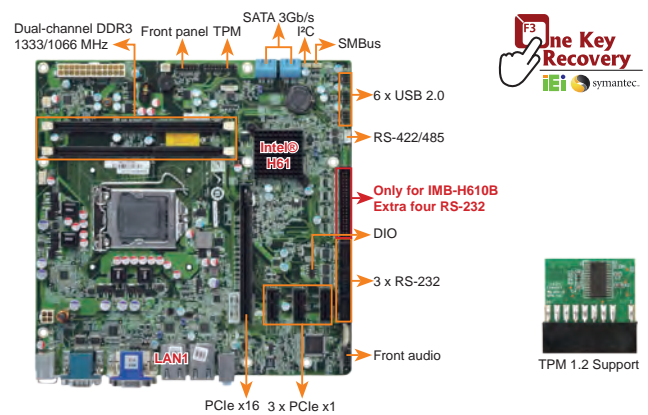
1 x IMB-Q670 single board computer	1 x Mini jumper pack
1 x I/O shielding	1 x One Key Recovery CD
2 x Quad-port RS-232 cable	1 x QIG
4 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
IMB-Q670-R30	microATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® Q67, DDR3, VGA/DVI-D/HDMI, dual Intel® PCIe GbE, USB 3.0, COM, SATA 6Gb/s, HD Audio and RoHS
19800-003100-100-RS	Dual port USB cable with bracket, 300mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

IMB-H610A/IMB-H610B

microATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, dual Realtek PCIe GbE, USB 2.0, six COMs, SATA 3Gb/s, HD Audio and RoHS



Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3 quad/dual, Pentium® dual and Celeron® dual/single core processors
- ◆ Chipset: Intel® H61
- ◆ Memory: Two 240-pin 1333/1066 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 16GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support; LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ Graphics Engine: Intel® HD Graphics 2000/3000 (based on CPU type) Supports DX10.1 and OpenGL 3.0; Full MPEG2, VC1, AVC Decode
- ◆ External I/O Interface: 1 x KB/MS; 2 x RS-232; 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x RS-422/485 (1x4 pin, P=2.0); 4 x SATA 3Gb/s; 6 x USB 2.0 (2x4 pin, P=2.54); 3 x RS-232 (2x5 pin, P=2.54, for IMB-H610A-R10); 8 x RS-232 (2x5 pin, P=2.54, for IMB-H610B-R10)
- ◆ Display Output: Dual display supported; 1 x VGA (up to 2048x1536@75Hz); 1 x DVI-D (up to 1920x1200@60Hz)
- ◆ Audio: Realtek ALC662 HD Audio codec; 3 x Audio jacks (line-out, line-in, mic-in) on rear IO; 1 x Front audio (2x5 pin)
- ◆ Front Panel: 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ Expansion: 1 x PCIe x16 slot; 3 x PCIe x1 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 2 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 3.3V@1.75A, 5V@6.61A, Vcore@3.68A, 12V@0.09A, 5sb@0.12A (Intel® 2.60GHz CPU with two 1333 MHz 4 GB DDR3 memory)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 244 mm x 244 mm
- ◆ Weight: GW: 1200g / NW: 680g

Packing List

1 x IMB-H610 single board computer	
1 x I/O shielding	1 x One Key Recovery CD
4 x SATA cable	1 x QIG
1 x Mini jumper pack	1 x Utility CD

Ordering Information

Part No.	Description
IMB-H610A-R10	microATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, dual Realtek PCIe GbE, USB 2.0, 6 COM, SATA 3Gb/s, HD Audio and RoHS
IMB-H610B-R10	microATX motherboard supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with Intel® H61, DDR3, VGA/DVI-D, dual Realtek PCIe GbE, USB 2.0, 10 COM, SATA 3Gb/s, HD Audio and RoHS
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-003600-100-RS	RS-232 cable with bracket, Dual 10-pin to dual DB-9, 400mm, P=2.54
19800-010900-200-RS	RS-232 cable with bracket, 230mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-001203-200-RS	RS-232 cable, 40-pin to four DB-9, 400mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

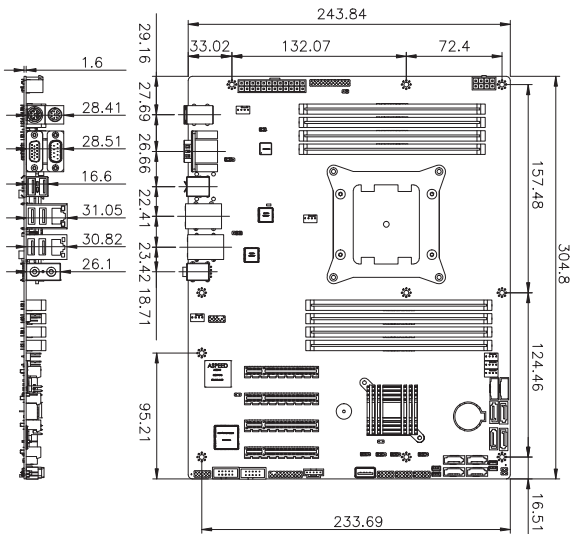
4 Open Frame Monitor

5 Power Supply/Peripherals

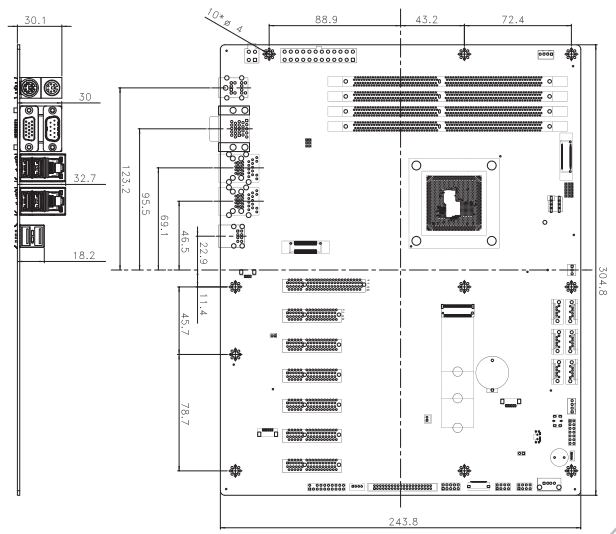
6 All-in-One System

Dimensions (Unit: mm)

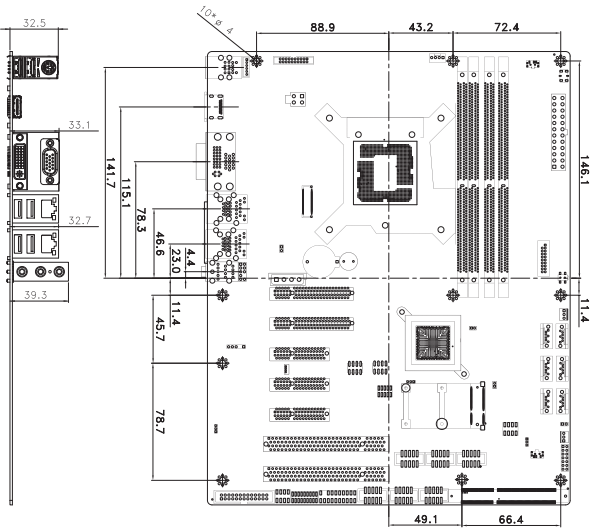
IMBA-C604EP



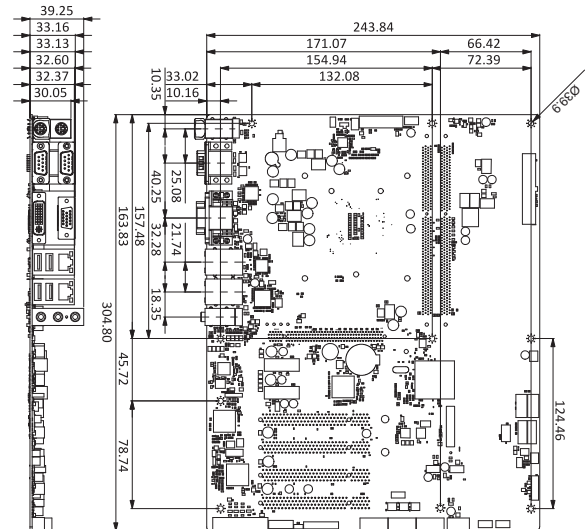
IMBA-BDE **New**



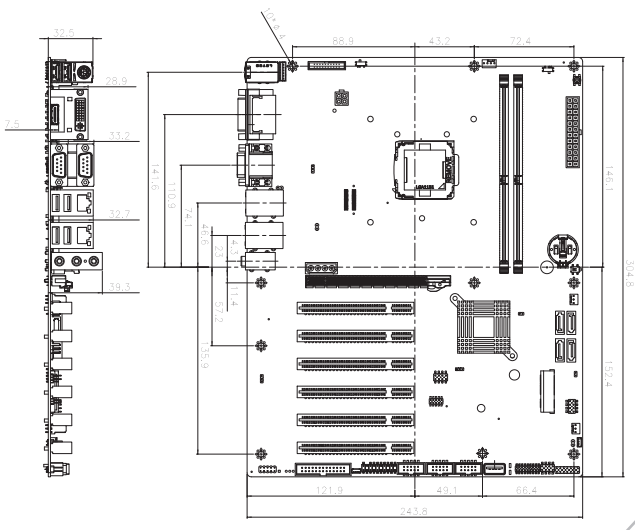
IMBA-C2360-i2/IMBA-Q170-i2 **New**



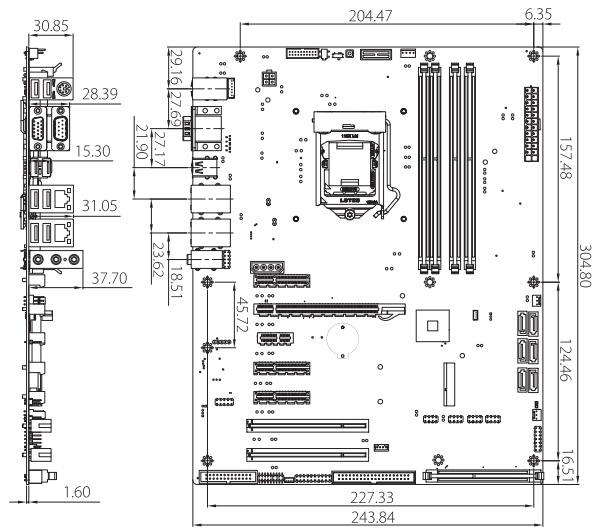
IMBA-H810



IMBA-H110 **New**



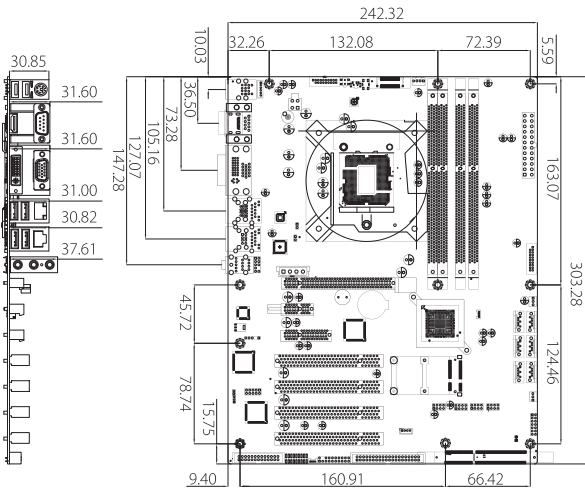
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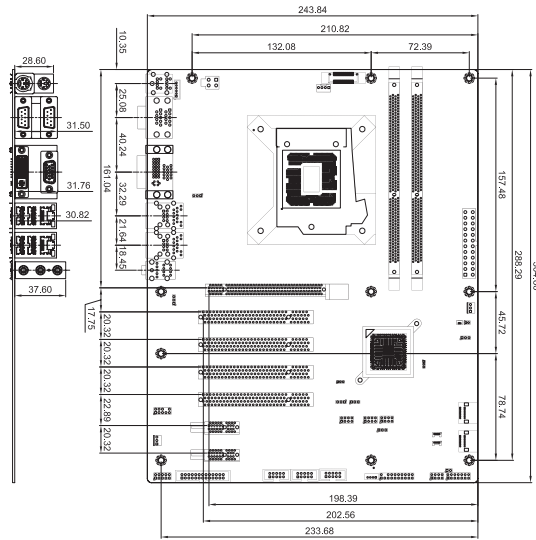
- 1 Industrial Computing Solutions
- 2 Video Capture Solutions
- 3 Industrial Computer Chassis
- 4 Open Frame Monitor
- 5 Power Supply/Peripherals
- 6 All-in-One System

Dimensions (Unit: mm)

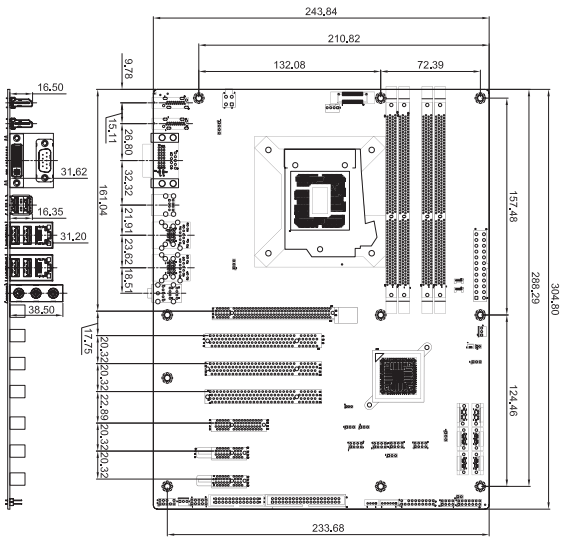
IMBA-Q870-i2



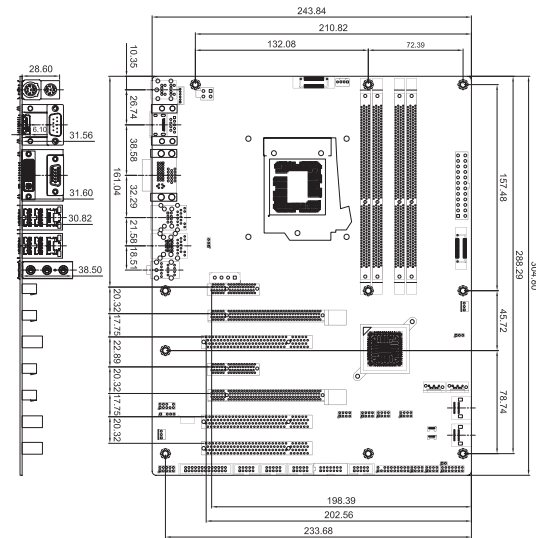
IMBA-H610



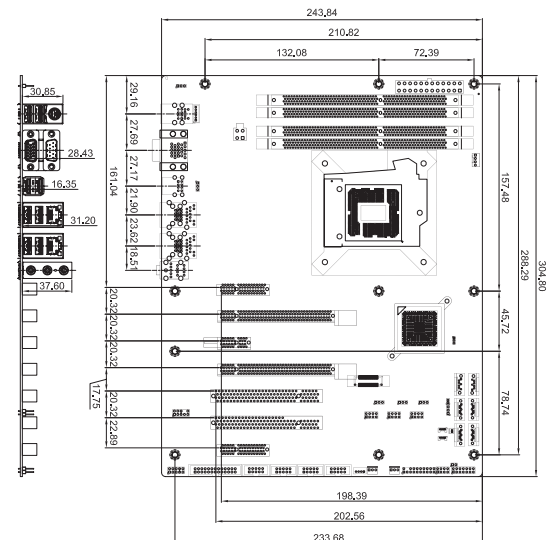
IMBA-Q770



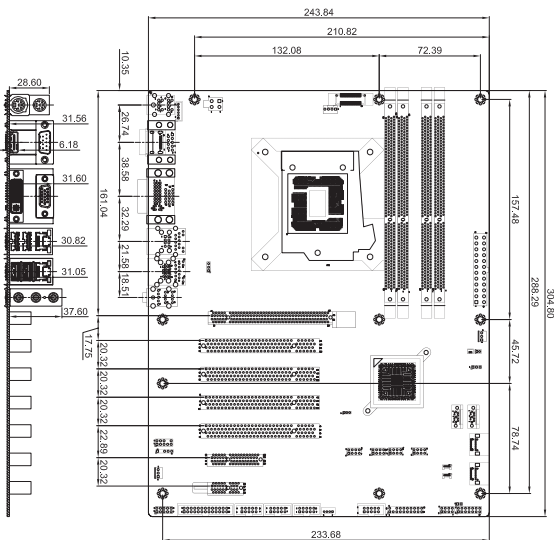
IMBA-C2060-R20



IMBA-C2160



IMBA-Q670-R30



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Industrial Computing Solutions

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Video Capture Solutions

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Industrial Computer Chassis

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Open Frame Monitor

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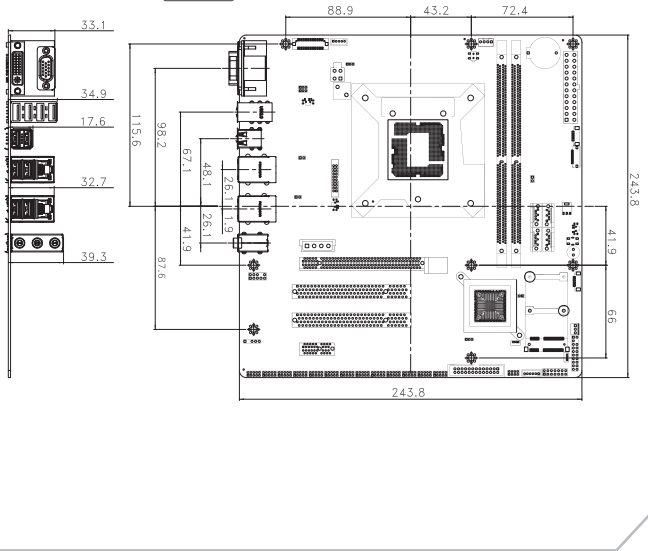
Power Supply/ Peripherals

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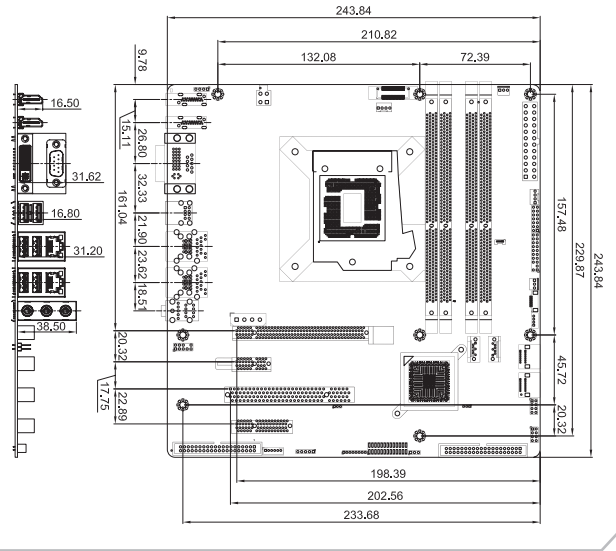
All-in-One System

Dimensions (Unit: mm)

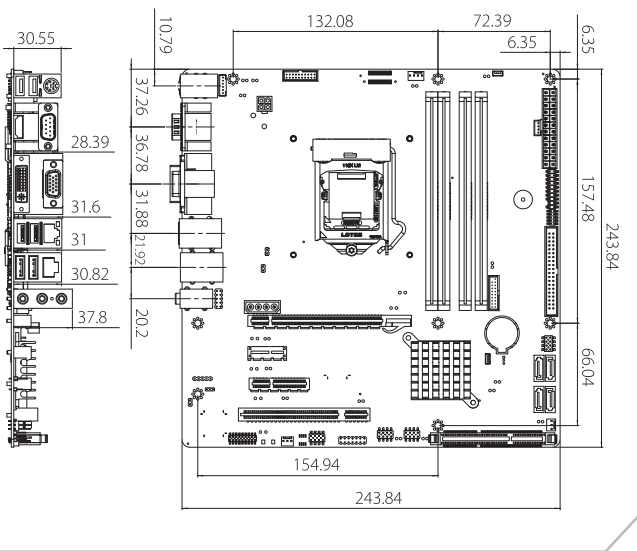
IMB-H110 **New**



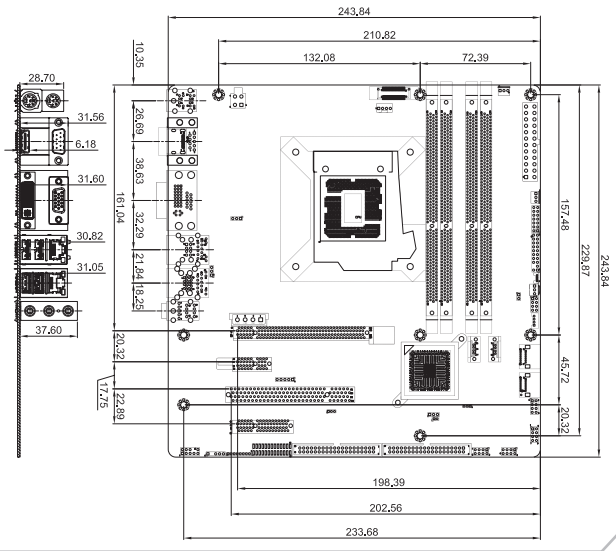
IMB-Q770



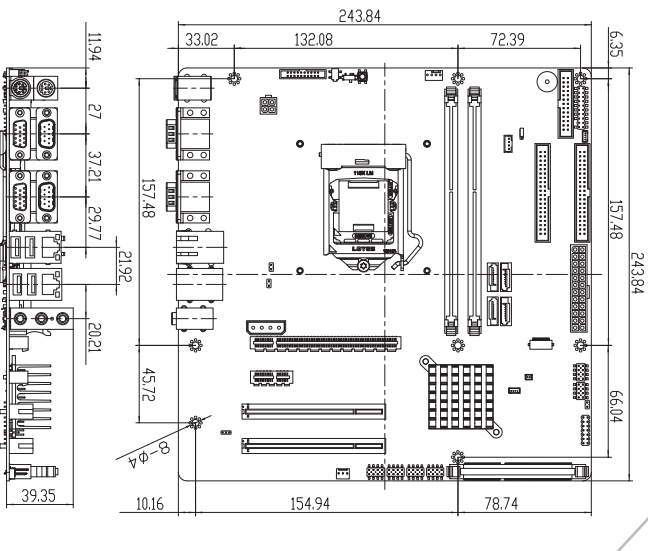
IMB-Q870-i2



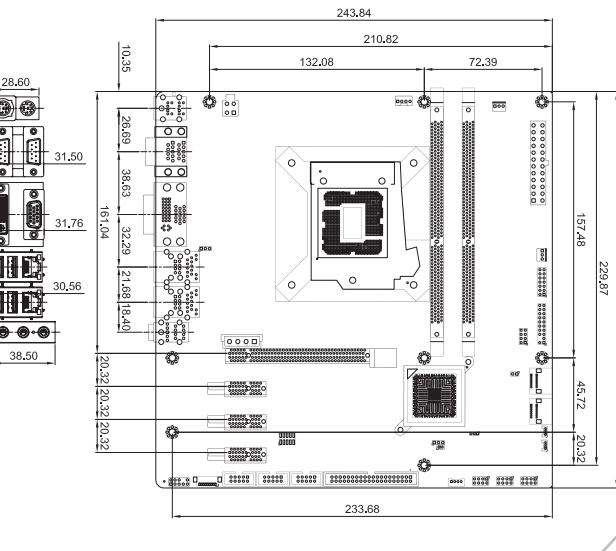
IMB-Q670-R30



IMB-H810-i2-R11



IMB-H610



1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

4 Open Frame Monitor

5 Power Supply/Peripherals

6 All-in-One System

Mini-ITX Selection Guide

Preliminary



Preliminary



Preliminary



New



New



Model Name	KINO-DAL	tKINO-AL	gKINO-DMF	tKINO-ULT3	KINO-DCM236
CPU Socket	On Board	On Board	On Board	On Board	On Board
CPU Type	Intel® Atom™/Celeron®/Pentium® on-board SoC	Intel® Atom™/Celeron®/Pentium® on-board SoC	AMD G-series on board SoC Merlin Falcon	Intel® Core™ i7/i5/i3, Celeron® ULT processor	Intel® Xeon® E3, Core™ i3, Celeron® process
Chipset	Intel® Atom™/Celeron®/Pentium® on-board SoC	Intel® Atom™/Celeron®/Pentium® on-board SoC	AMD G-series on board SoC Merlin Falcon	Intel® Core™ i7/i5/i3, Celeron® ULT processor	Intel® CM236
Memory	2 x 204-pin 1866/1600 MHz single-channel DDR3L SO-DIMM (system max. 8 GB)	2 x 204-pin 1866/1600 MHz single-channel DDR3L SO-DIMM (system max. 8 GB)	2 x SO-DIMM DDR4 2400MHz up to 64GB	2 x SO-DIMM DDR4 2133MHz, system maximum up to 32GB	2 x SO-DIMM DDR4 2133MHz up to 32GB with ECC support
Display Interface	Triple independent display 1 x VGA 1 x HDMI 1 x 18/24-bit dual-channel LVDS	Triple independent display 2 x DP++ 1 x eDP	Triple independent display 1 x HDMI 2.0 1 x HDMI 1.4 1 x DP++	Triple independent display 1 x HDMI/DP 1 x HDMI 1 x LVDS/eDP	Triple independent display 1 x HDMI 2.0 2 x HDMI 1.4 1 x LVDS
Ethernet	Dual LAN: Intel® I210-IT/I211-AT PCIe controller	Dual LAN: RTL8111	Dual LAN: RTL8111GN	LAN1: Intel® I219LM LAN2: Intel® I211AT	LAN1: Intel® I219LM LAN2: Intel® I211
iRIS Remote Management Module	N/A				
I/O Interface	1 x PS/2 KB/MS 2 x RS-232/422/485 2 x USB 2.0 4 x RS-232 4 x USB 3.0	1 x PS/2 KB/MS 2 x RS-232/422/485 2 x USB 2.0 4 x RS-232 4 x USB 3.0	2 x RS-232/422/485 4 x RS-232 (2 support cctalk, TTL) 4 x USB 3.0 5 x USB 2.0	2 x RS-232/422/485 4 x RS-232 4 x USB 2.0 4 x USB 3.0	1 x KB/MS 2 x RS-232/422/485 4 x RS-232 4 x USB 2.0 4 x USB 3.0
Storage Interface	2 x SATA 6Gb/s with 12/5V SATA power connector 1 x 8 GB eMMC (optional) 1 x M.2 (B Key) (2242)(SATA port1 + USB 2.0 signal) 1 x Micro SD slot (Optional)	2 x SATA 6Gb/s with 12/5V SATA power connector 1 x M.2 (B Key) (2242)(SATA port1 + USB 2.0 signal) 1 x Micro SD slot (Optional)	2 x SATA 6Gb/s with 5V/12V SATA power connector 1 x MicroSD slot 1 x M.2 (B key) (SATA signal)	2 x SATA 6Gb/s with 5V SATA power connector 1 x eMMC5.0 (up to 32G, optional)	4 x SATA6Gb/s 1 x mSATA
Audio	Realtek ALC662 HD Audio codec	Realtek ALC269 HD Audio codec	Realtek ALC662 HD Audio Codec		
Digital I/O	8-bit programmable digital I/O				
Power Consumption	TBD	12V@2.58A (Intel® Pentium® N4200 CPU with two 8GB 1600MHz DDR3L memory)	12V@5.54A (AMD RX-421BD 2.1GHz CPU with 2400 MHz 16GB DDR4 memory)	TBD	12V@6.93A (Intel Xeon E3-1505M V5 2.8GHz CPU with 32 GB (two 16 GB) 2133 MHz DDR4 memory)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset				
Operation Environment	Temperature Range: KINO-DAL: -20°C ~ 60°C (-4°F~140°F) KINO-DALW2: -40°C ~ 85°C (-40°F~185°F) Relative Humidity: 5% ~ 95% non-condensing	Temperature Range: -20°C ~ 60°C (-4°F ~ 140°F) Relative Humidity: 5% ~ 95% non-condensing			
Expansion Slot	1 x PCIe x1 slot 1 x Full/Half-size PCIe Mini card slot (w/ SIM holder)	1 x PCIe x1 slot 1 x Full/Half-size PCIe Mini card slot (w/ SIM holder)	1 x PCIe x8 slot 1 x Full-size PCIe Mini card slot 1 x MicroSD slot	1 x PCIe x4 slot 1 x Full-size PCIe Mini card slot (support mSATA, colay with SATA2) 1 x Full-size PCIe Mini card slot (with SIM card slot)	1 x PCIe x16 slot 1 x Full-size PCIe Mini card slot (support mSATA) 1 x Half-size PCIe Mini card slot 1 x M.2 2230 (A key)
CPU Cooler	Heatsink	Heatsink	Cooler	Heatsink	Heatsink

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Industrial Computing Solutions

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Video Capture Solutions

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Industrial Computer Chassis

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Open Frame Monitor

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Power Supply/Peripherals

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All-in-One System

Mini-ITX Selection Guide

New**New****New**

Model Name	KINO-DQM170	KINO-AQ170	KINO-BW	KINO-DBT	KINO-SE/KBN-i2
CPU Socket	On board	LGA1151	On board	On board	On board
CPU Type	6th generation Intel® Core™ i7/ i5/i3 and Celeron® processor	6th generation Intel® Core™ i7/ i5/i3, Pentium® and Celeron® processor	Intel® Pentium®/Celeron® on board SoC	Intel® Atom™/Celeron® on board SoC	AMD Embedded G-Series SoC
Chipset	Intel® QM170	Intel® Q170	Intel® Pentium®/Celeron® on-board SoC	Intel® Atom™/Celeron® on-board SoC	AMD Embedded G-Series SoC
Memory	Two 260-pin 2133 MHz dual-channel DDR4 SDRAM SO-DIMMs (system Max. 64 GB)	Two 260-pin 2133 MHz dual-channel DDR4 SDRAM SO-DIMMs (system Max. 64 GB)	Two 204-pin 1600/1333 MHz dual-channel DDR3L SDRAM SO-DIMMs (support up to 8 GB)	Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826) One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 4 GB (N2807, E3825, E3815)	Two 204-pin 1333/1600 MHz dual-channel DDR3 & DDR3L SO-DIMMs (system max. 8GB)
Display Interface	Triple independent display supported 1 x HDMI 2.0 2 x HDMI 1.4 1 x LVDS	Triple independent display supported 1 x HDMI 2.0 1 x HDMI/DP 1 x VGA 1 x iDP interface	Triple independent display supported 1 x HDMI/DP 1 x VGA 1 x 18/24-bit dual-channel LVDS	Dual independent display supported 1 x VGA 1 x DVI-D	Dual independent display supported 2 x HDMI 1 x VGA
Ethernet	LAN1: Intel® I219-LM with Intel® AMT 11.0 support LAN2: Intel® I211 PCIe controller	LAN1: Intel® I211 PCIe controller LAN2: Intel® I219LM with intel AMT 11.0 support	Dual LAN: Realtek RTL8111G PCIe controller	Dual LAN: Realtek RTL8111G PCIe controller	LAN1: Intel® I210-AT with PCIe controller with NCSI support LAN2: Intel® I211-AT PCIe controller
iRIS Remote Management Module	N/A	N/A	N/A	N/A	1 x iRIS-2400 slot
I/O Interface	1 x KB/MS 2 x RS-232/422/485 4 x RS-232 4 x USB 2.0 4 x USB 3.0	1 x KB/MS 2 x RS-232/422/485 4 x RS-232 4 x USB 3.0 6 x USB 2.0	1 x KB/MS 2 x RS-232/422/485 2 x USB 3.0 4 x RS-232 4 x USB 2.0	1 x KB/MS 1 x RS-422/485 2 x USB 3.0 4 x USB 2.0 5 x RS-232	1 x KB/MS 1 x RS-422/485 2 x USB 3.0 4 x USB 2.0 5 x RS-232
Storage Interface	4 x SATA 6Gb/s (RAID 0/1/5/10 supported)	4 x SATA 6Gb/s (RAID 0/1/5/10 supported)	2 x SATA 6Gb/s 1 x mSATA 1 x Micro SD slot	2 x SATA 3Gb/s 1 x Micro SD slot (E38xx sku only)	2 x SATA 6Gb/s 1 x mSATA 1 x SD card slot
Audio	Realtek ALC662 HD Audio codec				Realtek ALC892 HD Audio codec
Digital I/O	8-bit digital I/O				
Power Consumption	12V@5.08A (Intel® Core™ i7-6820EQ, 3.5GHz CPU with 16 GB (two 8 GB) 2133 MHz DDR4 memory)	3.3V@1.62A, 5V@3.54A, 12V@8.17A, 5VSB@3.6A (Intel® Core™ i7 6700K 4.0 GHz CPU with 16 GB (two 8 GB) 2133 MHz DDR4 memory)	12V@1.61A (Intel® Celeron® N3710 CPU with two 4 GB 1600 MHz DDR3L memory)	12V@1.64A (Intel® Celeron® J1900 CPU with 4 GB 1333 MHz DDR3L memory)	12V@2.7A (AMD GX-424CC 2.4GHz CPU with 1600 MHz 8 GB DDR3 memory)
Watchdog Timer	Software programmable supports 1~255 sec. system reset				
Operation Environment	Temperature Range: -20°C ~ 60°C (-4°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing				
Expansion Slot	1 x PCIe x16 slot 1 x Full-size PCIe Mini card slot (support mSATA) 1 x Half-size PCIe Mini card slot 1 x M.2 2230 (A key)	1 x PCIe x8 slot 1 x Full-size PCIe Mini card Slot (support mSATA)	1 x PCIe x1 slot 1 x PCIe Mini card slot	1 x Full-size PCIe Mini card slot (support mSATA) 1 x PCIe x4 slot (with PCIe x1 signal)	1 x Half-size PCIe Mini card slot 1 x PCIe x4 slot
CPU Cooler	Heatsink	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-RS	Heatsink	Heatsink	CF-479B-BGA-RS

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Industrial Computing Solutions

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Video Capture Solutions

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Industrial Computer Chassis

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Open Frame Monitor

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Power Supply/ Peripherals

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All-in-One System

Mini-ITX Selection Guide



Model Name	KINO-DH810	eKINO-BT	KINO-ABT-i2	KINO-DA750-i2	KINO-AA750-i2
CPU Socket	LGA1150	On board	On board	Socket FS1r2	Socket FS1r2
CPU Type	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Atom™/Celeron® on-board SoC	Intel® Atom™/Celeron® on-board SoC	AMD Embedded R-Series APU	AMD Embedded R-Series APU
Chipset	Intel® H81	Intel® Atom™/Celeron® on-board SoC	Intel® Atom™/Celeron® on-board SoC	AMD® A75	AMD® A75
Memory	Two 204-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs (system max. 16 GB)	Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826) One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 4 GB (N2807, E3825, E3815)	Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826) One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 4 GB (N2807, E3825, E3815)	Two 204-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs (system max. 16 GB)	Two 204-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs (system max. 16 GB)
Display Interface	Dual display supported 1 x VGA 1 x DVI-D 1 x iDP interface	Dual display supported 1 x VGA 2 x 18/24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x HDMI 1 x iDP interface	Quad display supported 3 x HDMI 1 x DVI-D (pin header)	Triple display supported 1 x HDMI 1 x DVI-D 1 x VGA 1 x iDP interface
Ethernet	Dual LAN: Intel® I211-AT PCIe controller	Dual LAN: Realtek RTL8111E PCIe controller	LAN1: Intel® I210-AT PCIe controller with NCSI support (for iRIS solution) LAN2: Intel® I211-AT PCIe controller	LAN1: Intel® I210-AT PCIe controller with NCSI support LAN2: Intel® I211-AT PCIe controller	LAN1: Intel® I210-AT PCIe controller with NCSI support LAN2: Intel® I211-AT PCIe controller
iRIS Remote Management Module	N/A	N/A	1 x iRIS-2400 slot	1 x iRIS-2400 slot	
I/O Interface	1 x PS/2 for KB/MS 1 x RS-422/485 2 x USB 3.0 5 x RS-232 6 x USB 2.0	1 x PS/2 for KB/MS 1 x RS-422/485 2 x USB 3.0 4 x RS-232 4 x USB 2.0	1 x PS/2 for KB/MS 1 x RS-422/485 2 x USB 3.0 4 x RS-232 6 x USB 2.0	1 x PS/2 for KB/MS 1 x RS-422/485 2 x RS-232 2 x USB 3.0 6 x USB 2.0	1 x PS/2 for KB/MS 1 x RS-422/485 2 x RS-232 2 x USB 3.0 4 x SATA 6Gb/s 6 x USB 2.0
Storage Interface	2 x SATA 6Gb/s	2 x SATA 3Gb/s	2 x SATA 3Gb/s	6 x SATA 6Gb/s (RAID 0/1/5/10 supported) 1 x SD card slot 1 x CFAST	4 x SATA 6Gb/s
Audio	Realtek ALC662 HD Audio codec			Realtek ALC892 HD Audio codec	
Digital I/O	8-bit programmable digital I/O				
Power Consumption	12V@6.03A (Intel® Core™ i7-4770K 3.90 GHz CPU with two 1333 MHz 4 GB DDR3 memory)	12V@1.55A (Intel® Celeron® J1900 CPU with two 8 GB 1333 MHz DDR3L memory)	5V@1.71A, 12V@0.08A, Vcore_12V@0.27A, 3.3V@0.34 (Intel® Celeron® J1900 CPU with two 4 GB 1333 MHz DDR3L memory)	12V@3.45A (AMD R-464L 2.3 GHz CPU with 8 GB (2 x 4 GB) 1333 MHz DDR3 memory)	12V@3.45A (AMD R-464L 2.3 GHz CPU with 8 GB (2 x 4 GB) 1333 MHz 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: 0°C ~ 60°C (32°F ~ 140°F) Relative Humidity: 5% ~ 95% non-condensing		Temperature Range: 0°C ~ 60°C (32°F ~ 140°F) Relative Humidity: 5% ~ 95% non-condensing	
Expansion Slots	1 x Full-size PCIe Mini card slot 1 x PCIe x1 slot	1 x Full-size PCIe Mini card slot 1 x PCIe x1 slot	1 x Full-size PCIe Mini card slot 1 x PCIe x1 slot	1 x SIM card socket 1 x PCIe Mini card slot	1 x PCIe x8 slot 1 x PCIe Mini card slot 1 x SIM card socket
CPU Cooler	CF-1156A-RS-R11 CF-1156E-R11	Heatsink	Heatsink	CF-989B-RS-R11	CF-989B-RS-R11

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Industrial Computing Solutions

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Video Capture Solutions

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Industrial Computer Chassis

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Power Supply/Peripherals

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All-in-One System

Mini-ITX Selection Guide



Model Name	KINO-AQ870	KINO-DQM871-i1	KINO-QM770	KINO-DH610	KINO-AH611
CPU Socket	LGA1150	On Board	Socket G2	Socket H2	Socket H2
CPU Type	Intel® Core™ i7/i5/i3 processor	Intel® Core™ i7/i5/i3 Mobile processor	Intel® Mobile processor	Intel® Core™ i3, Pentium®, Celeron® processor	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor
Chipset	Intel® Q87	Intel® QM87	Intel® QM77	Intel® H61	Intel® H61
Memory	2 x 240-pin, Max. 16 GB, 1600/1333 MHz dual-channel DDR3 SDRAM UDIMM	2 x 204-pin, Max. 16 GB, 1333/1600 MHz dual-channel DDR3 SO-DIMMs	2 x 204-pin, Max. 16 GB, 1066/1333/1600 MHz dual-channel DDR3 SO-DIMMs	2 x 204-pin 1066/1333 MHz dual-channel DDR3 SO-DIMMs (system max. 16 GB)	2 x 204-pin 1066/1333 MHz dual-channel DDR3 SO-DIMMs (system max. 16 GB)
Display Interface	Triple display supported 1 x VGA 1 x DVI-D 1 x iDP interface	Triple display supported 2 x HDMI 1 x VGA 1 x 18/24-bit dual-channel LVDS 1 x iDP interface	Triple display supported 2 x HDMI 1 x DVI-I 1 x 18/24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x HDMI 1 x DVI-D	Dual display supported 2 x VGA 2 x HDMI
Ethernet	LAN1: Intel® I211 PCIe controller LAN2: Intel® I217LM with Intel® AMT 9.0 support	LAN1: Intel® I217LM with Intel® AMT 9.0 support LAN2: Intel® I210-AT PCIe controller	LAN1: Intel® 82579 PHY with Intel® AMT 8.0 support LAN2: Intel® 82583V PCIe controller	LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support LAN2: Realtek RTL8111E PCIe GbE controller	Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
iRIS Remote Management Module	N/A	1 x iRIS-1010 slot	N/A		
I/O Interface	1 x PS/2 for KB/MS 1 x RS-422/485 1 x TPM (2x10 pin) 4 x USB 3.0 5 x RS-232 6 x USB 2.0	1 x PS/2 for KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 4 x USB 3.0 5 x RS-232 10 x USB 2.0	1 x KB/MS 1 x RS-422/485 1 x SMBus 1 x TPM (2x10 pin) 2 x RS-232 4 x USB 2.0 4 x USB 3.0	1 x KB/MS 1 x RS-232 1 x RS-422/485 1 x TPM (2x10 pin) 10 x USB 2.0	1 x KB/MS 1 x TPM (2x10 pin) 2 x RS-232 8 x USB 2.0
Storage Interface	4 x SATA 6Gb/s 1 x mSATA	2 x SATA 6Gb/s 2 x SATA 3Gb/s 1 x mSATA	2 x SATA 6Gb/s 2 x SATA 3Gb/s	4 x SATA 3Gb/s	3 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 digital I/O				
Power Consumption	3.3V@1.11A, 5V@3.01A, 12V@0.12A, Vcore@6.32A, 5VSB@0.15A (Intel® 2.60GHz CPU with two 1600 MHz 2 GB DDR3 memory)	12V@5.03A (2.0GHz Intel® Core™ i7 processor with two 1333 MHz 4 GB DDR3 memory)	12V@6.08A (2.3GHz Intel® Core™ i7-3610QE with two 1333 MHz 4 GB DDR3 memory running 3DMark06 burn in)	12V@5.07A (2.2GHz Intel® G620T with two 2GB DDR3 1066 MHz running 3DMark06 burn in) 12V@8.85A (2.8GHz Intel® Core™ i7-2600S with two 1066 MHz 2 GB DDR3 running 3DMark06 burn in)	5V@3.47A, 12V@0.11A, Vcore_12V@6.73A, 3.3V@1.01A, 5VSB@0.15A (3.4GHz Intel® Core™ i7-2600K with two 1333 MHz 2 GB DDR3)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset				
Operation Environment	Temperature Range: -10°C ~ 60°C (14°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing				
Expansion Slots	1 x PCIe x8 slot 1 x PCIe Mini (support mSATA)	1 x PCIe x16 slot 1 x Full-size PCIe Mini slot (support mSATA)	1 x PCIe x16 slot 1 x PCIe Mini card slot (support mSATA)	1 x PCI slot 1 x PCIe x1 slot	1 x PCIe x16 slot 1 x Half-size PCIe Mini card slot
CPU Cooler	CF-1150SA-R10 CF-1150SB-R11 CF-1150SC-R20 CF-1150SE-R11	XCF-479B-RS CF-989B-RS-R11	CF-989A-RS-R12	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-R11	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-R11

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Industrial Computing Solutions

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Video Capture Solutions

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Industrial Computer Chassis

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Open Frame Monitor

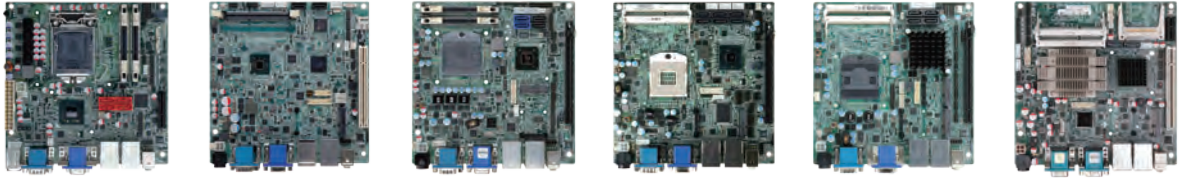
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Power Supply/ Peripherals

6

All-in-One System

Mini-ITX Selection Guide



Model Name	KINO-AH612	KINO-CV-D25501/N26001	KINO-QM670-R20	KINO-QM57A	KINO-HM551	KINO-PV-D5252/D4252
CPU Socket	Socket H2	On Board	Socket G2	Socket G1	Socket G1	On board
CPU Type	Intel® Core™ i7/i5/i3, Pentium®, Celeron® processor	Intel® Atom™ processor D2550 1.86GHz Intel® Atom™ processor N2600 1.6GHz	Intel® Core™ i7/i5/i3 Mobile processor	Intel® Core™ i7/i5/i3 and Celeron® mobile processor	Intel® Core™ i7/i5/i3 and Celeron® mobile processor	Intel® Atom™ processor D525 1.8GHz Intel® Atom™ processor D425 1.8GHz
Chipset	Intel® H61	NM10	Intel® QM67	Intel® QM57	Intel® HM55	ICH8M
Memory	2 x 204-pin 1066/1333 MHz dual-channel DDR3 SO-DIMMs (system max. 16 GB)	1 x 204-pin 1066 MHz DDR3/DDR3L (1.35V) SO-DIMM (D2550) (system max. 4 GB) 1 x 204-pin 800 MHz DDR3/DDR3L (1.35V) SO-DIMM (N2600) (system max. 2 GB)	2 x 204-pin 1333/1066 MHz 4 GB DDR3 SO-DIMM (system max. 8 GB)	2 x 204-pin 800/1066 MHz 4 GB DDR3 SO-DIMM (system max. 8 GB)	2 x 204-pin 800/1066 MHz 4 GB DDR3 SO-DIMM (system max. 8 GB)	2 x 204-pin 800 MHz 2 GB DDR3 SO-DIMM (system max. 4 GB)
Display Interface	Dual display supported 1 x VGA 1 x DVI-D	Dual display supported 1 x VGA 1 x Single-channel 18-bit (N2600)/24-bit LVDS2 (D2550) 1 x 24-bit dual-channel LVDS 1 x HDMI	Dual display supported 1 x VGA 2 x HDMI 1 x 18/24-bit dual-channel LVDS	Dual display supported 1 x VGA 2 x HDMI 1 x 18/24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x HDMI 1 x DVI-D 1 x 18/24-bit dual-channel LVDS	Dual display supported 1 x VGA 1 x 18-bit single-channel LVDS 1 x 24-bit dual-channel LVDS
Ethernet	Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support	Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support	LAN1: Intel® 82583V PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 supported	LAN1: Intel® 82577 GbE LAN controller with Intel® AMT 6.0 supported by iEZman software UI LAN2: Intel® 82574L GbE LAN	Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support	Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
iRIS Remote Management Module	N/A					
I/O Interface	1 x PS/2 for KB/MS 1 x RS-422/485 1 x TPM (2x10 pin) 5 x RS-232 8 x USB 2.0	1 x KB/MS 1 x RS-422/485 1 x TPM (2x10 pin) 2 x USB 3.0 5 x RS-232 6 x USB 2.0	1 x KB/MS 1 x RS-422/485 1 x TPM (2x10 pin) 2 x RS-232 2 x USB 3.0 6 x USB 2.0	1 x KB/MS 1 x RS-232/422/485 2 x RS-232 8 x USB 2.0	1 x KB/MS 1 x TPM (2x10 pin) 2 x RS-232/422/485 4 x RS-232 8 x USB 2.0	1 x KB/MS 1 x LPT 1 x RS-232/422/485 1 x TPM (2x10 pin) 5 x RS-232 8 x USB 2.0
Storage Interface	4 x SATA 3Gb/s	2 x SATA 3Gb/s or 1 x SATA 3Gb/s + 1 x mSATA 1 x microSD slot (bootable)	2 x SATA 3Gb/s 2 x SATA 6Gb/s	6 x SATA 3Gb/s	4 x SATA 3Gb/s	2 x SATA 3Gb/s 1 x CF Type II
Audio	Realtek ALC662 HD Audio codec		Realtek ALC892 HD Audio codec	Realtek ALC888 HD Audio codec		
Digital I/O	8-bit programmable digital I/O					
Power Consumption	5V@3.9A, 12V@0.36A, Vcore_12V@8.28A, 3.3V@1.24A, 5VSB@0.18A (3.4GHz Intel® Core™ i7-2600 with two 1333 MHz 2 GB DDR3)	12V@2.8A (1.86GHz Intel® D2550 CPU with DDR3 1333 MHz 4 GB DIMM) 12V@2.4A (1.6GHz Intel® N2600 CPU with 1333 MHz 2 GB DDR3 DIMM)	12V@6.5A (2.2GHz Intel® Core i7 with two 1333 MHz 4 GB DDR3 DIMM)	12V@5.27A (2.66GHz Intel® Core i7 620M CPU with two 1333 MHz 2 GB DDR3 DIMM)	12V@4.67A (2.66GHz Intel® Core i7 620M CPU with two 1333 MHz 4 GB DDR3 DIMM)	12V@1.95A (Intel® Atom™ D525 1.8GHz with two 1 GB DDR3)
Watchdog Timer	Software programmable and supports 1~255 sec. system reset					
Operation Environment	Temperature Range: -10°C ~ 60°C (14°F ~ 140°F) Relative Humidity: 5% ~ 95%, non-condensing		-20°C ~ 60°C with free air, -20°C ~ 70°C with force air for D2550 processor -20°C ~ 70°C with free air, -20°C ~ 75°C with force air for N2600 processor Relative Humidity: 5% ~ 95%, non-condensing	Temperature Range: -10°C ~ 60°C Relative Humidity: 5% ~ 95%, non-condensing		
Expansion Slots	1 x PCIe x4 slot	1 x PCIe Mini Card Slot 1 x PCI	1 x PCI x16 slot 1 x PCIe Mini card slot	1 x PCIe x16 slot 1 x PCIe Mini card slot	1 x PCIe x16 slot 1 x PCIe Mini card slot	1 x PCI Slot 1 x PCIe x1 slot 1 x PCIe Mini card slot
CPU Cooler	CF-1156A-RS-R11 CF-1156C-RS CF-1156D-RS CF-1156E-R11	Heatsink	CF-989A-RS-R12	CF-989A-RS-R12	CF-989A-RS-R12	Heatsink

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Industrial Computing Solutions

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Video Capture Solutions

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Industrial Computer Chassis

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Open Frame Monitor

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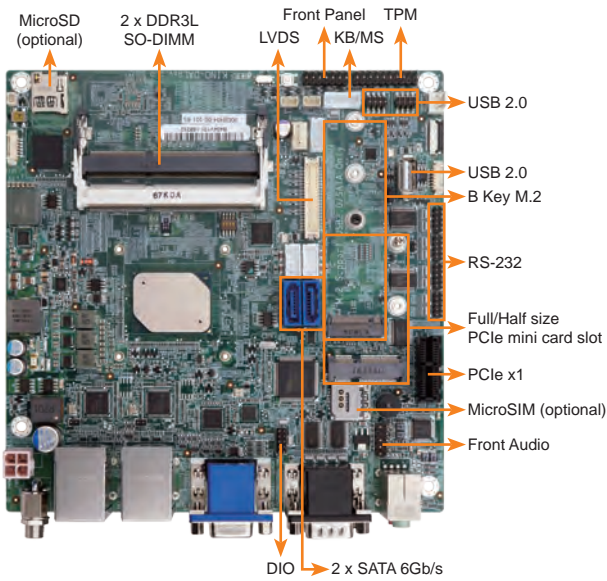
Power Supply/Peripherals

6

All-in-One System

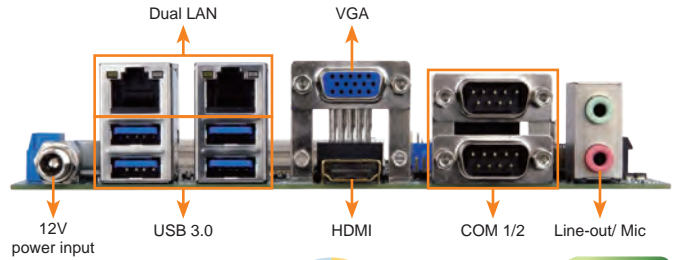
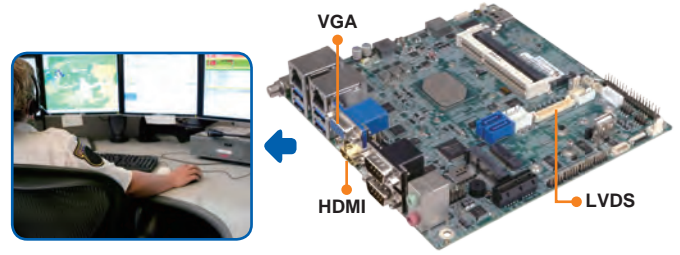
KINO-DAL

Mini-ITX SBC supports Intel® 14nm Atom™, Pentium® or Celeron® on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS



Triple Independent Displays

Preliminary



Specifications

- ◆ SoC
 - Intel® Atom™ E3950 on-board SoC (up to 2.0GHz, quad-core, 2M Cache, TDP=12W)
 - Intel® Atom™ E3940 on-board SoC (up to 1.8GHz, quad-core, 2M Cache, TDP=9W)
 - Intel® Atom™ E3930 on-board SoC (up to 1.8GHz, dual-core, 2M Cache, TDP=6W)
 - Intel® Pentium® N4200 on-board SoC (up to 2.5GHz, quad-core, 2M Cache, TDP=6W)
 - Intel® Celeron® N3350 on-board SoC (up to 2.4GHz, dual-core, 2M Cache, TDP=6W)
- ◆ BIOS
 - AMI UEFI BIOS
- ◆ Memory
 - Two 204-pin 1866/1600MHz Dual-channel DDR3L DIMMs support up to 8GB
- ◆ Graphics Engine
 - Intel® HD Graphics Gen9 Low Power; 18 Execution Units
 - 4K Codec Decode & Encode for HEVC 4, H.264, VP8, SVC, MVC
- ◆ Display Output
 - Triple Independent Display
 - 1 x LVDS: 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
 - 1 x VGA (up to 1920x1200@60Hz)
 - 1 x HDMI (up to 3840x2160@30Hz)
- ◆ Ethernet
 - 2 x PCIe GbE LAN Intel® i211 AT / i210 IT controller
- ◆ External I/O Interface
 - 4 x USB 3.0
 - 2 x RS-232/422/485
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin) 1 x eMMC 5.0 (optional, up to 32G)
 - 1 x MicroSD card slot 1 x M.2 (B key) (2242, colay SATA1, with USB signal)
 - 1 x USB 2.0 (180° Type-A) 2 x SATA 6G/s with 12/5V SATA power connector (no RAID)
 - 4 x USB 2.0 (2x4 pin, P=2.0) 4 x RS-232 (2x5 pin, P=2.0)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio
 - Realtek ALC662 HD codec
 - 2 x Audio jacks (line-out, mic-in) on rear I/O
 - 1 x Front audio (2x5 pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
 - 2 x LAN LED (1x2 pin)
- ◆ Expansion
 - 1 x PCIe x1 card slot
 - 1 x Full/Half-size PCIe Mini card slot (SIM holder)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System smart fan (1x4 pin)
- ◆ Power Supply
 - 12V only DC input as Default/ 9V~30V DC input (optional)
 - 1 x Internal power connector (2x2 pin)
 - 1 x External DC power Jack (Ø5.5mm)
 - Support AT/ATX mode
- ◆ Watchdog Timer
 - Software programmable support 1~255 sec. system reset
- ◆ Power Consumption: TBD
- ◆ Operating Temperature: -20°C ~ 60°C / -40°C ~ 85°C
- ◆ Storage Temperature: -40°C ~ 85°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 1100g / NW: 700g



Features

- Mini-ITX SBC supports Intel® 14nm Atom™, Pentium® or Celeron® on-board SoC supports dual-channel DDR3L SO-DIMMs
- Triple independent display support
- Optional wide range 9V~30V DC input design
- Full size PCIe Mini slot with SIM sockets for 3G/LTE expansion
- COM, USB 3.0, SATA 6Gb/s, M.2, eMMC 5.0 and audio support
- IEI one key recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x KINO-DAL single board computer with heatsink	1 x One key recovery CD
1 x SATA with power cable kit	1 x QIG
1 x I/O Shielding	1 x Utility CD

Ordering Information

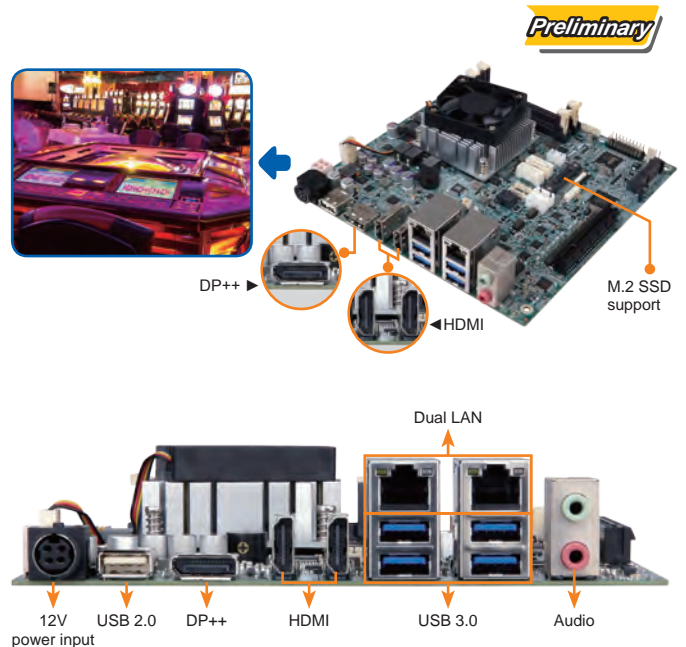
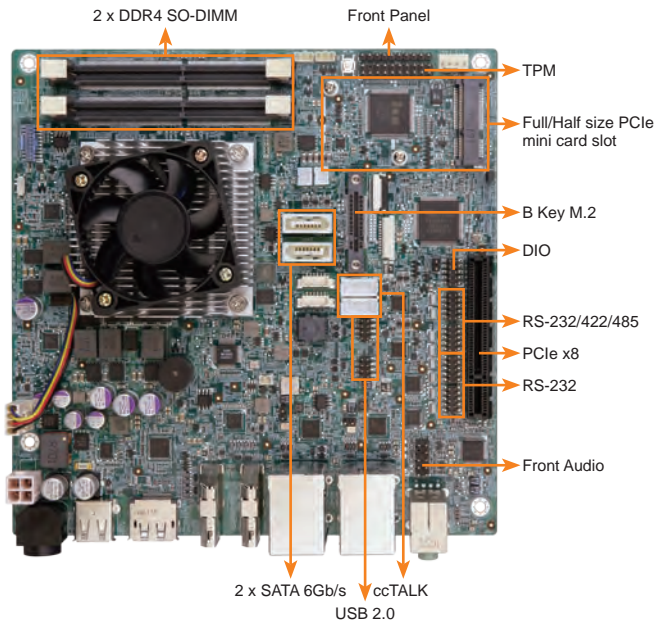
Part No.	Description
KINO-DAL-N2-R10	Mini-ITX SBC supports Intel® 14nm quad-core Pentium® N4200 2.5GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS
KINO-DAL-N1-R10	Mini-ITX SBC supports Intel® 14nm dual-core Celeron® N3350 2.3GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS
KINO-DAL-E3W2-R10**	Mini-ITX SBC supports Intel® 14nm quad-core Atom™ E3950 2.0GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C
KINO-DAL-E2W2-R10	Mini-ITX SBC supports Intel® 14nm quad-core Atom™ E3940 1.8GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C
KINO-DAL-E1W2-R10	Mini-ITX SBC supports Intel® 14nm dual-core Atom™ E3930 1.8GHz on-board SoC with HDMI/LVDS/VGA, Dual PCIe GbE, USB 3.0, PCIe Mini, M.2, SATA 6Gb/s, COM, Audio and RoHS, -40°C ~ 85°C
32000-070301-RS	Dual-port USB cable, 210mm, P=2.0
32000-023800-RS	PS/2 KB/MS cable, 135mm, P=2.0
32205-002700-100-RS	RS-232 cable, 200mm, P=2.0
TPM-IN02-R20	20-pin Infineon TPM 2.0 module, software management tool, firmware v5.5

**By order production, MOQ: 100

- 1 Industrial Computing Solutions
- 2 Video Capture Solutions
- 3 Industrial Computer Chassis
- 4 Open Frame Monitor
- 5 Power Supply/ Peripherals
- 6 All-in-One System

gKINO-DMF

Mini-ITX SBC supports AMD Merlin Falcon SoC Processor, HDMI 2.0, M.2, PCIe mini, SATA 6Gb/s, USB 3.0, HD audio and RoHS



Specifications

- ◆ CPU
FP4 BGA supports AMD Merlin Falcon SoC
- ◆ BIOS
AMI BIOS
- ◆ Memory
Two 260-pin 2400MHz dual-channel DDR4 non-ECC unbuffered SO-DIMMs support up to 64 GB
- ◆ Graphics Engine
AMD Radeon HD 10000graphic,3rd Gen. graphic core,support DX 12, HSA 2.0
UVD v6 decode for H.265 MPEG2/4, VC-1, MVC
VCE v3.1 encode for H.254 VCE
- ◆ Display Output
Triple Independent Display
2 x HDMI 1.4 (up to 4096x2160@24Hz)
1 x DP (up to 3840x2160@60Hz)
- ◆ Ethernet
Dual GbE RTL 8111GN
- ◆ External I/O Interface
4 x USB 3.0
1 x USB 2.0
- ◆ Internal I/O Interface
1 x MicroSD card slot 2 x RS-232/422/485 (2x5 pin, P=2.0)
2 x RS-232 (2x5 pin, P=2.0) 2 x RS-232 (support Cctalk, TTL)(1x4 pin, P=2.54)
4 x USB 2.0 (2x4 pin, P=2.0) 2 x SATA with 5V/12V output
- ◆ Audio
Realtek ALC662 HD audio codec
2 x Audio jacks (line-out, mic-in) on rear IO
1 x Front audio (2x5-pin)
- ◆ Front Panel
1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ SMBUS
1 x SMBus (1x4 pin)
- ◆ I²C
1 x I²C (1x4 pin)
- ◆ TPM:
1 x TPM (2x10 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Expansion
1 x PCIe x 8 slot
1 x Full size PCIe Mini card slot
- ◆ Watchdog Timer: Software Programmable support 1~255 sec. system reset
- ◆ EEPROM: Reserved
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Power Supply
12V DC input 1 x Internal power connector (2x2 pin)
Support AT/ATX mode 1 x External DC jack (4-pin DIN)
- ◆ FAN Connector
1 x CPU smart fan (1x4 pin)
1 x System smart fan (1x4 pin)
- ◆ Power Consumption
12V@5.54A (AMD RX-421BD 2.1GHz CPU with 2400 MHz 16GB DDR4 memory)
- ◆ Storage Temperature: -10°C ~ 70°C
- ◆ Operating Temperature: 0°C ~ 60°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170 mm
- ◆ Weight: GW: 1100g / NW: 700g



Features

- Mini ITX form factor with AMD Merlin Falcon processor with DDR4 memory (ECC support)
- HDMI 2.0 Supported
- Triple display via, HDMI2.0, DP++
- M.2 B key support
- Full-size PCIe mini slot

Packing List

1 x gKINO-DMF single board computer with CPU cooler
1 x SATA cable
1 x I/O shielding
1 x One key recovery CD
1 x QIG
1 x Utility CD

Ordering Information

Part No.	Description
gKINO-DMF-421-R10	Mini-ITX SBC supports AMD RX-421BD on board SoC (quad-core 2.1GHz, 35W), DDR4 ,triple independent displays,HDMI/DP, dual GbE, SATA 6Gb/s, USB3.0, PCIe mini, M.2,HD audio and RoHS
gKINO-DMF-216-R10	Mini-ITX SBC supports AMD RX-216GD on board SoC (dual-core 1.6GHz, 15W), DDR4 ,triple independent displays, HDMI/DP, dual GbE, SATA 6Gb/s, USB3.0, PCIe mini, M.2, HD audio and RoHS
19800-000300-100-RS	RS-232 cable with bracket, 300mm, P=2.0
CB-USB02A-RS	Dual-port USB cable with bracket, 300mm, P=2.0
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

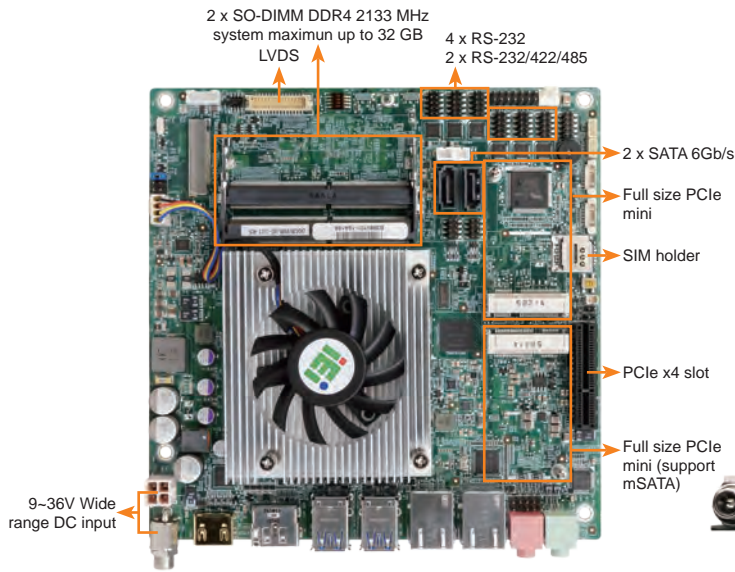
4 Open Frame Monitor

5 Power Supply/Peripherals

6 All-in-One System

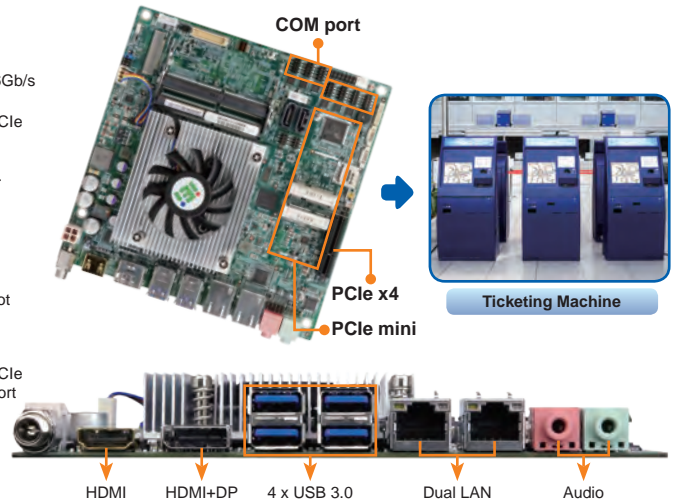
tKINO-ULT3

Thin Mini-ITX SBC supports Intel® Skylake-U Processor, 9~36V DC input, Dual HDMI, LVDS, SATA 6Gb/s, Dual Intel® GbE, USB 3.0, Mini PCIe, eMMC 5.0, HD audio and RoHS



Multiple expansion with COM port, PCIe x4, and PCIe mini.

Preliminary



Specifications

- ◆ CPU
 - 6th generation Intel® mobile ULT on-board processor
 - Intel® Core™ i7-6600U (up to 3.4GHz, dual-core, 4M Cache, TDP=15W)
 - Intel® Core™ i5-6300U (up to 3.0GHz, dual-core, 3M Cache, TDP=15W)
 - Intel® Core™ i3-6100U (up to 2.3GHz, dual-core, 3M Cache, TDP=15W)
 - Intel® Celeron® 3955U (up to 2.0GHz, dual-core, 2M Cache, TDP=15W)
 - Intel® Celeron® 3855U (up to 1.6GHz, dual-core, 2M Cache, TDP=15W)
- ◆ BIOS
 - AMI UEFI BIOS
- ◆ Memory
 - 2 x SO-DIMM DDR4 2133MHz, system maximum up to 32GB
- ◆ Graphics Engine
 - Intel® HD graphic
- ◆ Display Output
 - 1 x HDMI 1.4 (up to 4096x2160@24Hz)
 - 1 x HDMI/DP (up to 4096x2160@24Hz)
 - 1 x LVDS/eDP (eDP support by request)
- ◆ Ethernet
 - LAN1: Intel® I219 (with Intel® AMT11.0 support)
 - LAN2: Intel® I211 PCIe controller with NCSI support
- ◆ External I/O Interface
 - 4 x USB 3.0
- ◆ Internal I/O Interface
 - 1 x eMMC 5.0 (optional, up to 32G) 4 x RS-232 (2x5 pin, P=2.0)
 - 2 x RS-232/422/485 (2x5 pin, P=2.0) 4 x USB 2.0 (2x4 pin, P=2.0)
 - 2 x SATA with 5V output
- ◆ Audio
 - Realtek ALC662 HD Audio Codec support 5.1 Channel
 - 2 x Audio jacks (line-out, mic-in) on rear IO
 - 1 x Front audio (2x5-pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, power button, reset button)
- ◆ LAN LED
 - 2 x LAN LED(1x2 pin)
- ◆ SMBUS
 - 1 x SMBus (1x4 pin)
- ◆ I²C
 - 1 x I²C (1x4 pin)
- ◆ Digital I/O
 - 8-bit digital I/O (2x5 pin)
- ◆ Expansion
 - 1 x PCIe x4 slot
 - 1 x Full-size PCIe Mini card slot (support mSATA, coloy SATA2)
 - 1 x Full-size PCIe Mini card slot (with SIM holder)
- ◆ Watchdog Timer
 - Software programmable support 1~255 sec. system reset by Super I/O
- ◆ Power Supply
 - 9~36V DC input
 - 1 x Internal power connector (2x2 pin)
 - 1 x External DC power Jackc (Ø5.5mm)
 - Support AT/ATX mode
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System fan (1x3 pin)
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Power Consumption: TBD
- ◆ Operating Temperature: TBD
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170 mm
- ◆ Weight: TBD



Features

- Mini ITX form factor with Intel® Skylake-U processor support DDR4-2133 memory
- Wide range 9~36V DC Input
- Support dual HDMI (one HDMI/DP combo support), LVDS/eDP
- Intel® GbE LAN with Intel® AMT 11.0 supported
- SATA 6Gb/s, mSATA and eMMC 5.0 (option) supported
- High speed I/O interface for USB 3.0, PCIe x4, full-size PCIe mini support
- Support IEL jumpless

Packing List

1 x tKINO-ULT3 single board computer with CPU cooler
2 x SATA cable
1 x I/O shielding
1 x One key Recovery CD
1 x QIG
1 x Utility CD

Ordering Information

Part No.	Description
tKINO-ULT3-i7-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Core™ i7-6600U (15W) on-board Processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB3.0, Mini PCIe, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-i5-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Core™ i5-6300U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB3.0, Mini PCIe, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-i3-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Core™ i3-6100U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB3.0, Mini PCIe, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-C-R10	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Celeron® 3955U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB3.0, Mini PCIe, eMMC 5.0, HD audio and RoHS
tKINO-ULT3-CE-R10*	Thin Mini-ITX SBC supports Intel® 6th Generation Mobile Celeron® 3855U (15W) on-board processor (ULT), 9~36V DC input, Dual HDMI, LVDS, eDP, SATA 6 Gb/s, Dual Intel® GbE, USB3.0, Mini PCIe, eMMC 5.0, HD audio and RoHS
32205-002700-100-RS	RS-232 cable, 200mm, P=2.0
32205-003700-100-RS	RS-232/422/485 cable, 230mm, P=2.0

*Without full functions support, please refer to user manual.

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

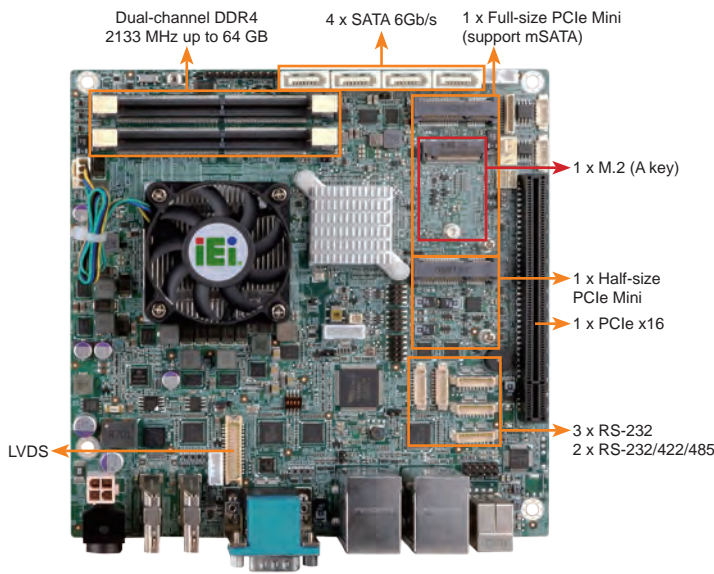
Power Supply/Peripherals

6

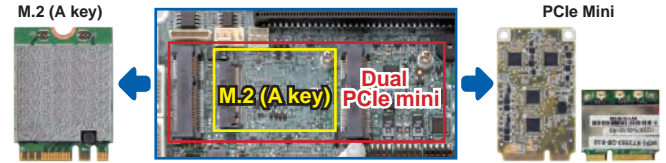
All-in-One System

KINO-DCM236

Mini-ITX SBC supports 6th Intel® Xeon® Processor E3 v5 series, Core™ i3, Celeron® per Intel® CM236, DDR4 with ECC support, HDMI 2.0, dual Intel® GbE, SATA 6Gb/s, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS



Flexible Selection of Modules with Different Functions

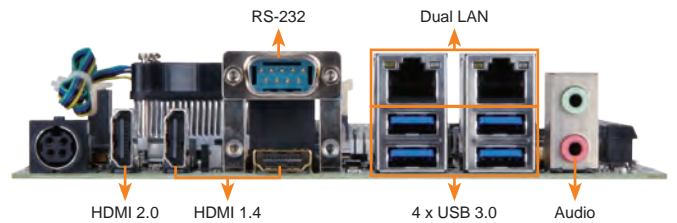


SO-DIMM DDR4 ECC support



Specifications

- ◆ CPU
 - 6th generation Intel® processor
 - Intel® Xeon® processor E3-1505M v5 (up to 3.7GHz, quad-core, 8M Cache, TDP=45W)
 - Intel® Xeon® processor E3-1505L v5 (up to 2.0GHz, quad-core, 8M Cache, TDP=25W)
 - Intel® Core™ i3-6102E processor (up to 1.90GHz, dual-core, 3M cache, TDP=25W)
 - Intel® Celeron® processor G3902E (up to 1.60GHz, dual-core, 2M cache, TDP=25W)
- ◆ Chipset: Intel® CM236
- ◆ BIOS: AMI BIOS
- ◆ Memory
 - Two 260-pin 2133/1866 MHz dual-channel DDR4 ECC and non-ECC unbuffered SDRAM SO-DIMMs support up to 64GB
- ◆ Graphics Engine
 - Intel® HD Graphics Gen 9 support for DX11/12, OCL 2.x, OGL 4.3/4.4, ES 2.0
- ◆ Display Output
 - Triple independent display
 - 2 x HDMI 1.4 (up to 4096x2160@24Hz)
 - 1 x HDMI 2.0 (up to 4096x2160@60Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
- ◆ Ethernet
 - LAN1: Intel® I219LM with (Intel® AMT 11.0 support)
 - LAN2: Intel® I211 PCIe controller with NCSI support
- ◆ External I/O Interface
 - 4 x USB 3.0
 - 1 x RS-232
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin, P=2.0)
 - 4 x SATA 6G/s (RAID 0/1/5/10 support)
 - 2 x RS-232/422/485 (1x9 pin, P=1.25)
 - 4 x USB 2.0 (2x4 pin, P=2.0)
 - 3 x RS-232 (1x9 pin, P=1.25)
- ◆ Audio
 - Realtek ALC662 HD Audio codec supports 5.1-channel
 - 2 x Audio jacks (line-out, mic-in) on rear IO
 - 1 x Front audio (2x5-pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ I²C: 1 x I²C (1x4 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Expansion
 - 1 x PCIe x16 slot
 - 1 x Full-size PCIe Mini card slot (support mSATA)
 - 1 x M.2 2230 (A key)
 - 1 x Half-size PCIe Mini card slot
- ◆ Cooler Module
 - 19100-000219-00-RS for Intel® Xeon® E3-1505M v5 (45W)
 - 19100-000203-00-RS for Intel® Xeon® E3-1505L v5/Core™ i3/Celeron® (25W)
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset by super I/O
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Power Supply
 - 12V DC input
 - 1 x External DC jack (4-pin DIN)
 - 1 x Internal power connector (2x2 pin)
 - Support AT/ATX mode
- ◆ Fan Connector
 - 1 x CPU smart (1x4 pin)
 - 1 x System fan (1x4 pin)
- ◆ Power Consumption
 - 12V@6.93A (Intel Xeon E3-1505M V5 2.8GHz CPU with 32 GB (two 16 GB) 2133 MHz DDR4 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170 mm
- ◆ Weight: GW: 900g / NW: 450g



Features

- Mini ITX form factor with 6th Intel® Xeon® Processor E3 v5 series, Core™ i3, Celeron® support DDR4-2133 memory with ECC support
- HDMI 2.0
- ECC support
- Triple display with independent audio
- PCIe x16, dual PCIe Mini and M.2 A key feature support for various function module
- Rich High speed I/O interface for USB 3.0 and SATA 6Gb/s
- Support IEI jumpless

Packing List

1 x KINO-DCM236 single board computer with CPU cooler	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-DCM-236-E3-R10	Mini-ITX SBC supports 6th Intel® Xeon® processor E3-1505M v5 (45W), DDR4 with ECC support, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
KINO-DCM-236-E3E-R10	Mini-ITX SBC supports 6th Intel® Xeon® processor E3-1505L v5 (25W), DDR4 with ECC support, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
KINO-DCM-236-i3E-R10**	Mini-ITX SBC supports 6th Intel® Core™ i3-6102E processor (25W), DDR4 with ECC support, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
KINO-DCM-236-CE-R10**	Mini-ITX SBC supports 6th Intel® Celeron® processor G3902E (25W), DDR4 with ECC support, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
32000-023800-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32005-000900-200-RS	RS-232/422/485 cable, 100mm, P=1.25

**By order production, MOQ: 100

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

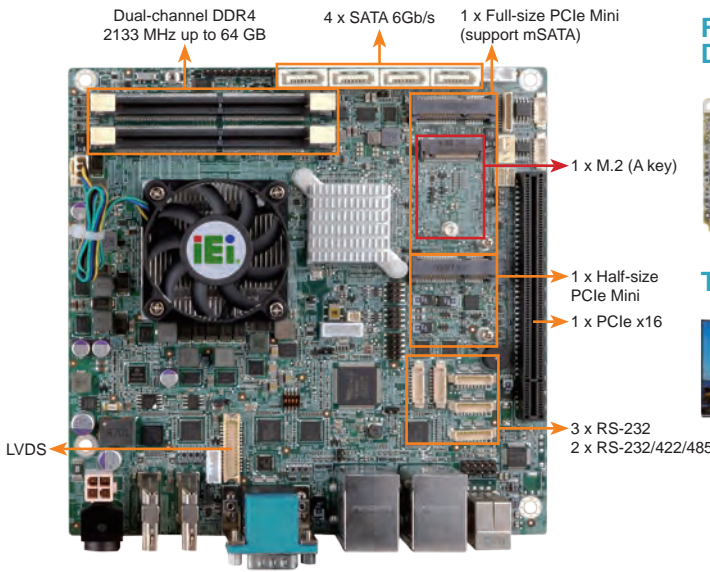
4 Open Frame Monitor

5 Power Supply/ Peripherals

6 All-in-One System

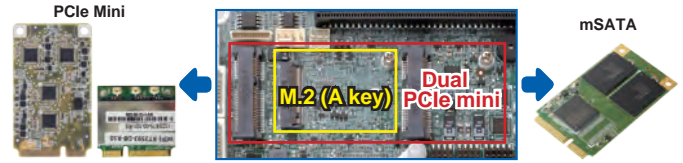
KINO-DQM170

Mini-ITX SBC supports 6th Intel® Core™ Mobile CPU, HDMI 2.0, M.2, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, HD Audio and RoHS

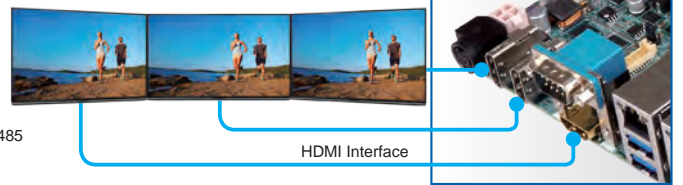


Flexible Selection of Modules with Different Functions

New

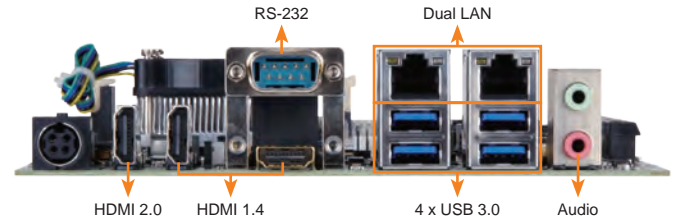


Triple Independent Displays



Specifications

- CPU**
 - 6th generation Intel® Core™ mobile processor
 - Intel® Core™ i7-6820EQ (up to 3.5GHz, quad-core, 8M cache, TDP=45W)
 - Intel® Core™ i5-6440EQ (up to 3.4GHz, quad-core, 6M cache, TDP=45W)
 - Intel® Core™ i3-6102E (up to 1.90GHz, dual-core, 3M cache, TDP=25W)
 - Intel® Celeron® G3902E (up to 1.60GHz, dual-core, 2M cache, TDP=25W)
- Chipset:** Intel® QM170
- BIOS:** AMI BIOS
- Memory**
 - Two 260-pin 2133/1866 MHz dual-channel unbuffered DDR4 SDRAM SO-DIMMs support up to 64GB
- Graphics Engine**
 - Intel® HD Graphics Gen 9 support for DX11/12, OCL 2.x, OGL 4.3/4.4, ES 2.0
- Display Output**
 - Triple independent display
 - 2 x HDMI 1.4 (up to 4096x2160@24Hz)
 - 1 x HDMI 2.0 (up to 4096x2160@60Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
- Ethernet**
 - LAN1: Intel® I219LM with (Intel® AMT 11.0 support)
 - LAN2: Intel® I211 PCIe controller with NCSI support
- External I/O Interface**
 - 4 x USB 3.0
 - 1 x RS-232
- Internal I/O Interface**
 - 1 x KB/MS (1x6 pin, P=2.0)
 - 2 x RS-232/422/485 (1x9 pin, P=1.25)
 - 3 x RS-232 (1x9 pin, P=1.25)
 - 4 x SATA 6G/s (RAID 0/1/5/10 support)
 - 4 x USB 2.0 (2x4 pin, P=2.0)
- Audio**
 - Realtek ALC662 HD Audio codec supports 5.1-channel
 - 2 x audio jacks(line out, mic in) on rear I/O (colay with 3x audio jack)
 - 1 x Front audio (2x5 pin)
- Front Panel**
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- LAN LED:** 2 x LAN LED (1x2 pin)
- SMBus:** 1 x SMBus (1x4 pin)
- PC:** 1 x PC (1x4 pin)
- Digital I/O:** 8-bit digital I/O (2x5 pin)
- Expansion**
 - 1 x PCIe x16 slot
 - 1 x Full-size PCIe Mini card slot (support mSATA)
 - 1 x M.2 2230 (A key)
 - 1 x Half-size PCIe Mini card slot
- Cooler Module**
 - 19100-000219-00-RS for Intel® Core™ i7/i5 (45W)
 - 19100-000203-00-RS for Intel® Core™ i3/Celeron® (25W)
- Watchdog Timer**
 - Software programmable supports 1~255 sec. system reset by super I/O
- Chassis Intrusion Detection:** 1 x Chassis intrusion connector (1x2 pin)
- Power Supply**
 - 12V DC input
 - 1 x External DC jack (4-pin DIN)
 - 1 x Internal power connector (2x2 pin)
 - Support AT/ATX mode
- Fan Connector**
 - 1 x CPU smart (1x4 pin)
 - 1 x System fan (1x4 pin)
- Power Consumption**
 - 12V@5.08A (Intel® Core™ i7-6820EQ, 3.5GHz CPU with 16 GB (two 8 GB) 2133 MHz DDR4 memory)
- Operating Temperature:** -20°C ~ 60°C
- Operating Humidity:** 5% ~ 95%, non-condensing
- Dimensions:** 170mm x 170 mm
- Weight:** 900g / NW: 450g



Features

- Mini ITX form factor with 6th Gen Intel® Core™ i7/i5/i3/Celeron® processor support
- DDR4 memory
- Support HDMI 2.0 (4096x2160@60Hz)
- Triple display with independent audio via HDMI
- PCIe x16, dual PCIe Mini and M.2 A key feature support for various function module
- Rich High speed I/O interface for USB 3.0 and SATA 6Gb/s
- Support IEI jumpless

Packing List

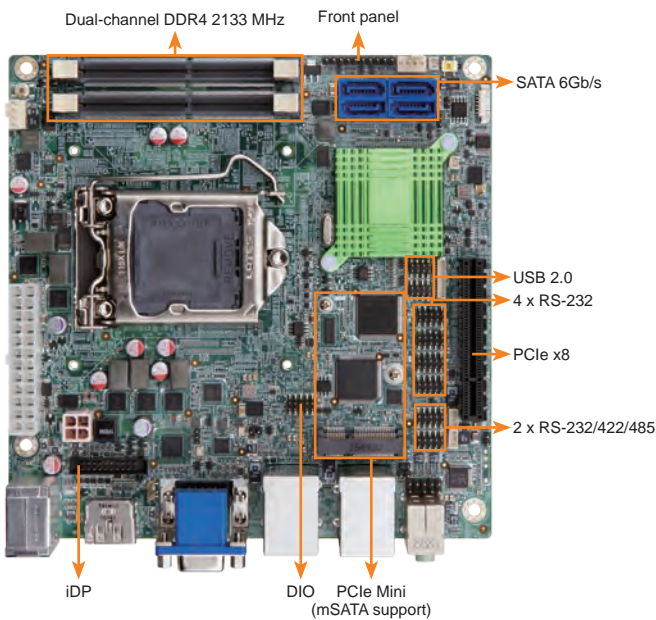
1 x KINO-DQM170 single board computer with CPU cooler	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-DQM170-i7-R10	Mini-ITX SBC with BGA 1440 supports 6th Gen Intel® Core™ i7-6820EQ processor, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
KINO-DQM170-i5-R10	Mini-ITX SBC with BGA 1440 supports 6th Gen Intel® Core™ i5-6440EQ processor, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
KINO-DQM170-i3E-R10	Mini-ITX SBC with BGA 1440 supports 6th Gen Intel® Core™ i3-6102E processor, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
KINO-DQM170-CE-R10	Mini-ITX SBC with BGA 1440 supports 6th Gen Intel® Celeron® G3902E processor, HDMI 2.0, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, M.2, HD Audio and RoHS
32000-023800-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32005-000900-200-RS	RS-232/422/485 cable, 100mm, P=1.25

KINO-AQ170

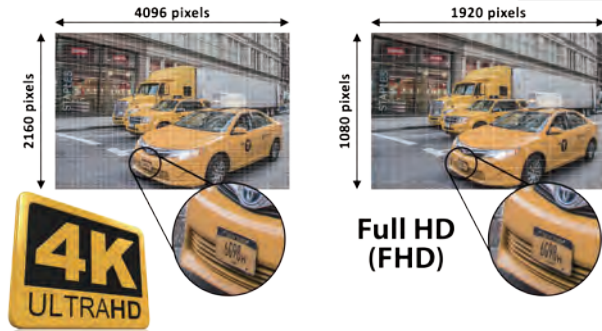
Mini-ITX SBC supports LGA 1151 Intel® Core™ i7/i5/i3, Pentium® or Celeron® CPU with Intel® Q170, HDMI 2.0/HDMI+DP/VGA, Dual Intel® GbE, SATA 6Gb/s, USB 3.0, PCIe Mini, HD Audio and RoHS



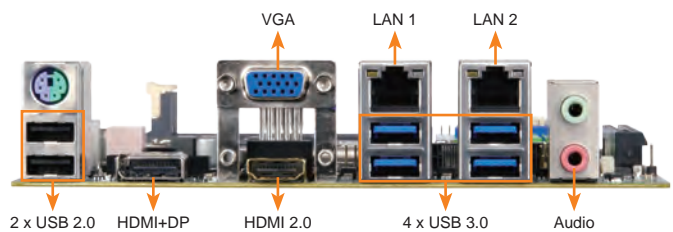
Specifications

- ◆ CPU: LGA 1151 socket supports 6th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® processor
- ◆ Chipset: Intel® Q170
- ◆ BIOS: AMI BIOS
- ◆ Memory: Two 260-pin 2133 MHz dual-channel DDR4 SDRAM SO-DIMM support up to 64GB
- ◆ Graphics Engine: Intel® HD Graphics Gen 9 support for DX11/12, OCL 2.x, OGL 4.3/4.4, ES 2.0 Decode/Encode for HEVC, VP8, VP9 2, VDENC
- ◆ Display Output: Triple independent displays
1 x HDMI 2.0 (up to 4096x2160@60Hz)
1 x HDMI/DP (up to 3840x2160@60Hz)
1 x VGA (up to 1920x1200)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 2560x1600@60Hz)
- ◆ Ethernet: LAN1: Intel® I219LM with (Intel® AMT 11.0 support)
LAN2: Intel® I211 PCIe controller with NCSI support
- ◆ External I/O Interface: 2 x USB 2.0
4 x USB 3.0
- ◆ Internal I/O Interface: 2 x RS-232/422/485 (2x5 pin, P=2.0)
4 x RS-232 (2x5 pin, P=2.0)
4 x SATA 6Gb/s (RAID 0/1/5/10 supported)
4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ Audio: Realtek ALC662 HD Audio codec
2 x Audio jacks (line-out, mic-in) on rear IO
1 x Front audio (2x5-pin)
- ◆ Front Panel: 1 x Front panel (1x10 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ PC: 1 x PC (1x4 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Expansion: 1 x PCIe x8 slot
1 x Full-size PCIe Mini card slot (support mSATA)
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset by super I/O
- ◆ Power Supply: ATX power supply
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin)
1 x System smart fan (1x4 pin)
- ◆ Power Consumption: 3.3V@1.62A, 5V@3.54A, 12V@8.17A, 5VSB@3.6A (Intel® Core™ i7 6700K 4.0GHz CPU with 16 GB (two 8 GB) 2133 MHz DDR4 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 900g / NW: 450g

HDMI 2.0 Ultra HD (4,096x2,160@60Hz)



	HDMI 1.4	HDMI 2.0
Bandwidth	10.2Gbps	18Gbps
4K@30hz	Yes	Yes
4K@60hz	No	Yes
Up to 32 Audio Channels	No	Yes



Features

- Mini ITX form factor with 6th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® processor support DDR4-2133 memory
- Support HDMI 2.0 (4096x2160@60Hz)
- Dual Intel® GbE support Intel® AMT 11.0
- Triple display via HDMI 2.0/HDMI/DP 1.2/VGA/iDP
- High speed I/O interface for USB 3.0, SATA 6Gb/s and mSATA support
- Support IEC jumpless

Packing List

1 x KINO-AQ170 single board computer	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-AQ170-R10	Mini-ITX SBC supports 6th generation Intel® Core™ i7/i5/i3, Pentium® and Celeron® processor, HDMI 2.0/HDMI/DP/VGA, SATA 6Gb/s, dual Intel® GbE, USB 3.0, PCIe Mini, HD Audio and RoHS
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32205-002700-200-RS	RS-232/422/485 cable, 230mm, P=2.54
CF1156A-RS-R11	High-performance LGA1155/1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High performance LGA1155/LGA1156 cooler kit, 95W
DP-DP-R10	DisplayPort to DP converter board (for IEC connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEC connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEC connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEC connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEC connector)

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

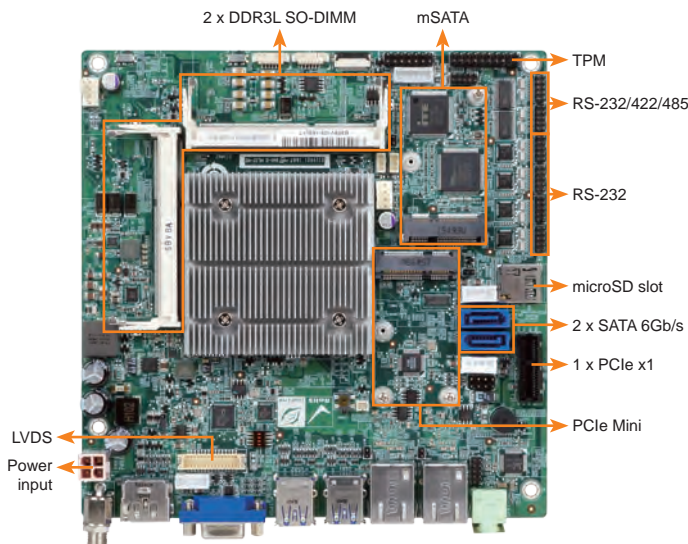
4 Open Frame Monitor

5 Power Supply/ Peripherals

6 All-in-One System

tKINO-BW

Thin Mini-ITX SBC supports 14nm Intel® Pentium®/Celeron® on-board SoC, 9~30V DC input, VGA/LVDS/DP+HDMI, SATA 6Gb/s, dual GbE, USB 3.0, HD Audio and RoHS



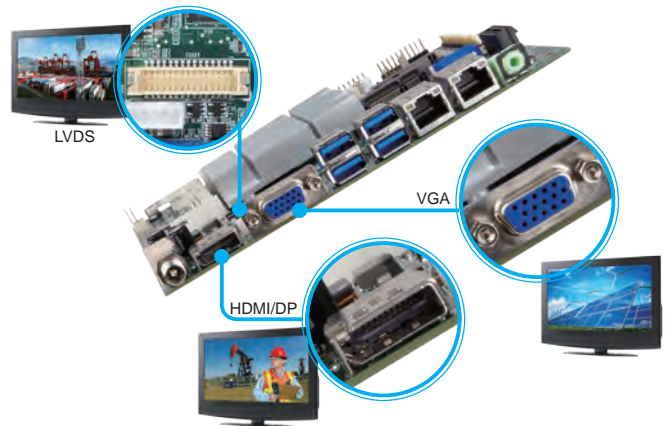
Specifications

- ◆ SoC
 - Intel® Pentium® N3710 on-board SoC (up to 2.56GHz, quad-core, 2MB cache, TDP=6W)
 - Intel® Celeron® N3160 on-board SoC (up to 2.24GHz, quad-core, 2MB cache, TDP=6W)
 - Intel® Celeron® N3060 on-board SoC (up to 2.48GHz, dual-core, 2MB cache, TDP=6W)
 - Intel® Celeron® N3010 on-board SoC (up to 2.24GHz, dual-core, 2MB cache, TDP=4W)
- ◆ BIOS
 - UEFI BIOS
- ◆ Memory
 - Two 204-pin 1333/1600 MHz single-channel DDR3L SDRAM unbuffered SO-DIMM slots support up to 8 GB
- ◆ Graphics Engine
 - Intel® HD Graphics Gen 8 Engines with 16 low-power execution units, supporting DX11.1, OpenGL 4.2 and OpenCL1.2
- ◆ Display Output
 - Triple independent display
 - 1 x HDMI/DP (up to 3840x2160@30Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
 - 1 x VGA (up to 1920x1200@60Hz)
- ◆ Ethernet
 - Dual Realtek RTL8111E PCIe GbE controller
- ◆ External I/O Interface
 - 4 x USB 3.0
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin)
 - 1 x MicroSD card slot
 - 1 x mSATA (colay SATA2)
 - 2 x RS-232/422/485 (2x5 pin, P=2.0)
 - 2 x SATA 6Gb/s with 5V output
 - 2 x USB 2.0 (2x4 pin, P=2.54)
 - 4 x RS-232 (2x5 pin, P=2.0)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
 - 2 x LAN LED (1x2 pin)
- ◆ SMBus
 - 1 x SMBus (1x4 pin)
- ◆ TPM
 - 1 x TPM (2x10 pin)
- ◆ I²C
 - 1 x I²C (1x4 pin)
- ◆ Digital I/O
 - 8-bit digital I/O (2x5 pin)
- ◆ Expansion
 - 1 x PCIe x1
 - 1 x Full-size PCIe Mini card slot
- ◆ Audio
 - Realtek ALC662 HD codec
 - 1 x Audio jacks (line-out) on rear IO
 - 1 x Front audio (2x5 pin)
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
 - 1 x External DC power jack (ø5.5 mm)
 - 1 x Internal power connector (2x2 pin)
 - Input Voltage Range: 9V ~ 30V
 - Support AT/ATX mode
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System smart fan (1x4 pin)
- ◆ Power Consumption
 - 12V@1.61A (Intel® Celeron® N3710 CPU with two 4 GB 1600 MHz DDR3L memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Weight: GW: 900g / NW: 400g

Three Digital Display Interfaces

3 independent displays under Window® 7 OS and up

New



Features

- Thin Mini-ITX form factor with 14nm Intel® Pentium®/Celeron® on-board SoC processor supports DDR3L memory
- Supports USB 3.0, two SATA 6Gb/s
- Triple independent display, supporting 4K resolution
- Supports IEL jumperless function

Packing List

1 x tKINO-BW single board computer with heatsink
1 x I/O shielding
1 x SATA cable
1 x One Key Recovery CD
1 x QIG
1 x Utility CD

Ordering Information

Part No.	Description
tKINO-BW-N4-R10	Thin Mini-ITX SBC supports Intel® Pentium® quad-core processor N3710 up to 2.56GHz (6W), VGA/LVDS/DP+HDMI, SATA, dual GbE, USB 3.0, HD Audio and RoHS
tKINO-BW-N3-R10	Thin Mini-ITX SBC supports Intel® Celeron® quad-core processor N3160 up to 2.24GHz (6W), VGA/LVDS/DP+HDMI, SATA, dual GbE, USB 3.0, HD Audio and RoHS
tKINO-BW-N2-R10	Thin Mini-ITX SBC supports Intel® Celeron® dual-core processor N3060 up to 2.48GHz (6W), VGA/LVDS/DP+HDMI, SATA, dual GbE, USB 3.0, HD Audio and RoHS
tKINO-BW-N1-R10**	Thin Mini-ITX SBC supports Intel® Celeron® dual-core processor N3010 up to 2.24GHz (4W), VGA/LVDS/DP+HDMI, SATA, dual GbE, USB 3.0, HD Audio and RoHS
32205-002700-200-RS	RS-232/422/485 cable, 200mm, P=2.0
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

**By order production, MOQ: 100

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

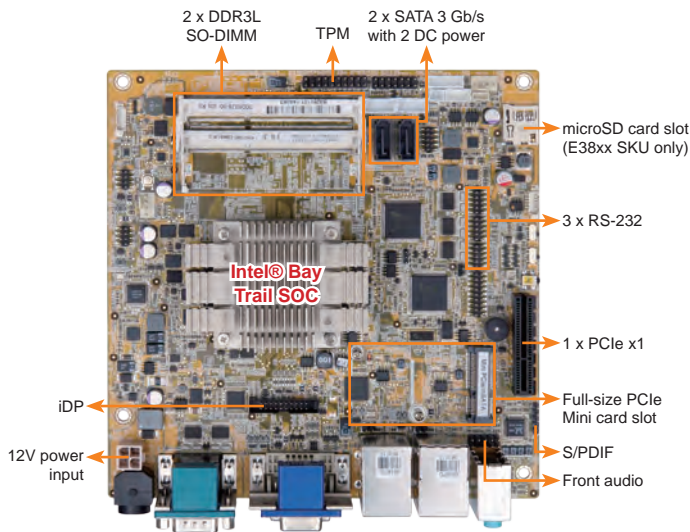
Power Supply/Peripherals

6

All-in-One System

KINO-DBT

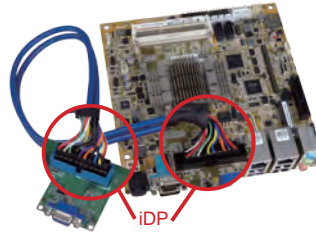
Mini-ITX SBC supports 22nm Intel® Atom™ or Celeron® on-board SoC, VGA/DVI/iDP, dual Realtek PCIe GbE, USB 3.0, SATA, HD Audio, RoHS



Specifications

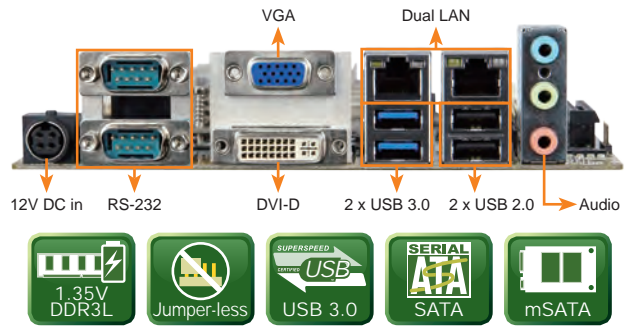
- ◆ SoC
 - Intel® Atom™ E3845 on-board SoC (1.91GHz, quad-core, 2MB cache, TDP=10W)
 - Intel® Atom™ E3827 on-board SoC (1.75GHz, dual-core, 1MB cache, TDP=8W)
 - Intel® Atom™ E3826 on-board SoC (1.46GHz, dual-core, 1MB cache, TDP=7W)
 - Intel® Atom™ E3825 on-board SoC (1.33GHz, dual-core, 1MB cache, TDP=6W)
 - Intel® Atom™ E3815 on-board SoC (1.46GHz, single-core, 512KB cache, TDP=5W)
 - Intel® Celeron® J1900 on-board SoC (2GHz, quad-core, 2MB cache, TDP=10W)
 - Intel® Celeron® N2930 on-board SoC (1.83GHz, quad-core, 2MB cache, TDP=7.5W)
 - Intel® Celeron® N2807 on-board SoC (1.58GHz, dual-core, 2MB cache, TDP=4.5W)
- ◆ BIOS
 - AMI UEFI BIOS
- ◆ Memory
 - Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826)
 - One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 4 GB (N2807, E3825, E3815)
- ◆ Graphics Engine
 - Intel® HD Graphics Gen 7 engine with 4 execution units, supporting DX11.1, OpenGL 4.2 and OpenCL 1.2
- ◆ Display Output
 - Dual independent display
 - 1 x VGA (up to 2560x1600@60 Hz)
 - 1 x DVI-D (up to 1920x1080@60 Hz)
 - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 2560x1600@60 Hz)
- ◆ Ethernet
 - LAN1: Realtek RTL8111E PCIe GbE controller
 - LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ External I/O Interface
 - 2 x RS-232
 - 2 x USB 2.0
 - 2 x USB 3.0
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin)
 - 1 x mSATA (colay SATA2)
 - 2 x SATA 3Gb/s
 - 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio
 - Realtek ALC662 HD Audio codec supports 5.1-channel
 - 3 x Audio jacks (line-out, line-in, mic-in) on rear IO
 - 1 x Front audio (2x5 pin)
 - 1 x S/PDIF (1x5 pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion
 - 1 x PCIe x4 slot (with PCIe x1 signal)
 - 1 x Full-size PCIe Mini card slot
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System smart fan (1x4 pin)
- ◆ Power Supply
 - 12V DC input
 - 1 x External DC jack (4-pin DIN)
 - 1 x Internal power connector (2x2 pin)
- ◆ Power Consumption
 - 12V@1.64A (Intel® Celeron® J1900 CPU with 4 GB 1333 MHz DDR3L memory)
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 900g / NW: 400g

iDP (IEI Internal DisplayPort)



Model	Output	External Power
DP-VGA-R10	VGA	No
DP-HDMI-R10	HDMI	No
DP-DVI-R10	DVI	No
DP-LVDS-R10	LVDS	Yes
DP-DP-R10	DP	No

Easy Installation on the Chassis



Features

- Mini-ITX SBC with 22nm Intel® Atom™ on-board SoC
- 1.35V DDR3L 1066/1333 MHz SDRAM supporting up to 8 GB of memory
- Dual independent display support
- COM, USB 3.0, SATA 6Gb/s, PCIe Mini, mSATA and HD Audio support
- Support Intel® VT-x technology

Packing List

1 x KINO-DBT single board computer	
1 x IO shielding	1 x QIG
1 x SATA cable with power output cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-DBT-J19001-R10	Mini-ITX SBC supports Intel® Celeron® quad-core processor J1900 (10W), VGA/DVI/iDP, Dual PCIe GbE, USB 3.0, SATA, HD Audio and RoHS
KINO-DBT-N29301-R10	Mini-ITX SBC supports Intel® Celeron® quad-core processor N2930 (7.5W), VGA/DVI/iDP, Dual PCIe GbE, USB 3.0, SATA, HD Audio and RoHS
KINO-DBT-N28071-R10	Mini-ITX SBC supports Intel® Celeron® dual-core processor N2807 (4.5W), VGA/DVI/iDP, Dual PCIe GbE, USB 3.0, SATA, HD Audio and RoHS
KINO-DBT-E38XX1-R10**	Mini-ITX SBC supports Intel® Atom™ processor E38XX, VGA/DVI/iDP, Dual PCIe GbE, USB 3.0, SATA, HD Audio and RoHS
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
32205-002700-200-RS	RS-232 cable, 200mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

**By order production, MOQ: 100

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

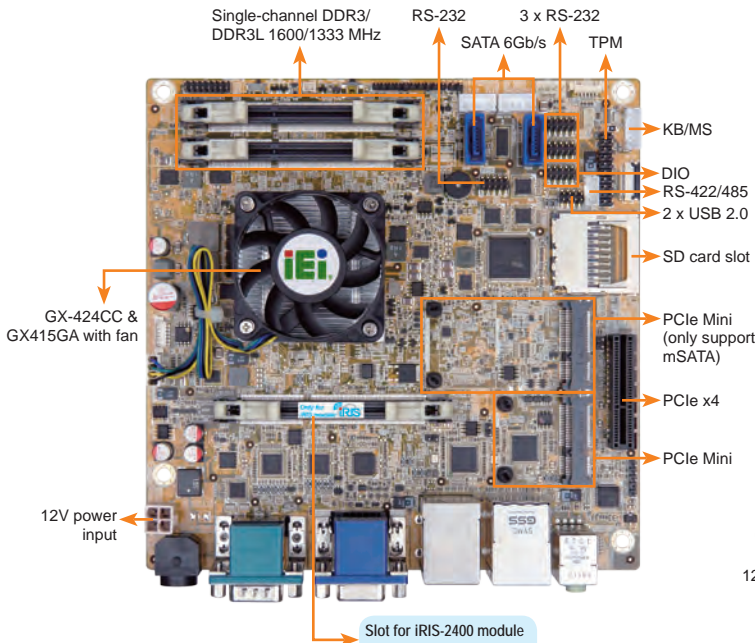
4 Open Frame Monitor

5 Power Supply/Peripherals

6 All-in-One System

KINO-SE-i2 KINO-KBN-i2

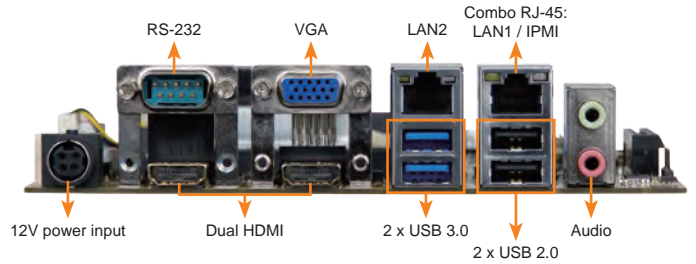
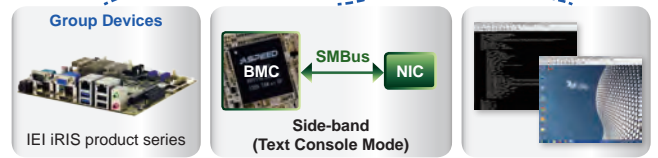
Mini-ITX SBC with AMD® Embedded G-Series SoC with VGA/
Dual HDMI, dual GbE, dual PCIe Mini, USB 3.0, SATA 6 GB/s,
audio, iRIS-2400 and RoHS



Remote Management Solution

Support iRIS-2400 module

- » Out-of-band control
- » Remote KVM function support
- » User friendly web-UI based



Specifications

- ◆ SoC
 - » AMD® Embedded G-Series "Steppe Eagle" SoC
 - GX-424CC on-board Soc (2.4GHz, quad-core, 2MB cache, TDP=25W)
 - GX-412HC on-board Soc (1.2GHz, quad-core, 2MB cache, TDP=7W)
 - GX-212JC on-board Soc (1.2GHz, dual-core, 1MB cache, TDP=6W)
 - GX-411GA on-board Soc (1.0GHz, quad-core, 2MB cache, TDP=15W)
 - GX-209HA on-board Soc (1.0GHz, dual-core, 1MB cache, TDP=9W)
 - » AMD® Embedded G-Series "eKabini" SoC
 - GX-415GA on-board Soc (1.5GHz, quad-core, 2MB cache, TDP=15W)
 - GX-210HA on-board Soc (1.0GHz, dual-core, 1MB cache, TDP=9W)
 - GX-420CA on-board Soc (2.0GHz, quad-core, 2MB cache, TDP=25W)
 - GX-217GA on-board Soc (1.65GHz, dual-core, 1MB cache, TDP=15W)
- ◆ BIOS: AMI UEFI BIOS
- ◆ Memory
 - Two 204-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered SO-DIMM slots support up to 8 GB
- ◆ Graphics Engine
 - Support DX11.1, OpenGL 4.1 and OpenCL1.2
 - UVD4.2 decode for H.264, MPEG2/4, VC1, MVC
 - VCE 2.0 encode for H.264, VCE
- ◆ Display Output
 - Dual independent display
 - 2 x HDMI (up to 3840x2160@60Hz)
 - 1 x VGA (up to 2048x1536@60Hz)
- ◆ Ethernet
 - LAN1: Intel® I210-AT PCIe controller with NCSI support
 - LAN2: Intel® I211-AT PCIe controller
- ◆ External I/O Interface
 - 1 x RS-232
 - 2 x USB 2.0
 - 2 x USB 3.0
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin)
 - 1 x SD card slot
 - 2 x USB 2.0 (2x4 pin, P=2.0)
 - 2 x SATA 6Gb/s with SATA power connector
- ◆ iRIS Remote Management Module: 1 x iRIS-2400 slot
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio: Realtek AL892 HD Audio codec
 - 2 x Audio jacks (line-out, mic-in) on rear IO
 - 1 x S/PDIF (1x4 pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ Expansion
 - 1 x PCIe x4 slot
 - 1 x Half-size PCIe Mini card slot
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector : 1 x System smart fan (1x4 pin)
- ◆ Watchdog Timer: Software programmable, support 1~255 sec. system reset
- ◆ Power Supply
 - 12V only DC input
 - 1 x Internal power connector (2x2 pin)
 - 1 x External DC jack (4-pin DIN)
 - Support AT/ATX mode
- ◆ Power Consumption
 - 12V@2.7A (AMD GX-424CC 2.4GHz CPU with 1600 MHz 8 GB DDR3 memory)
- ◆ Operating Temperature: -0°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 600g/ NW: 250g

Features

- Mini-ITX form factor with AMD® Embedded G-Series SoC
- 12V only single voltage design for AT/ATX power
- Dual independent display by VGA, dual HDMI
- Supporting dual PCIe Mini card slot with mSATA, wireless card, DOM capabilities
- Support IPMI 2.0 through iRIS module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x KINO-SE-i2 single board computer with CPU cooler
1 x I/O shielding
1 x SATA with power output cable kit
1 x One Key Recovery CD
1 x QIG
1 x Utility CD

Ordering Information

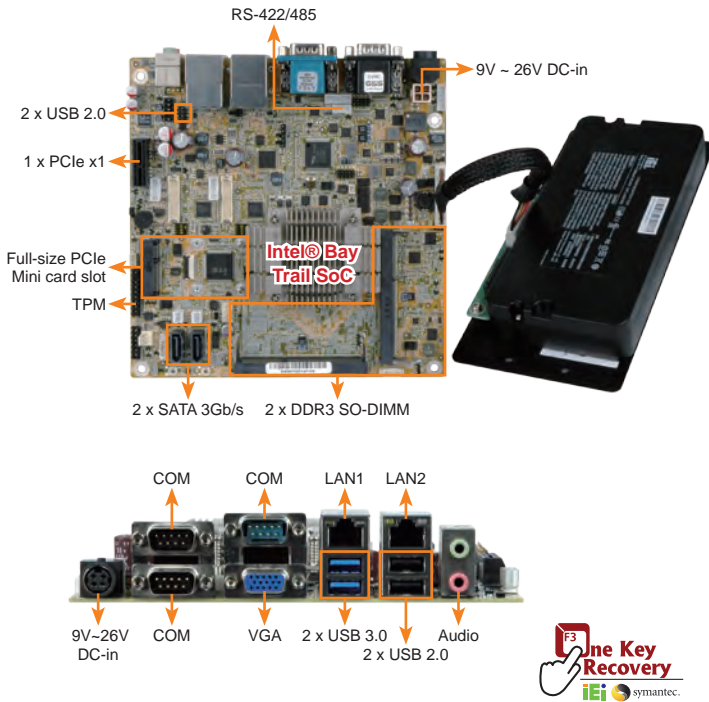
Part No.	Description
KINO-SE-i2-4241-R10	Mini-ITX SBC with 28nm AMD® GX-424CC on-board SoC (quad-core, 2.4GHz, 25W) with VGA/Dual HDMI, dual GbE, dual PCIe Mini, USB 3.0, SATA 6 GB/s, iRIS-2400, audio and RoHS
KINO-KBN-i2-4151-R10	Mini-ITX SBC with 28nm AMD® GX-415GA on-board SoC (quad-core, 1.5GHz, 15W) with VGA/Dual HDMI, dual GbE, dual PCIe Mini, USB 3.0, SATA 6 GB/s, iRIS-2400, audio and RoHS
KINO-KBN-i2-2101-R10	Mini-ITX SBC with 28nm AMD® GX-210HA on-board SoC (quad-core, 1.0GHz, 9W) with VGA/Dual HDMI, dual GbE, dual PCIe Mini, USB 3.0, SATA 6 GB/s, iRIS-2400, audio and RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19800-010900-200-RS	RS-232 cable with bracket, 230mm, P=2.54
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CB-USB02A-RS	Dual-port USB 2.0 cable with bracket, 300mm, P=2.0
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

Note: Models with other CPUs not listed in the table are requested by MOQ - 100 pcs/lot.

- Industrial Computing Solutions
- Video Capture Solutions
- Industrial Computer Chassis
- Open Frame Monitor
- Power Supply/Peripherals
- All-in-One System

eKINO-BT

Mini-ITX SBC supports AUPS sub-system, 22nm Intel® Atom™/Celeron® on-board SoC, wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.0, audio, CFast and RoHS



AUPS Battery Kit

• BATKIT-2S2P3800-R10

• BATKIT-4S2P3800-R10



P/N: BAT-LI-2S2P3800
2S2P 7.4V 3800mAh

P/N: BAT-LI-4S2P3800
4S2P 14.8V 3800mAh

Battery Specifications

Battery Model	BAT-LI-2S2P3800	BAT-LI-4S2P3800
Battery type	Li-Ion 2S2P 7.4V	Li-Ion 4S2P 14.8V
Battery capacity	7.4V 3800mAh	14.8V, 3800mAh
Maximum charge voltage	8.4V	16.8V
The end of discharging voltage	5.6V	11.2V
Battery charge time (Power off)	2.5hrs	5hrs
Battery charge time (Power on)	6.5hrs	13hrs
Operating temp.	0°C ~ 40°C	0°C ~ 40°C
Storage temp.	-20°C ~ 60°C	-20°C ~ 60°C
Cycle life	300 charge/discharge cycles	
Backup	60W/10Min	100W/10Min
Safety class	CE	

Features

- Mini ITX supports Intel® 22nm Atom™ or Celeron® on-board SoC
- Wide-range 9V ~ 26V DC input design
- Supports dual independent display with dual LVDS and VGA
- Equipped with AUPS sub-system, acts as a simple UPS system
- Supports four USB 2.0, two USB 3.0, two SATA and four COM
- IEI jumper-less function

Packing List

1 x eKINO-BT single board computer	
2 x SATA with 5V output cable kit	
1 x I/O shielding	
1 x QIG	1 x Utility CD

Ordering Information

Part No.	Description
EKINO-BT-J19001-R10	Mini-ITX SBC supports AUPS sub-system, Intel® Celeron® quad-core processor J1900 (10W), wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.0, audio, CFAST and RoHS
EKINO-BT-N29301-R10	Mini-ITX SBC supports AUPS sub-system, Intel® Celeron® quad-core processor N2930 (7.5W), wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.0, audio, CFAST and RoHS
EKINO-BT-N28071-R10	Mini-ITX SBC supports AUPS sub-system, Intel® Celeron® dual-core processor N2807 (4.3W), wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.0, audio, CFAST and RoHS
EKINO-BT-E38XX1-R10**	Mini-ITX SBC supports AUPS sub-system, Intel® Atom™ E38XX on-board SoC, wide-range 9V ~ 26V DC input, VGA/dual LVDS, SATA, dual GbE, USB 3.0, audio, CFAST and RoHS (by request MOQ: 100pcs/lot)
BATKIT-2S2P3800-R10	2S2P 7.4V 3800mAh AUPS battery kit
BAT-LI-2S2P3800	2S2P 7.4V 3800mAh smart battery
BATKIT-4S2P3800-R10	4S2P 14.8V 3800mAh AUPS battery kit
BAT-LI-4S2P3800	4S2P 14.8V 3800mAh smart battery
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
32001-008600-200-RS	Dual-port USB 2.0 cable, 210mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
63040-010060-110-RS	60W/12V power adaptor, 90VAC~260VAC, 4-pin DIN
63040-010120-210-RS	120W/19V power adaptor, 90VAC~264VAC, 4-pin DIN
CB-USB02A-RS	Dual-port USB 2.0 cable with bracket, 300mm, P=2.0

**By order production, MOQ: 100

Specifications

- ◆ CPU
 - Intel® Atom™ E3845 on-board SoC (1.91GHz, quad-core, 2MB cache, TDP=10W)
 - Intel® Atom™ E3827 on-board SoC (1.75GHz, dual-core, 1MB cache, TDP=8W)
 - Intel® Atom™ E3826 on-board SoC (1.46GHz, dual-core, 1MB cache, TDP=7W)
 - Intel® Atom™ E3825 on-board SoC (1.33GHz, dual-core, 1MB cache, TDP=6W)
 - Intel® Atom™ E3815 on-board SoC (1.46GHz, single-core, 512KB cache, TDP=5W)
 - Intel® Celeron® J1900 on-board SoC (2GHz, quad-core, 2MB cache, TDP=10W)
 - Intel® Celeron® N2930 on-board SoC (1.83GHz, quad-core, 2MB cache, TDP=7.5W)
 - Intel® Celeron® N2807 on-board SoC (1.58GHz, dual-core, 2MB cache, TDP=4.3W)
- ◆ BIOS
 - AMI UEFI BIOS
- ◆ Memory
 - Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826)
 - One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 4 GB (N2807, E3825, E3815)
- ◆ Graphics Engine
 - Intel® HD Graphics Gen 7 Engines with 4 execution units, supporting DX11.1, OpenGL 4.2 and OpenCL1.2
- ◆ Display Output
 - 1 x VGA (up to 2560x1600@60Hz)
 - 2 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
- ◆ External I/O Interface
 - 2 x USB 2.0
 - 2 x USB 3.0
 - 3 x RS-232
- ◆ Internal I/O Interface
 - 1 x CFAST slot
 - 1 x KB/MS (1x6 pin)
 - 1 x MicroSD card slot
 - 1 x RS-232 (2x5 pin, P=2.0)
 - 1 x RS-422/485 (1x4 pin, P=2.0)
 - 2 x SATA 3Gb/s with 5V SATA power connector
 - 2 x USB 2.0 (2x4 pin, P=2.0)
- ◆ Ethernet
 - Dual LAN: Realtek RTL8111E PCIe controller
- ◆ TPM
 - 1 x TPM (2x10 pin)
- ◆ SMBus
 - 1 x SMBus (1x4 pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
 - 2 x LAN LED (1x2 pin)
- ◆ Digital I/O
 - 8-bit digital I/O (2x5 pin)
- ◆ Expansion
 - 1 x PCIe x1 slot
 - 1 x Full-size PCIe Mini card slot
- ◆ Audio
 - Realtek ALC662 HD Audio codec
 - 2 x Audio jacks (line-out, mic-in) on rear I/O
 - 1 x Front audio (2x5 pin)
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
 - 1 x External DC power jack (4-pin DIN)
 - 1 x Internal power connector (2x2 pin)
 - Input voltage range: 9V ~ 26V
 - Recommended operating input voltage range: 12V~24V
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System fan (1x3 pin)
- ◆ Power Consumption
 - +12V@1.55A (Intel® Celeron® J1900 CPU with two 4 GB 1333 MHz DDR3L memory)
- ◆ Operating Temperature
 - 0°C ~ 40°C with AUPS sub-system
 - 20°C ~ 60°C without AUPS sub-system
- ◆ Storage Temperature
 - 10°C ~ 50°C with AUPS sub-system
 - 30°C ~ 70°C without AUPS sub-system
- ◆ Operating Humidity
 - 5% ~ 95%, non-condensing
- ◆ Weight
 - GW: 1100g / NW: 400g

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

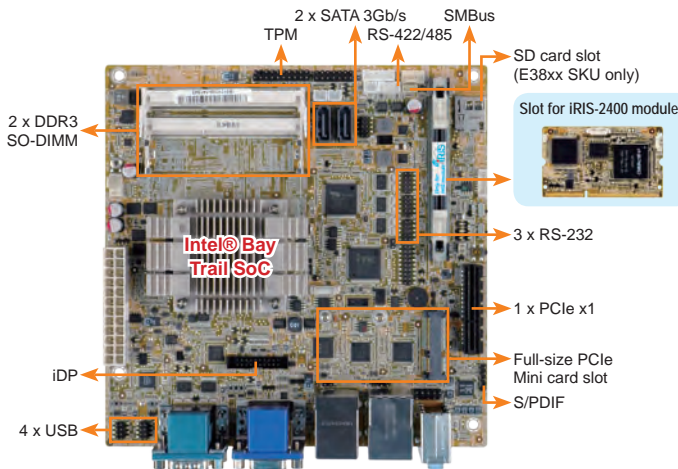
Power Supply/ Peripherals

6

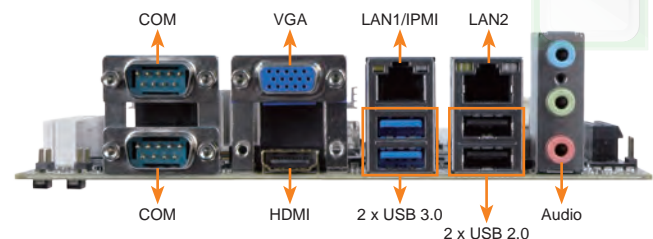
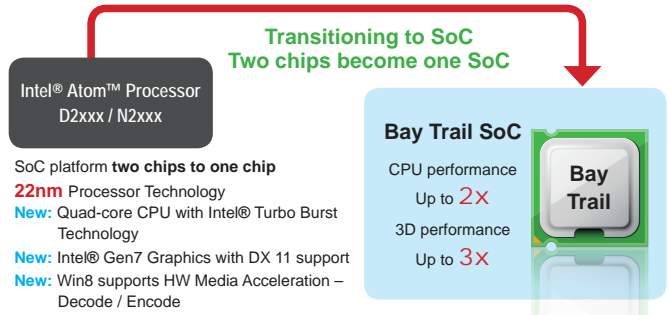
All-in-One System

KINO-ABT-i2

Mini-ITX SBC supports 22nm Intel® Atom™ or Celeron® on-board SoC, VGA/HDMI/iDP, dual Intel® PCIe GbE, USB 3.0, SATA, HD Audio, iRIS-2400 and RoHS



Intel® Bay Trail Platform Transition



Specifications

- ◆ SoC
 - Intel® Atom™ E3845 on-board SoC (1.91GHz, quad-core, 2MB cache, TDP=10W)
 - Intel® Atom™ E3827 on-board SoC (1.75GHz, dual-core, 1MB cache, TDP=8W)
 - Intel® Atom™ E3826 on-board SoC (1.46GHz, dual-core, 1MB cache, TDP=7W)
 - Intel® Atom™ E3825 on-board SoC (1.33GHz, dual-core, 1MB cache, TDP=6W)
 - Intel® Atom™ E3815 on-board SoC (1.46GHz, single-core, 512KB cache, TDP=5W)
 - Intel® Celeron® J1900 on-board SoC (2GHz, quad-core, 2MB cache, TDP=10W)
 - Intel® Celeron® N2930 on-board SoC (1.83GHz, quad-core, 2MB cache, TDP=7.5W)
 - Intel® Celeron® N2807 on-board SoC (1.58GHz, dual-core, 2MB cache, TDP=4.3W)
- ◆ BIOS
 - AMI UEFI BIOS
- ◆ Memory
 - Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB (J1900, N2930, E3845, E3827, E3826)
 - One 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM supports up to 4 GB (N2807, E3825, E3815)
- ◆ Graphics Engine
 - Intel® HD Graphics Gen 7 Engines with 4 execution units, supporting DX11.1, OpenGL 4.2 and OpenCL 1.2
- ◆ Display Output
 - Dual Independent Display
 - 1 x VGA (up to 2560x1600@60Hz)
 - 1 x HDMI (up to 2560x1600@60Hz)
 - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 2560x1600@60Hz)
- ◆ Ethernet
 - LAN1: Intel® I210-AT PCIe controller with NCSI support (for iRIS solution)
 - LAN2: Intel® I211-AT PCIe controller
- ◆ External I/O Interface
 - 2 x RS-232
 - 2 x USB 2.0
 - 2 x USB 3.0
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin)
 - 1 x Micro SD card slot (E38xx sku only)
 - 1 x RS-422/485 (1x4 pin, P=2.0)
 - 2 x SATA 3Gb/s with 5V SATA power connector
 - 3 x RS-232 (2x5 pin, P=2.0)
 - 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ SMBus
 - 1 x SMBus (1x4 pin)
- ◆ TPM
 - 1 x TPM (2x10 pin)
- ◆ Audio
 - Realtek ALC662 HD Audio codec
 - 3 x Audio jacks (line-out, line-in, mic-in) on rear IO
 - 1 x Front audio (2x5 pin)
 - 1 x S/PDIF (1x5 pin)
- ◆ Front Panel
 - 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED
 - 2 x LAN LED (1x2 pin)
- ◆ Expansion
 - 1 x PCIe x4 slot (PCIe x1 signal)
 - 1 x Full-size PCIe Mini card slot (support mSATA, colay SATA2)
- ◆ iRIS Remote Management Module
 - 1 x iRIS-2400 slot
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Chassis Intrusion Detection: 1 x Chassis intrusion connector (1x2 pin)
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System smart fan (1x4 pin)
- ◆ Power Supply: ATX power supply
- ◆ Watchdog Timer: Software programmable, supports 1~255 sec. system reset
- ◆ Power Consumption
 - 5V@1.71A, 12V@0.08A, Vcore_12V@0.27A, 3.3V@0.34
 - (Intel® Celeron® J1900 CPU with two 4 GB 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 900g / NW: 450g



Features

- Mini-ITX SBC supports 22nm Intel® Atom™ or Celeron® on-board SoC
- 1066/1333 MHz 1.35V DDR3L SDRAM supported up to 8 GB
- Supports dual independent display with VGA, HDMI and iDP
- COM, USB 3.0, SATA, PCIe Mini, mSATA and HD Audio support
- Supports IPMI 2.0 via iRIS-2400 module
- Supports Intel® VT-x technology
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x KINO-ABT-i2 single board computer	1 x IO shielding
1 x Dual-port USB cable	1 x QIG
1 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-ABT-i2-J19001-R10	Mini-ITX SBC supports Intel® Celeron® quad-core processor J1900 (10W), VGA/HDMI/iDP, dual Intel® PCIe GbE, SATA, USB 3.0, HD Audio, iRIS-2400 and RoHS
KINO-ABT-i2-N29301-R10	Mini-ITX SBC supports Intel® Celeron® quad-core processor N2930 (7.5W), VGA/HDMI/iDP, dual Intel® PCIe GbE, SATA, USB 3.0, HD Audio, iRIS-2400 and RoHS
KINO-ABT-i2-N28071-R10	Mini-ITX SBC supports Intel® Celeron® dual-core processor N2807 (4.3W), VGA/HDMI/iDP, dual Intel® PCIe GbE, SATA, USB 3.0, HD Audio, iRIS-2400 and RoHS
KINO-ABT-i2-E38XX1-R10**	Mini-ITX SBC supports Intel® Atom™ processor E38XX, VGA/HDMI/iDP, dual Intel® PCIe GbE, SATA, USB 3.0, HD Audio, iRIS-2400 and RoHS
KINO-ABT-J19001-ECO-R10	Mini-ITX SBC supports Intel® 22nm Celeron® J1900 2.0GHz (10W) on-board (10W), VGA/HDMI/iDP, dual Intel® PCIe GbE, USB 3.0, SATA, HD Audio, ECO packing and RoHS (10 pce/pack)
32006-000300-100-RS	PS/2 KB/MS Y-cable without bracket, 140mm/120mm
32200-000049-RS	RS-232 cable, 200mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
DP-DP-R10	DisplayPort to DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

**By order production, MOQ: 100

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

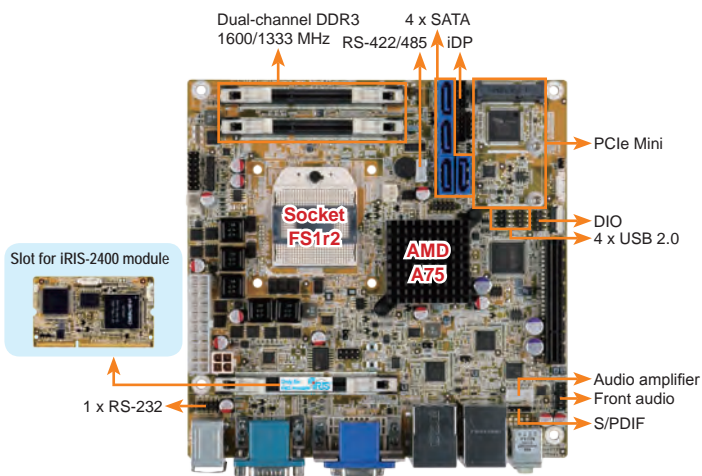
4 Open Frame Monitor

5 Power Supply Peripherals

6 All-in-One System

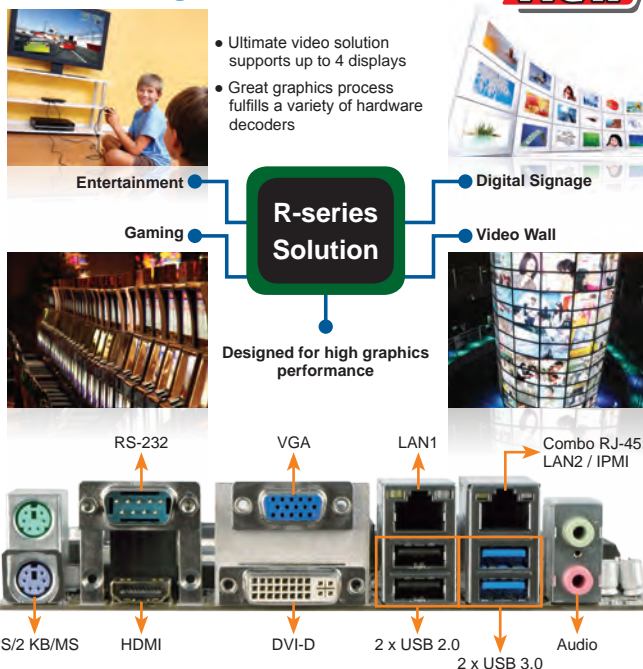
KINO-AA750-i2

Mini-ITX SBC supports Socket FS1r2 AMD R-series APU with A75, DDR3, HDMI/DVI-D/VGA/iDP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, iRIS-2400 and RoHS



Target Market of R-series

New



Specifications

- ◆ CPU
Socket FS1r2 supports AMD Embedded R-Series APU
- ◆ Chipset
AMD A75
- ◆ Memory
Two 204-pin 1600/1333 MHz dual-channel DDR3 & DDR3L SDRAM unbuffered DIMMs support up to 16 GB
- ◆ BIOS
UEFI BIOS
- ◆ Ethernet
LAN1: Intel® I210-AT PCIe controller with NCSI support
LAN2: Intel® I211-AT PCIe controller
- ◆ Graphics Engine
AMD Radeon™ GPUs (Radeon™ HD 7000 series), supports DX11, UVD3 H.264, VC-1, MPEG-2, DivX Direct X® 11, Open CL™ 1.1, OpenGL 4.2
- ◆ Display Output
1 x HDMI (up to 1920x1080@60 Hz)
1 x DVI-D (up to 1920x1080@60 Hz)
1 x VGA (up to 1920x1200@60 Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 2560x1600@60 Hz)
- ◆ Audio
Realtek ALC892 HD Audio codec
2 x Audio jacks (line-out, mic-in) on rear IO
1 x Audio amplifier (2x3 watt)
1 x Front audio (2x5 pin)
1 x S/PDIF (1x4 pin)
- ◆ External I/O Interface
1 x KB/MS 2 x USB 2.0
1 x RS-232 2 x USB 3.0
1 x SD card slot
- ◆ Internal I/O Interface
1 x RS-232 (2x5 pin, P=2.0) 4 x SATA 6Gb/s
1 x RS-422/485 (1x4 pin, P=2.0) 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ SMBus
1 x SMBus (1x4 pin)
- ◆ Expansion
1 x PCIe x8 slot 1 x Full-size PCIe Mini card slot (with SIM holder)
- ◆ iRIS Remote Management Module
1 x iRIS-2400 slot
- ◆ Watchdog Timer
Software programmable, support 1~255 sec. system reset
- ◆ Digital I/O
8-bit digital I/O (2x5 pin)
- ◆ LAN LED
2 x LAN LED (1x2 pin)
- ◆ Infrared Interface
1 x Infrared interface (1x5 pin)
- ◆ Fan Connector
1 x CPU smart fan (1x4 pin)
1 x System fan (1x3 pin)
- ◆ Power Supply
ATX power supply
- ◆ Power Consumption
+12@2.45A, +5V@3.25A, 3.3@0.76A (AMD R-460H APU with two 8 GB 1600 MHz DDR3 memory)
- ◆ Operating Temperature
0°C ~ 60°C
- ◆ Storage Temperature
-10°C ~ 70°C
- ◆ Operating Humidity
5% ~ 95%, non-condensing
- ◆ Dimensions
170mm x 170mm
- ◆ Weight
GW: 900g / NW: 450g



Features

- ◆ Socket FS1r2 supports AMD Embedded R-Series APU
- ◆ 1066/1333/1600 MHz dual-channel DDR3 SDRAM
- ◆ Supports triple display via HDMI, DVI, VGA and iDP
- ◆ 3D micro-architecture enhancement supports DX11, OCL 1.1 and OGL4.2
- ◆ Rich media acceleration for hardware decode and encode acceleration
- ◆ High speed I/O interface for USB 3.0 and SATA 6Gb/s
- ◆ IEL jumper-less function
- ◆ Supports IPMI 2.0 via iRIS-2400 module

Packing List

1 x KINO-AA750-i2 single board computer	
1 x I/O shielding	1 x QIG
1 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-AA750-i2-R10	Mini-ITX SBC supports Socket FS1r2 AMD R-series APU with A75, DDR3, HDMI, DVI-D, VGA, iDP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio, iRIS-2400 and RoHS
iRIS-2400-R10	IPMI 2.0 adapter card with AST2400 BMC chip for DDR3 SO-DIMM socket interface
19800-000075-RS	PS/2 KB/MS cable with bracket, 220mm, P=2.0
19800-000300-100-RS	RS-232 cable with bracket, 300mm, P=2.0
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
32801-000703-400-RS	SATA cable with power output cable
CF-989B-RS-R11	CPU cooler for 50W processor, aluminum
IO-KIT-001-R20	DVI and quad-port USB 2.0 adapter card, RoHS

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

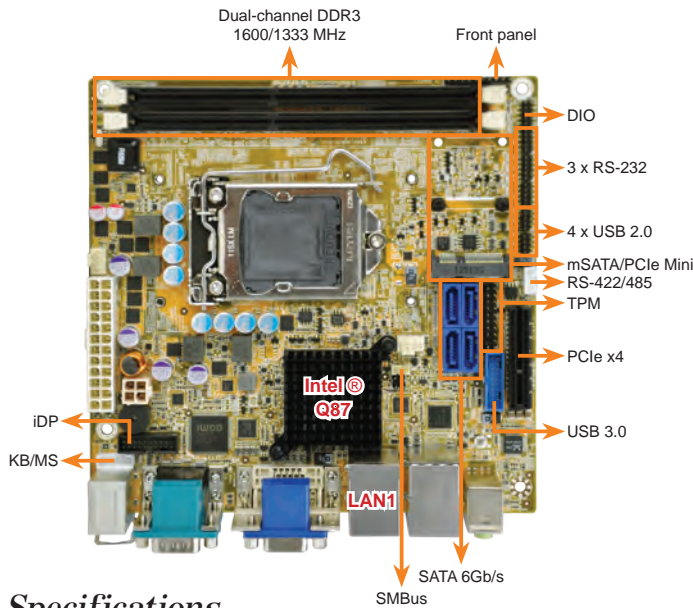
4 Open Frame Monitor

5 Power Supply/ Peripherals

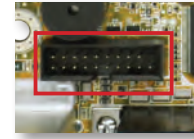
6 All-in-One System

KINO-AQ870

Mini-ITX SBC with LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor, DVI-D/VGA/DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS

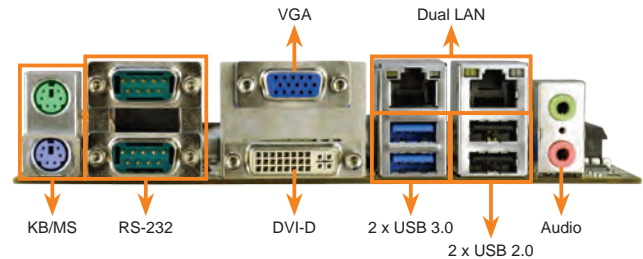


Flexible Display Function through IEI Display Port Connector



iDP Module Selection

DP-HDMI-R10
DP-VGSA-R10
DP-DVI-R10
DP-LVDS-R10



Specifications

- ◆ CPU: LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor
- ◆ PCH: Intel® Q87
- ◆ Memory: Two 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: LAN1: Intel® I211 PCIe controller; LAN2: Intel® I217LM with Intel® AMT 9.0 support
- ◆ Graphics Engine: Support for DX11.1 and OpenGL3.2; Full MPEG2, VC1, AVC Decode
- ◆ Display Output: 1 x VGA (up to 1920x1200@60 Hz); 1 x DVI-D (up to 2560x1600@60 Hz); 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 2560x1600@60 Hz)
- ◆ Audio: Realtek ALC662 HD codec supports 5.1-channel; 2 x Audio jacks (line-out, mic-in) on rear IO
- ◆ External I/O Interface: 1 x KB/MS; 2 x RS-232; 2 x USB 2.0; 2 x USB 3.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin); 1 x RS-422/485 (1x4 pin, P=2.0); 2 x USB 3.0 (2x10 pin, P=2.0); 3 x RS-232 (2x5 pin, P=2.0); 4 x SATA 6Gb/s (RAID 0/1/5/10 supported); 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ Front Panel: 1 x Front panel (1x10 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Expansion: 1 x PCIe x4 card slot; 1 x PCIe Mini card slot (supports mSATA, with SATA & USB 2.0 signal only)
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin); 1 x System smart fan (1x4 pin)
- ◆ Power Supply: ATX Power Supply
- ◆ Power Consumption: 3.3V@1.11A, 5V@3.01A, 12V@0.12A, Vcore@6.32A, 5VSB@0.15A (Intel® 2.60GHz CPU with two 1600 MHz 2 GB DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Storage Temperature: -30°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 900g / NW: 450g



Features

- LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor
- DDR3 1066/1333/1600 MHz dual-channel SDRAM
- 3D micro-architecture enhancements for DX11.1, OCL 1.2 and OGL3.2
- Rich media acceleration for hardware decode and encode acceleration
- Intel® GbE LAN with Intel® AMT 9.0 support
- High speed I/O interface for USB 3.0, SATA 6Gb/s and mSATA
- IEI jumper-less function

Packing List

1 x KINO-AQ870 motherboard	1 x Mini jumper pack
1 x I/O shielding	1 x QIG
4 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-AQ870-R10	Mini-ITX SBC with LGA1150 socket supports 4th Gen Intel® Core™ i7/i5/i3 processor, DVI-D/VGA/ DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, HD Audio and RoHS
32001-008600-200-RS	Dual-port USB cable, 210mm, P=2.0
32205-002700-200-RS	RS-232/422/485 cable, 200mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-1150SA-R10	Special cooler kit for LGA1150, high-performance compatible, 95W
CF-1150SB-R11	Special cooler kit for LGA1150, high-performance compatible, 65W
CF-1150SC-R20	Special cooler kit for LGA1150, 1U chassis compatible, 65W
CF-1150SE-R11	Special cooler kit for LGA1150, 1U chassis compatible, 95W
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

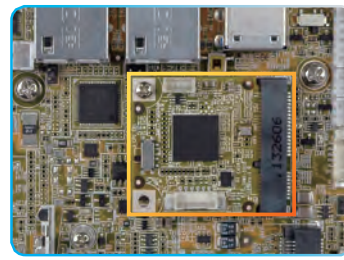
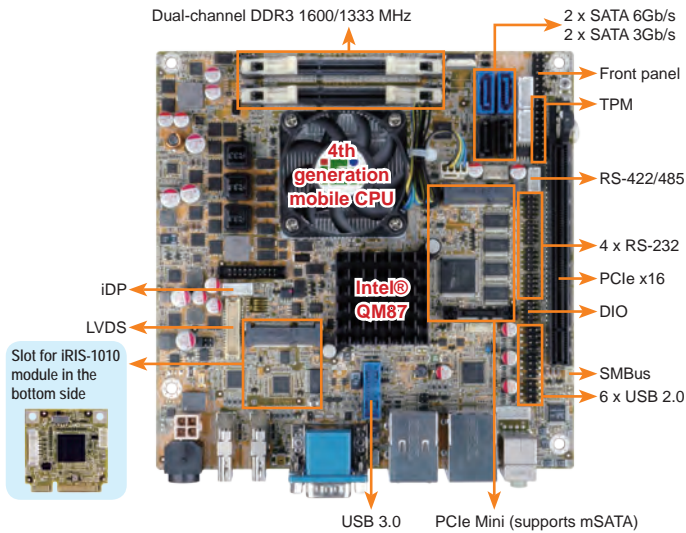
Power Supply/Peripherals

6

All-in-One System

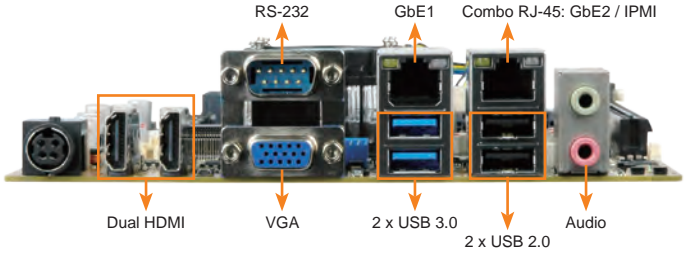
KINO-DQM871-i1

Mini-ITX SBC supports 4th generation 22nm Intel® mobile processors, HDMI/VGA/LVDS/DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, iRIS-1010, audio and RoHS



iRIS-1010 Key Features

- IPMI 2.0 Based Management
- Cross OS Platform Support
- Hardware Health Monitor
- Event Log
- Notifications
- Virture Media Support
- Remote Power Control
- User Management
- Serial over LAN



IPMI 2.0 Compliant

One Key Recovery

DDR3 1600

Jumper-less

Triple Display

USB 3.0

SATA 6Gb/s

Dual GbE

HDMI

mSATA

Specifications

- ◆ CPU
 - Intel® mobile Core™ i7-4700EQ on-board processor with Intel® AMT 9.0 support (2.4GHz, quad-core, 6MB cache, TDP=47W)
 - Intel® mobile Core™ i5-4402E on-board processor with Intel® AMT 9.0 support (1.6GHz, dual-core, 3MB cache, TDP=25W)
 - Intel® mobile Core™ i3-4102E on-board processor (1.6GHz, dual-core, 3MB cache, TDP=25W)
 - Intel® mobile Celeron® 2002E on-board processor (1.5GHz, dual-core, 2MB cache, TDP=25W)
 - Intel® mobile Core™ i5-4400E on-board processor with Intel® AMT 9.0 support (2.7GHz, dual-core, 3MB cache, TDP=37W) (by request)
 - Intel® mobile Core™ i3-4100E on-board processor (2.4GHz, dual-core, 3MB cache, TDP=37W) (by request)
 - Intel® mobile Celeron® 2000E on-board processor (2.2GHz, dual-core, 2MB cache, TDP=37W) (by request)
- ◆ Chipset: Intel® QM87
- ◆ Memory: Two 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet
 - LAN1: Intel® I217LM with Intel® AMT 9.0 support
 - LAN2: Intel® I210-AT PCIe controller
- ◆ Graphics Engine
 - Intel® HD Graphics Gen 7.5 supports DX11.1 and OpenCL 1.2, OpenGL 3.2
 - Full MPEG2, VC1, AVC Decode
- ◆ Display Output
 - 1 x VGA (up to 1920x1200@60Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
 - 2 x HDMI (up to 2500x1600@60Hz)
 - 1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (up to 3840x2160@60Hz)
- ◆ Audio: Realtek ALC662 HD codec supports 5.1-channel
 - 2 x Audio jacks (line-out, mic-in) on rear IO
- ◆ External I/O Interface
 - 1 x RS-232
 - 2 x USB 2.0
 - 2 x USB 3.0
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin)
 - 2 x USB 3.0 (2x10 pin, P=2.0)
 - 1 x RS-422/485 (1x4 pin, P=2.0)
 - 4 x RS-232 (2x5 pin, P=2.0)
 - 2 x SATA 3Gb/s
 - 6 x USB 2.0 (2x4 pin, P=2.54)
 - 2 x SATA 6Gb/s (RAID 0/1/5/10 supported)
- ◆ iRIS Remote Management Module: 1 x iRIS-1010 slot
- ◆ Front Panel: 1 x Front panel (2x7 pin, power LED, HDD LED, speaker, power button, reset button)
- ◆ LAN LED: 2 x LAN LED (1x2 pin)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Expansion: 1 x PCIe x16 slot
- 1 x Full-size PCIe Mini card slot (support mSATA)
- ◆ Watchdog Timer: Software programmable, support 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin)
- 1 x System smart fan (1x4 pin)
- ◆ Power Supply
 - 12V DC input
 - 1 x Internal power connector (2x2 pin)
 - 1 x External DC jack (4-pin DIN)
 - Support AT/ATX mode
- ◆ Power Consumption: 12V@0.03A (Intel® Core™ i7-4770EQ, 2.4GHz CPU with 8 GB (two 4 GB) 1333 MHz DDR3 memory)
- ◆ Operating Temperature: -20°C ~ 60°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170mm x 170mm
- ◆ Weight: GW: 900g / NW: 450g

Features

- 4th generation Intel® mobile Core™ i7/i5/i3 or Celeron® on-board processor
- DDR3 1066/1333/1600 MHz dual-channel SDRAM
- HDMI 1.4a compliant, triple independent display supported
- 3D micro-architecture enhancement supports DX11.1, OCL 1.2 and OGL3.2
- Rich media acceleration for hardware decode and encode acceleration
- Intel® GbE LAN with Intel® AMT 9.0 support
- High speed I/O interface for PCIe Gen 3.0 add-on card, USB 3.0 and SATA 6Gb/s supported
- Supports dual PCIe Mini expansion for PCIe Mini device and mSATA
- IEI jumper-less function
- Support IPMI 2.0 with iRIS-1010 module

Packing List

1 x KINO-DQM871-i1 motherboard	
1 x CPU cooler	1 x Mini jumper pack
1 x I/O shielding	1 x QIG
2 x SATA with power output cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-DQM871-i1-i7-R10	Mini-ITX SBC supports Intel® 22nm mobile Core™ i7-4700EQ on-board processor, HDMI / VGA / LVDS / DP, dual Intel® PCIe GbE, AMT 9.0, USB 3.0, SATA 6Gb/s, iRIS-1010, audio and RoHS
KINO-DQM871-i1-i5E-R10	Mini-ITX SBC supports Intel® 22nm mobile Core™ i5-4402E on-board processor, HDMI / VGA / LVDS / DP, dual Intel® PCIe GbE, AMT 9.0, USB 3.0, SATA 6Gb/s, iRIS-1010, audio and RoHS
KINO-DQM871-i1-i3E-R10	Mini-ITX SBC supports Intel® 22nm mobile Core™ i3-4102E on-board processor, HDMI / VGA / LVDS / DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, iRIS-1010, audio and RoHS
KINO-DQM871-i1-CE-R10	Mini-ITX SBC supports Intel® 22nm Celeron® 2002E on-board processor, HDMI / VGA / LVDS / DP, dual Intel® PCIe GbE, USB 3.0, SATA 6Gb/s, iRIS-1010, audio and RoHS
iRIS-1010-R10	IPMI 2.0 adapter card with AST1010 BMC chip (W/O KVM over IP function) for PCIe Mini socket interface
19800-000300-100-RS	RS-232 cable with bracket, 300mm, P=2.0
19800-003100-100-RS	Dual port USB 2.0 cable with bracket, 300mm, P=2.54
19800-010500-200-RS	USB 3.0 cable with bracket, 450mm
32000-023800-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32205-003800-200-RS	RS-422/485 cable, 200mm, P=2.0
DP-DP-R10	DisplayPort converter board (for IEI iDP connector)
DP-DVI-R10	DisplayPort to DVI-D converter board (for IEI iDP connector)
DP-HDMI-R10	DisplayPort to HDMI converter board (for IEI iDP connector)
DP-LVDS-R10	DisplayPort to 24-bit dual-channel LVDS converter board (for IEI iDP connector)
DP-VGA-R10	DisplayPort to VGA converter board (for IEI iDP connector)
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

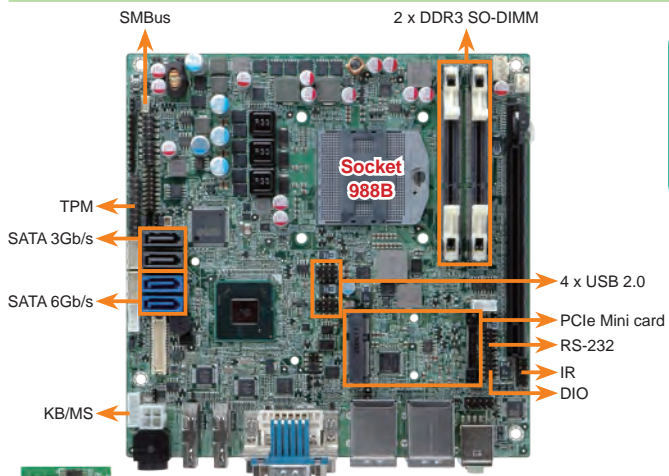
4 Open Frame Monitor

5 Power Supply/ Peripherals

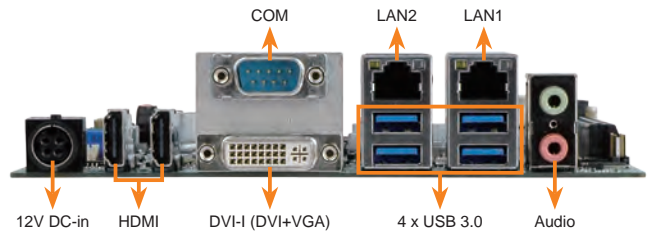
6 All-in-One System

KINO-QM770

Mini-ITX SBC with Socket G2 for Intel® 22nm mobile CPU, DVI-I, dual HDMI, LVDS, dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s and audio



3 independent displays support under Win7 OS



Features

- Mini-ITX SBC with Socket G2 for Intel® 22nm mobile Ivy Bridge processor
- Dual-channel 1066/1333/1600 MHz DDR3 SDRAM supports up to 16 GB
- HDMI 1.3 compliant, three independent displays supported
- 3D micro-architecture enhancement supports DX11, OCL 1.1 and OGL 3.1
- Rich media acceleration for hardware decoding and encoding acceleration
- Intel® GbE LAN with Intel® AMT 8.0 supported
- High speed I/O interface for PCIe Gen 3.0 add-on card, USB 3.0 and SATA 6Gb/s supported
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

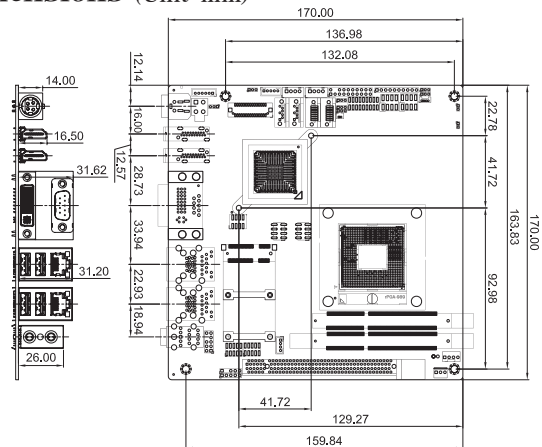
- ◆ CPU
 - Socket G2 for 3rd generation Intel® 22nm mobile processor
- ◆ Chipset
 - Intel® QM77
- ◆ Memory
 - Two 240-pin 1600/1333 MHz dual-channel DDR3 SDRAM unbuffered DIMMs support up to 16 GB
- ◆ BIOS
 - UEFI BIOS
- ◆ Ethernet
 - LAN1: Intel® 82579 PHY with Intel® AMT 8.0 support
 - LAN2: Intel® 82583V PCIe controller
- ◆ Graphics Engine
 - Supports DX11 and OpenGL 3.1
 - Full MPEG2, VC1, AVC Decode
- ◆ Display Output
 - 1 x DVI-I (up to 1920x1200@60Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
 - 2 x HDMI (up to 1920x1200@60Hz)
- ◆ Audio
 - Realtek ALC892 HD codec
 - 2 x Audio jacks (line-out, mic-in) on rear IO
 - 1 x Front Audio (2x5 pin)
- ◆ External I/O Interface

1 x RS-232	4 x USB 3.0
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- ◆ Internal I/O Interface

1 x KB/MS (1x6 pin)	2 x SATA 3Gb/s
1 x RS-232 (2x5 pin, P=2.0)	2 x SATA 6Gb/s (RAID 0/1/5/10 supported)
1 x RS-422/485 (1x4 pin, P=2.0)	4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ SMBus
 - 1 x SMBus (1x4 pin)
- ◆ TPM
 - 1 x TPM (2x10 pin)
- ◆ Expansion
 - 1 x PCIe x16 slot
 - 1 x PCIe Mini card slot
- ◆ Watchdog Timer
 - Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Infrared Interface: 1 x Infrared interface (1x5 pin)
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System fan (1x3 pin)
- ◆ Power Supply

12V DC input	1 x Internal power connector (2x2 pin)
1 x External DC jack (4-pin DIN)	Support AT/ATX mode
- ◆ Power Consumption
 - 12V@6.08A (2.3GHz Intel® Core™ i7-3610QE with two 1333 MHz 4 GB DDR3 memory running 3DMark06 burn in)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170 mm x 170 mm
- ◆ Weight: GW: 900g / NW: 450g

Dimensions (Unit: mm)



Packing List

1 x KINO-QM770 single board computer	1 x Mini jumper pack
1 x I/O shielding	1 x One Key Recovery CD
1 x RS-232 cable with bracket	1 x QIG
2 x SATA with power output cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-QM770-R10	Mini-ITX SBC with Socket G2 for Intel® 22nm mobile CPU, DVI-I/dual HDMI/LVDS, dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s and Audio
19800-003100-100-RS	Dual port USB 2.0 cable with bracket, 300mm, P=2.54
32000-023800-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
33200-000031-RS	DVI-I to VGA adapter connector
CF-989A-RS-R12	CPU cooler for mobile socket-G (PGA988) up to 55W processor, copper, 60 x 60 x 27.6mm, RoHS
SACF-KIT01-R10	SATA to CF converter board
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

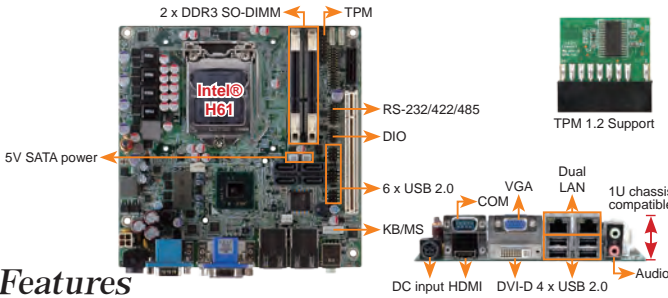
Power Supply/Peripherals

6

All-in-One System

KINO-DH610

Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU, DDR3, VGA/DVI-D/HDMI, dual PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS



Features

- LGA1155 socket for 2nd generation Intel® Core™ i3/Pentium®/Celeron® processor supported
- Up to 16 GB 1333/1066 MHz dual-channel DDR3 SDRAM
- Supports dual display by DVI/VGA/HDMI
- SATA 3Gb/s, PCI and PCIe x1 expansion slots supported
- Wide range 9 ~ 28V DC input support with either adaptor or 4-pin (2x2) ATX power connector
- IEL One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® dual-core processor (TDP 65W max.)
- ◆ Chipset: Intel® H61
- ◆ Memory: Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ Graphics Engine: Supports DX10.1 and OpenGL 3.0
Full MPEG-2, VC1, AVC Decode
- ◆ Display Output: Dual display supported
1 x VGA (up to 2048x1536@75Hz)
1 x HDMI (up to 1920x1200@60Hz)
1 x DVI-D (up to 1920x1200@60Hz)
- ◆ External I/O Interface: 1 x RS-232, 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin)
1 x RS-232/422/485 (2x7 pin, P=2.0)
2 x SATA power connector
4 x SATA 3Gb/s, 6 x USB 2.0 (2x4 pin, P=2.54)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio: Realtek ALC662 HD codec
2 x Audio jacks (line-out, mic-in) on rear IO
- ◆ Expansions: 1 x PCI slot
1 x PCIe x1 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin)
1 x System fan (1x3 pin)
- ◆ Power Supply: Maximum input voltage range: 9V ~ 28V
Recommended operating input voltage range: 12V ~ 24V
1 x External DC jack (4-pin DIN)
1 x Internal power connector (2x2 pin)
- ◆ Power Consumption: 12V@5.07A (2.2GHz Intel® G620T with two 1066 MHz 2 GB DDR3 memory running 3DMark06 burn in)
12V@8.85A (2.8GHz Intel® Core™ i7-2600S with two 1066 MHz 2 GB DDR3 memory running 3DMark06 burn in)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170 mm x 170 mm
- ◆ Weight: GW: 1100g / NW: 700g

Packing List

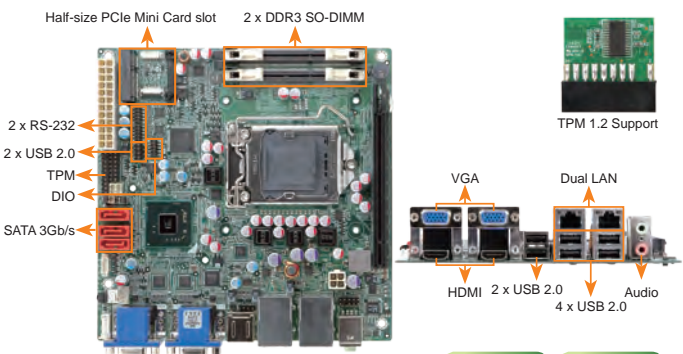
1 x KINO-DH610 single board computer	
1 x I/O shielding	1 x One Key Recovery CD
2 x SATA with 5V power cable	1 x QIG
1 x Mini jumper pack	1 x Utility CD

Ordering Information

Part No.	Description
KINO-DH610-R10	Mini-ITX SBC supports LGA1155 Intel® Core™ i5/i3/Pentium®/Celeron® CPU, DDR3, VGA/DVI-D/HDMI, dual PCIe GbE, USB 2.0, SATA 3Gb/s, HD Audio and RoHS
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
19800-004300-100-RS	RS-232 & RS-422/485 cable with bracket, 14-pin to two DB-9, 250mm, P=2.0
32000-023800-RS	PS/2 KB/MS cable, 135mm, P=2.0
63040-010060-110-RS	12V 60W power adaptor with 4-pin DIN lock, 90 ~ 264VAC input, ErP
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
SACF-KIT01-R10	SATA to CF converter board
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

KINO-AH611

Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU, DDR3, dual HDMI/dual VGA, dual PCIe GbE, SATA 3Gb/s, HD Audio and RoHS



Features

- LGA1155 for Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- Up to 16 GB 1333/1066 MHz dual-channel DDR3 SDRAM
- Supports dual independent display by dual VGA and dual HDMI
- Two COM ports and three SATA 3Gb/s connectors supported
- IEL One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ Chipset: Intel® H61
- ◆ Memory: Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ Graphics Engine: Supports DX10.1 and OpenGL 3.0
Full MPEG-2, VC1, AVC Decode
- ◆ Display Output: Dual display supported
2 x VGA (up to 2048x1536@75Hz)
2 x HDMI (up to 1920x1200@60Hz)
- ◆ External I/O Interface: 6 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin) 3 x SATA 3Gb/s
2 x RS-232 (2x5 pin, P=2.0)
2 x USB 2.0 (2x4 pin, P=2.54)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio: Realtek ALC662 HD codec
2 x Audio jacks (line-out, mic-in) on rear IO
1 x Front Audio (2x5 pin)
- ◆ Expansion: 1 x PCIe x16 slot
1 x Half-size PCIe Mini card slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin)
1 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 5V@3.47A, 12V@0.11A, Vcore_12V@6.73A, 3.3V@1.01A, 5VSB@0.15A (3.4GHz Intel® Core™ i7-2600K with two 1333 MHz 2 GB DDR3 SO-DIMMs)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170 mm x 170 mm
- ◆ Weight: GW: 1100g / NW: 700g

Packing List

1 x KINO-AH611 single board computer	1 x Mini jumper pack
1 x Dual RS-232 cable	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
3 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-AH611-R10	Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU, DDR3, dual HDMI/dual VGA, dual PCIe GbE, SATA 3Gb/s, HD Audio and RoHS
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
19800-003100-300-RS	Dual port USB cable with bracket, 300mm, P=2.54
32000-023800-RS	PS/2 KB/MS cable, 135mm, P=2.0
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
SACF-KIT01-R10	SATA to CF converter board
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

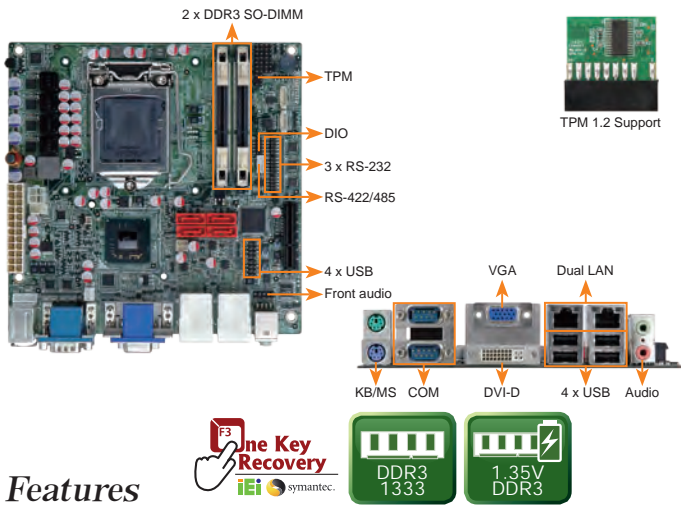
4 Open Frame Monitor

5 Power Supply/Peripherals

6 All-in-One System

KINO-AH612

Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with H61, DDR3, VGA/DVI-D, six COMs, dual PCIe GbE, SATA 3Gb/s, HD Audio and RoHS



Features

- LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor supported
- Dual-channel 1333/1066 MHz DDR3 supports up to 16 GB
- Supports dual independent display by VGA and DVI-D
- Supports six COM ports, four SATA 3Gb/s ports and one PCIe x4 slot for IO expansion card
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: LGA1155 socket supports Intel® Core™ i7/i5/i3/Pentium®/Celeron® processor
- ◆ Chipset: Intel® H61
- ◆ Memory: Two 204-pin 1066/1333 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ Graphics Engine: Supports DX10.1 and OpenGL 3.0 Full MPEG-2, VC1, AVC Decode
- ◆ Display Output: Dual display supported 1 x VGA (up to 2048x1536@75Hz) 1 x DVI-D (up to 1920x1200@60Hz)
- ◆ Audio: Realtek ALC662 HD codec 2 x Audio jacks (line-out, mic-in) on rear IO 1 x Front Audio (2x5 pin)
- ◆ External I/O Interface: 1 x KB/MS 2 x RS-232 4 x USB 2.0
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin) 4 x SATA 3Gb/s 1 x RS-422/485 (1x4 pin, P=2.0) 3 x RS-232 (2x5 pin, P=2.0) 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Expansion: 1 x PCIe x4 slot
- ◆ Watchdog Timer: Software programmable supports 1-255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector: 1 x CPU smart fan (1x4 pin) 1 x System fan (1x3 pin)
- ◆ Power Supply: ATX power supply
- ◆ Power Consumption: 5V@3.9A, 12V@0.36A, Vcore_12V@8.28A, 3.3V@1.24A, 5VSB@0.18A (3.4GHz Intel® Core™ i7-2600 with two 1333 MHz 2 GB DDR3 memory)
- ◆ Operating Temperature: -10°C ~ 60°C
- ◆ Storage Temperature: -20°C ~ 70°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Dimensions: 170 mm x 170 mm
- ◆ Weight: GW: 1100g / NW: 700g

Packing List

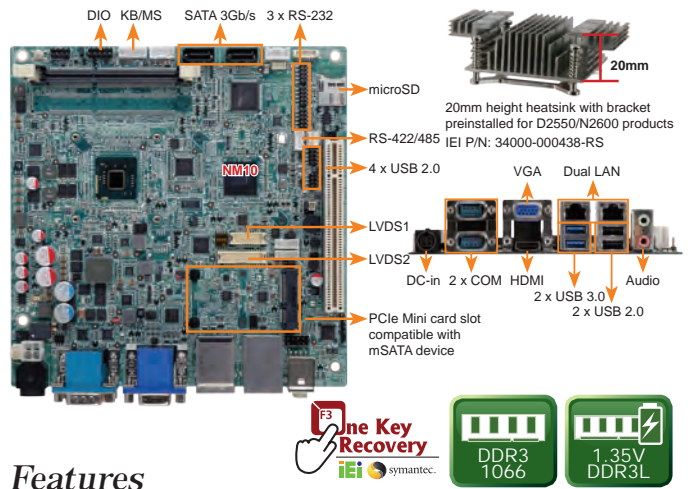
1 x KINO-AH612 single board computer	1 x Mini jumper pack
1 x Dual RS-232 cable	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-AH612-R10	Mini-ITX SBC supports LGA1155 Intel® Core™ i7/i5/i3/Pentium®/Celeron® CPU with H61, DDR3, VGA/DVI-D, 6 COM, dual PCIe GbE, SATA 3Gb/s, HD Audio and RoHS
CPU-DT-i5-2500T	Intel® Core™ i5-2500T processor, LGA1155, quad core 2.3GHz, 6M cache, 45W, compatible with CF-1156C-RS CPU cooler
CPU-DT-i5-2390T	Intel® Core™ i5-2390T processor, LGA1155, dual core 2.7GHz, 3M cache, 35W, AMT, compatible with CF-1156C-RS CPU cooler
CPU-DT-i3-2120T	Intel® Core™ i3-2120T processor, LGA1155, dual core 2.6GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-C-G440	Intel® Celeron® G440 processor, LGA1155, single core 1.6GHz, 1M cache, 35W, compatible with CF-1156C-RS CPU cooler
CPU-DT-P-G630T	Intel® Pentium® G630T processor, LGA1155, dual core 2.3GHz, 3M cache, 35W, compatible with CF-1156C-RS CPU cooler
19800-003100-100-RS	Dual port USB 2.0 cable with bracket, 300mm, P=2.54
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
CF-1156A-RS-R11	High-performance LGA1155/LGA1156 cooler kit, 1U chassis compatible, 73W
CF-1156C-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 45W
CF-1156D-RS	LGA1155/LGA1156 cooler kit, 1U chassis compatible, 65W
CF-1156E-R11	High-performance LGA1155/LGA1156 cooler kit, 95W
SACF-KIT01-R10	SATA to CF converter board
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

KINO-CV-D25501/N26001

Mini-ITX SBC with Intel® D2550/N2600 processor, DDR3, VGA/HDMI/dual LVDS, dual GbE, USB 3.0, mSATA, SATA 3Gb/s, audio, RoHS



Features

- Mini-ITX form factor with Intel® D2550/N2600 dual-core processor supports DDR3/DDR3L (1.35V) memory
- Wide range 9V ~ 28V DC input
- Flexible VGA, dual LVDS and HDMI with dual-display support
- Complete I/O: six USB 2.0, two USB 3.0, two SATA 3Gb/s, six COM, audio and mSATA SSD capable
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: Intel® Atom™ D2550 (1.86GHz, dual-core, 1MB cache) Intel® Atom™ N2600 (1.6GHz, dual-core, 1MB cache) Intel® Atom™ N2800 (1.86GHz, dual-core, 1MB cache)
- ◆ Chipset: Intel® NM10
- ◆ BIOS: UEFI BIOS
- ◆ Memory: One 204-pin 1066/800 MHz DDR3/DDR3L SDRAM SO-DIMM slot supports up to 4 GB (D2550/N2800) or 2 GB (N2600)
- ◆ Graphics Engine: Intel® GMA 3650 with 640 MHz graphics core speed for D2550 and N2800 Intel® GMA 3600 with 400 MHz graphics core speed for N2600
- ◆ Display Output: Supports dual LVDS, VGA and HDMI for dual independent display 1 x VGA (up to 2048x1536@75Hz) 1 x HDMI (up to 1920x1200@60Hz) 24-bit single-channel LVDS1 (D2550) (up to 1440x900@60Hz) 18-bit single-channel LVDS1 (N2600/N2800) (up to 1366x768@60Hz) 24-bit dual-channel LVDS2 (up to 1920x1200(D2550) or 1600x1200(N2600/N2800)@60Hz)
- ◆ Ethernet: Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Audio: Realtek ALC662 HD Audio codec 2 x Audio jacks (line-out, mic-in) on rear IO 1 x Front Audio (2x5 pin)
- ◆ External I/O Interface: 2 x RS-232 2 x USB 2.0 2 x SATA 3Gb/s
- ◆ Internal I/O Interface: 1 x KB/MS (1x6 pin) 2 x SATA 3Gb/s 1 x MicroSD card slot 1 x RS-422/485 (1x4 pin, P=2.0) 3 x RS-232 (2x5 pin, P=2.0) 4 x USB 2.0 (2x4 pin, P=2.0)
- ◆ Expansion: 1 x PCIe Mini card slot (support mSATA) 1 x PCI slot
- ◆ Watchdog Timer: Software programmable supports 1-255 sec. system reset by Super I/O
- ◆ Power Supply: 1 x External DC power jack (4-pin DIN) 1 x Internal power connector (2x2 pin) Input voltage range: 9V ~ 28V Recommended operating input voltage range: 12V~24V
- ◆ Fan Connector: 1 x CPU fan (1x3 pin) 1 x System fan (1x3 pin)
- ◆ Power Consumption: 12V@2.8A (1.86GHz Intel® D2550 CPU with DDR3 1333 MHz 4 GB DIMM) 12V@2.4A (1.6GHz Intel® N2600 CPU with DDR3 1333 MHz 2 GB DIMM)
- ◆ Operating Temperature: -20°C ~ 60°C with free air, -20°C ~ 70°C with force air for D2550 processor -20°C ~ 70°C with free air, -20°C ~ 75°C with force air for N2600 and N2800 processor
- ◆ Storage Temperature: -30°C ~ 80°C
- ◆ Operating Humidity: 5% ~ 95%, non-condensing
- ◆ Weight: GW: 600g / NW: 250g

Packing List

1 x KINO-CV-D25501/N26001 single board computer	1 x Mini jumper pack
1 x Dual-port USB cable	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA with 5V output cable Kit	1 x Utility CD

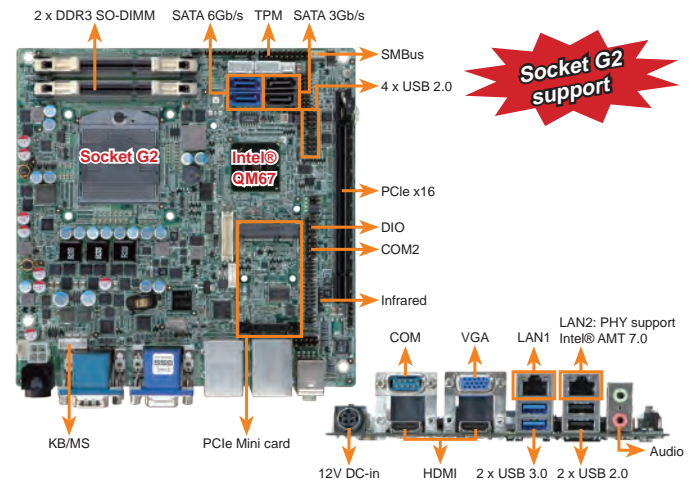
Ordering Information

Part No.	Description
KINO-CV-D25501-R10	Mini-ITX SBC with Intel® Atom™ D2550 1.86GHz, DDR3, VGA/HDMI/dual LVDS, dual GbE, USB 3.0, 9V ~ 28V, SATA 3Gb/s, audio, RoHS
KINO-CV-N26001-R10	Mini-ITX SBC with Intel® Atom™ N2600 1.6GHz, DDR3, VGA/HDMI/dual LVDS, dual GbE, USB 3.0, 9V ~ 28V, SATA 3Gb/s, audio, RoHS
KINO-CV-N28001-R10**	Mini-ITX SBC with Intel® Atom™ N2800 1.86GHz, DDR3, VGA/HDMI/dual LVDS, dual GbE, USB 3.0, 9 ~ 28V, SATA 3Gb/s, audio, RoHS
19FFD124010HB2A7-000001-RS	CPU fan (40mm x 40mm x 10mm)
32000-023800-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
34000-000510-RS	30mm higher heatsink

**By order production, MOQ: 100

KINO-QM670-R20

Mini-ITX SBC with Socket G2 for Intel® mobile Core™ i7/i5/i3 CPU, VGA/dual HDMI/LVDS, dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s and audio



Features

- Mini-ITX SBC with Socket G2 for Intel® Core™ i7/i5/i3 processor
- Dual-channel 1333/1066MHz DDR3 SDRAM (system max. 8 GB)
- HDMI 1.3 compliant
- 3D micro-architecture enhancement supports DX*10.1 and OGL*3.0
- Rich media acceleration for hardware decoding and encoding acceleration
- Intel® GbE LAN with Intel® AMT 7.0 supported
- High speed I/O interface for PCIe Gen2 add-on card, USB 3.0 and SATA 6Gb/s

Specifications

- ◆ CPU: Socket G2 for Intel® Core™ i7/i5/i3 processor
- ◆ Chipset: Intel® QM67
- ◆ Memory Two 204-pin 1333/1066 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 8 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet LAN1: Intel® 82583V PCIe controller LAN2: Intel® 82579 PHY with Intel® AMT 7.0 supported
- ◆ Graphics Engine Support for DX10.1 and OpenGL3.0 Full MPEG2, VC1, AVC Decode
- ◆ Display Output Dual display supported 1 x VGA (up to 2048x1536@75Hz) 2 x HDMI (up to 1920x1200@60Hz) 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
- ◆ External I/O Interface 1 x RS-232 2 x USB 2.0 2 x USB 3.0
- ◆ Internal I/O Interface 1 x RS-422/485 (1x4 pin, P=2.0) 2 x SATA 3Gb/s 2 x SATA 6Gb/s (RAID 0/1/5/10 supported) 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ Audio Realtek ALC892 HD codec 2 x Audio jacks (line-out, mic-in) on rear I/O 1 x Front Audio (2x5 pin)
- ◆ Expansion 1 x PCIe x16 slot 1 x PCIe Mini card slot
- ◆ Watchdog Timer Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O 8-bit digital I/O (2x5 pin)
- ◆ Infrared Interface: 1 x 5-pin header
- ◆ Fan Connector 1 x CPU smart fan (1x4 pin) 1 x System smart fan (1x3 pin)
- ◆ Power Supply 12V DC input 1 x External DC jack (4-pin DIN) 1 x Internal power connector (2x2 pin) Support AT/ATX mode
- ◆ Power Consumption 12V@6.5A (2.1GHz Intel® Core™ i7-2710QE CPU with two 1333 MHz 2 GB DDR3 DIMM)
 - ◆ Operating Temperature: -10°C ~ 60°C
 - ◆ Storage Temperature: -20°C ~ 70°C
 - ◆ Operating Humidity 5% ~ 95%, non-condensing
 - ◆ Dimensions: 170mm x 170mm
 - ◆ Weight: GW: 900g / NW: 450g

Packing List

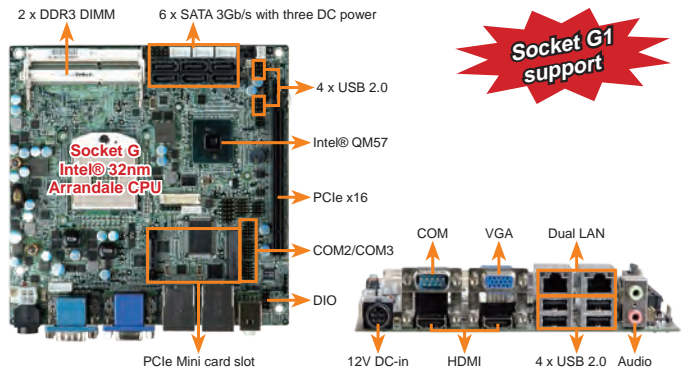
1 x KINO-QM670 single board computer	1 x Mini jumper pack
1 x I/O shielding	1 x One Key Recovery CD
1 x RS-232 cable	1 x QIG
2 x SATA with power output cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-QM670-R20	Mini-ITX SBC with Socket G2 for Intel® mobile Core i7/i5/i3 CPU, VGA/dual HDMI/LVDS, dual PCIe GbE, USB 3.0, PCIe Mini, SATA 6Gb/s and audio
19800-003100-100-RS	Dual port USB 2.0 cable with bracket, 300mm, P=2.54
32000-023800-RS	PS/2 KB/MS cable, 135mm/110mm, P=2.0
32205-003800-300-RS	RS-422/485 cable, 200mm, P=2.0
CF-989A-RS-R12	CPU cooler
SACF-KIT01-R10	SATA to CF converter board
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

KINO-QM57A

Mini-ITX SBC with Socket G1 for Intel® mobile Core™ i7/i5/i3/Celeron® CPU, VGA/dual HDMI/LVDS, PCIe GbE, USB 2.0, PCIe Mini, SATA 3Gb/s, audio and RoHS



Features

- Mini-ITX SBC with Socket G for Intel® 32nm/45nm mobile Core™ i7/i5/i3 and Celeron® processor
- 800/1066MHz dual-channel DDR3 SO-DIMM supported (system max. 8 GB)
- Analog CRT/18-bit or 24-bit dual-channel LVDS/Dual HDMI outputs supported
- Intel® GbE LAN with Intel® AMT 6.0 support, iEZman UI is bundled for remote control under Windows® environment
- UEFI software interface between OS and platform firmware
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU Intel® G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® processor (Socket 988)
- ◆ Chipset: Intel® QM57
- ◆ Memory Two 204-pin 1066/800 MHz dual-channel unbuffered DDR3L SDRAM SO-DIMM support up to 16 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet LAN1: Intel® 82577 GbE LAN controller with Intel® AMT 6.0 supported by iEZman software UI LAN2: Intel® 82574L GbE LAN
- ◆ Graphics Engine Gen 5.75 with 12 execution units support DirectX* 10, OpenGL* 2.1
- ◆ Display Output Dual display supported 1 x VGA (up to 2048x1536@75Hz) 2 x HDMI (up to 1920x1200@60Hz) 1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
- ◆ External I/O Interface 1 x RS-232 4 x USB 2.0
- ◆ Internal I/O Interface 1 x KB/MS (1x6 pin) 1 x RS-232/422/485 (2x7 pin, P=2.0) 2 x RS-232 (2x5 pin, P=2.0) 4 x USB 2.0 (2x4 pin, P=2.54) 6 x SATA3Gb/s (RAID 0/1/5/10 supported)
- ◆ Expansion 1 x PCIe x16 slot 1 x PCIe Mini card slot
- ◆ Watchdog Timer Software programmable supports 1~255 sec. system reset
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Fan Connector 1 x CPU smart fan (1x4 pin) 1 x System smart fan (1x3 pin)
- ◆ Power Supply 12V DC input 1 x External DC jack (4-pin DIN) 1 x Internal power connector (2x2 pin) Support AT/ATX mode
- ◆ Power Consumption 12V@5.27A (2.66GHz Intel® Core™ i7 620M CPU with two 2 GB 1333 MHz DDR3 DIMMs)
 - ◆ Operating Temperature 0°C ~ 60°C (32°F ~ 140°F)
 - ◆ Storage Temperature: -10°C ~ 70°C
 - ◆ Operating Humidity: 5% ~ 95%, non-condensing
 - ◆ Dimensions: 170mm x 170mm
 - ◆ Weight: GW: 1000g / NW: 350g

Packing List

1 x KINO-QM57A single board computer	1 x Mini jumper pack
1 x Dual RS-232 cable w/ bracket	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
3 x SATA with power output cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-QM57A-R10	Mini-ITX SBC with Socket G1 for Intel® mobile Core™ i7/i5/i3/Celeron® CPU, VGA/dual HDMI/LVDS, PCIe GbE, USB 2.0, PCIe Mini, SATA 3Gb/s and audio, RoHS
19800-003100-100-RS	Dual port USB 2.0 cable with bracket, 300mm, P=2.54
19800-004300-100-RS	RS-232 & RS-422/485 cable with bracket, 14-pin to two DB-9, 250mm, P=2.0
63040-010096-100-RS	96W/12V power adaptor 90VAC~260VAC, 4-pin DIN
CF-989A-RS-R12	CPU cooler for mobile socket-g (PGA988) up to 55W processor, copper, 60mm x 60mm x 27.6mm, RoHS
CF-989B-RS-R11	CPU cooler for mobile socket-g (PGA988) 50W processor, aluminum, 60mm x 60mm x 27.6mm, RoHS
SAIDE-KIT01-R10	SATA to IDE/CF converter board

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

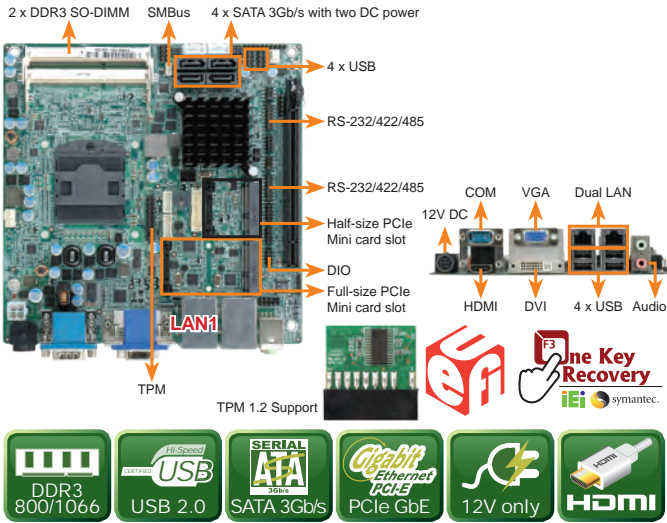
4 Open Frame Monitor

5 Power Supply/Peripherals

6 All-in-One System

KINO-HM551

Mini-ITX SBC with Socket G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® CPU, VGA/DVI/LVDS/HDMI, dual PCIe GbE, USB 2.0, dual PCIe Mini, SATA 3Gb/s and audio, RoHS



Features

- Mini-ITX SBC with Socket G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® processor
- DDR3 800/1066MHz dual-channel SDRAM supported up to 8 GB
- 18/24-bit dual-channel LVDS/Analog CRT/DVI/HDMI output supported
- PCIe x16 slot and dual PCIe Mini card for high speed device expansion
- TPM V1.2 hardware security function supported by TPM module
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: Socket G1 for Intel® mobile Core™ i7/i5/i3 and Celeron® processor (Socket 988)
- ◆ Chipset: Intel® HM55
- ◆ Memory: Two 204-pin 1066/800 MHz DDR3 SDRAM SO-DIMM slot supports up to 4 GB
- ◆ BIOS: UEFI BIOS
- ◆ Ethernet: Dual LAN: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ Graphics Engine: Gen 5.75 with 12 execution units support Direct* 10, OpenGL* 2.1
- ◆ Display Output: Dual display supported
 - 1 x VGA (up to 2048x153@60Hz)
 - 1 x HDMI (up to 1920x1080@60Hz)
 - 1 x DVI-D (up to 1600x1200@60Hz)
 - 1 x 18/24-bit dual-channel LVDS (up to 1600x1200@60Hz)
- ◆ Note: The Intel® quad-core processor is a discrete processor which does not integrate a graphics engine. If a quad-core processor is used on the motherboard, an additional graphics card must be installed in order to support display output. Otherwise, the display will show "No display output" when connected to the on-board display port.
- ◆ External I/O Interface
 - 1 x RS-232
 - 4 x USB 2.0
- ◆ Internal I/O Interface
 - 1 x KB/MS (1x6 pin)
 - 4 x SATA 3Gb/s
 - 2 x RS-232/422/485 (2x7 pin, P=2.0)
 - 3 x RS-232 (2x5 pin, P=2.0)
 - 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ Audio: Realtek ALC662 HD codec
- ◆ 2 x Audio jacks (line-out, mic-in) on rear I/O
- ◆ 1 x Front Audio (2x5 pin)
- ◆ TPM: 1 x TPM (2x10 pin)
- ◆ SMBus: 1 x 4-pin wafer connector
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Expansion
 - 1 x PCIe Mini card slot
 - 1 x Half-size PCIe Mini card slot
 - 1 x PCIe x16 slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System smart fan (1x3 pin)
- ◆ Power Supply
 - Single voltage 12V DC input
 - 1 x External 4-pin DIN DC jack
 - 1 x Internal 4-pin (2x2) power connector
 - AT/ATX power mode selected by jumper
- ◆ Power Consumption
 - 12V@4.67A (2.66GHz Intel® Core i7 620M CPU with two 1333 MHz 4 GB DDR3 DIMM)
 - ◆ Operating Temperature: -10°C ~ 60°C
 - ◆ Storage Temperature: -20°C ~ 70°C
 - ◆ Operating Humidity: 5% ~ 95%, non-condensing
 - ◆ Dimensions: 170mm x 170mm
 - ◆ Weight: GW: 900g / NW: 450g

Packing List

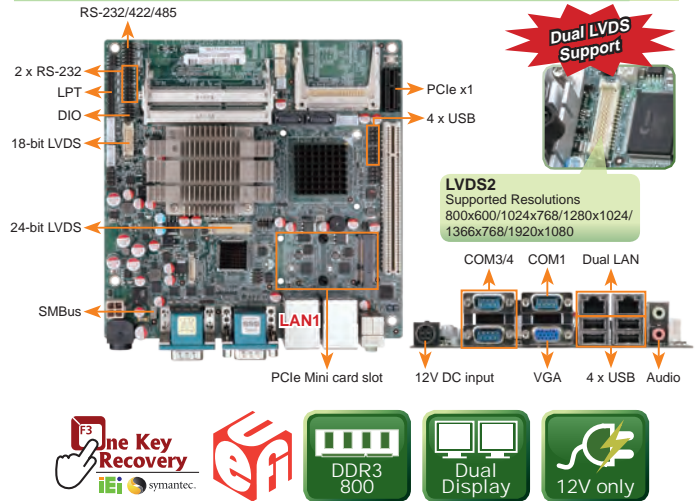
1 x KINO-HM551 single board computer	1 x Mini jumper pack
1 x Dual RS-232 cable with bracket	1 x One Key Recovery CD
1 x I/O shielding	1 x QIG
2 x SATA with power cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-HM551-R10	Mini-ITX SBC with Socket G1 for Intel® mobile Core i7/i5/i3 and Celeron® CPU, VGA/DVI/LVDS/HDMI, Dual PCIe GbE, USB 2.0, Dual PCIe Mini, SATA 3Gb/s and Audio, RoHS
19800-003100-300-RS	Dual USB cable with bracket
SAIDE-KIT01-R10	SATA to IDE/CF converter board
19800-004300-100-RS	RS-232 cable, 40-pin to RS-232 & RS-422/485 cable with bracket, 14-pin to two DB-9, 250mm, P=2.0
32000-023800-RS	KB/MS Y cable
CF-989A-RS-R12	CPU cooler for mobile socket-G (PGA988) up to 55W processor, copper, 60mm x 60mm x 27.6mm, RoHS
TPM-IN01-R20	20-pin Infineon TPM module, software management tool, firmware v3.17

KINO-PV-D4252/D5252

Mini-ITX SBC with Intel® Atom™ D425/D525, DDR3, VGA/18+48-bit LVDS, dual GbE, audio, USB 2.0 and SATA 3Gb/s, RoHS



Features

- Mini-ITX SBC with Intel® Atom™ D525/D425 processor
- Support 800 MHz DDR3 SO-DIMM socket (system max. 4 GB)
- Support 24-bit dual-channel LVDS with up to 1920x1080 resolution
- Complete I/O with eight USB, two SATA 3Gb/s, one CF Type II, six COM and audio
- IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Specifications

- ◆ CPU: Intel® Atom™ D525 (1.8GHz, dual-core, 1MB cache)
- ◆ Intel® Atom™ D425 (1.8GHz, single-core, 512KB cache)
- ◆ Chipset: ICH8M
- ◆ BIOS: UEFI BIOS
- ◆ Memory: Two 204-pin 800 MHz DDR3 SDRAM SO-DIMM slot supports up to 4 GB (D525/D425) or 2 GB (N455)
- ◆ Graphics Engine: GMA 3150
- ◆ Graphics core speed 400 MHz for D525/D425
- ◆ Display Output
 - 1 x VGA (up to 2048x1536@60Hz)
 - 1 x 18-bit single-channel LVDS (up to 1366x768@60Hz)
 - 1 x 24-bit dual-channel LVDS (up to 1920x1080@60Hz)
- ◆ Ethernet: LAN1: Realtek RTL8111E PCIe GbE controller with ASF 2.0 support
- ◆ LAN2: Realtek RTL8111E PCIe GbE controller
- ◆ External I/O Interface
 - 3 x RS-232
 - 4 x USB 2.0
- ◆ Internal I/O Interface
 - 1 x CF Type II
 - 1 x KB/MS (1x6 pin)
 - 1 x LPT (2x13 pin, P=2.54)
 - 1 x RS-232/422/485 (2x7 pin, P=2.0)
 - 2 x RS-232 (2x5 pin, P=2.0)
 - 2 x SATA 3Gb/s
 - 4 x USB 2.0 (2x4 pin, P=2.54)
- ◆ SMBus: 1 x SMBus (1x4 pin)
- ◆ Audio: Realtek ALC662 HD codec
- ◆ 2 x Audio jacks (line-out, mic-in) on rear I/O
- ◆ Digital I/O: 8-bit digital I/O (2x5 pin)
- ◆ Expansion
 - 1 x PCI slot
 - 1 x PCIe x1 slot
 - 1 x PCIe Mini card slot
- ◆ Watchdog Timer: Software programmable supports 1~255 sec. system reset
- ◆ Power Supply
 - 1 x External DC power jack (4-pin DIN)
 - 1 x Internal power connector (2x2 pin)
 - 12V only DC input, support AT/ATX mode
 - ◆ TPM: On-board Infineon SLB9635TT1.2 (Optional)
 - ◆ Fan Connector
 - 1 x CPU smart fan (1x4 pin)
 - 1 x System fan (1x3 pin)
- ◆ Power Consumption
 - 12V@1.95A (Intel® Atom™ D525 1.8GHz with two 1 GB DDR3)
 - ◆ Operating Temperature: -10°C ~ 60°C
 - ◆ Storage Temperature: -20°C ~ 70°C
 - ◆ Operating Humidity: 5% ~ 95%, non-condensing
 - ◆ Weight: GW: 800g / NW: 340g

Packing List

1 x KINO-PV-D4252/D5252 single board computer	1 x Mini jumper pack
1 x I/O shielding	1 x One Key Recovery CD
1 x RS-232 cable with bracket	1 x QIG
1 x SATA with power cable	1 x Utility CD

Ordering Information

Part No.	Description
KINO-PV-D5252-L2-R11	Mini-ITX SBC with Intel® Atom™ D525 1.8GHz, DDR3, VGA/18+48 bit LVDS, dual GbE, audio, USB 2.0 and SATA 3Gb/s, RoHS
KINO-PV-D4252-R11	Mini-ITX SBC with Intel® Atom™ D425 1.8GHz, DDR3, VGA/18-bit LVDS, dual GbE, audio, USB 2.0 and SATA 3Gb/s, RoHS
19800-003100-300-RS	Dual port USB cable with bracket, 30mm, P=2.54
19800-004300-100-RS	RS-232 & RS-422/485 cable with bracket, 14-pin to two DB-9, 250mm, P=2.0
19FFD124010HB2A7-000001-RS	CPU fan
32000-023800-RS	PS/2 KB/MS 135mm, P=2.0
32100-192900-RS	One 4-pin (2x2) to one 4-pin (1x4) DC power cable with terminal block
32200-015100-RS	LPT cable, 280mm, P=2.0
34000-000510-RS	30mm higher heatsink
PCIER-K101L-R10	PCIe x1 riser card

PCIe x1 Riser Card



PCIER-K101L-R10

Dimensions: 135mm x 31mm

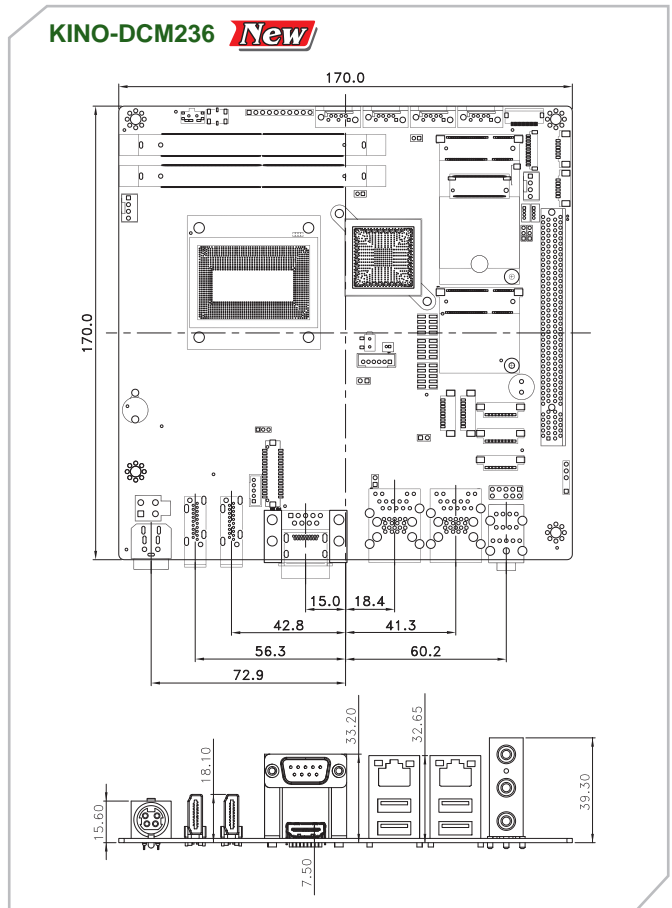
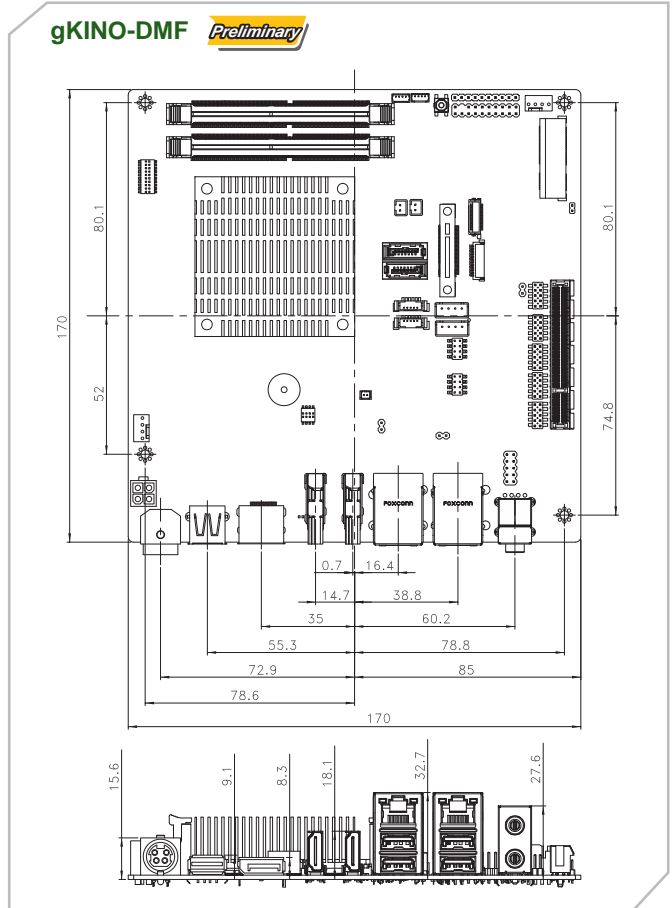
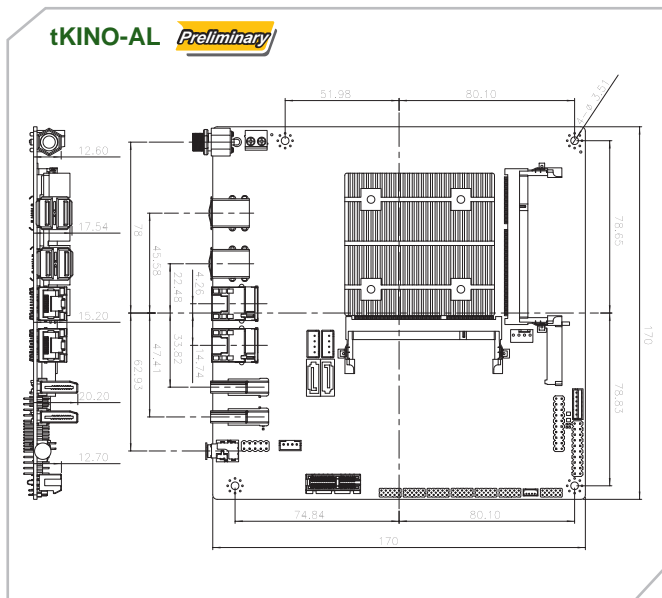
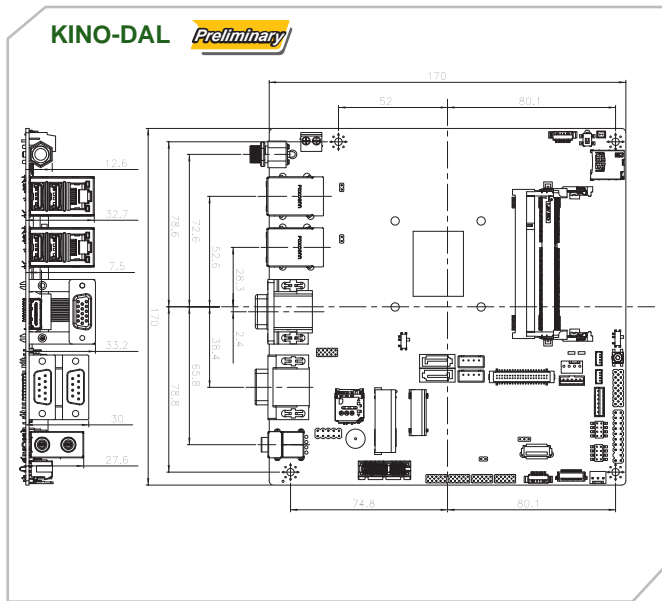
Compatible model list KINO-PV-D4252/D5252

Packing List

1 x PCIe x1 riser card

1 x QIG

Mini-ITX Dimensions (Unit: mm)



1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

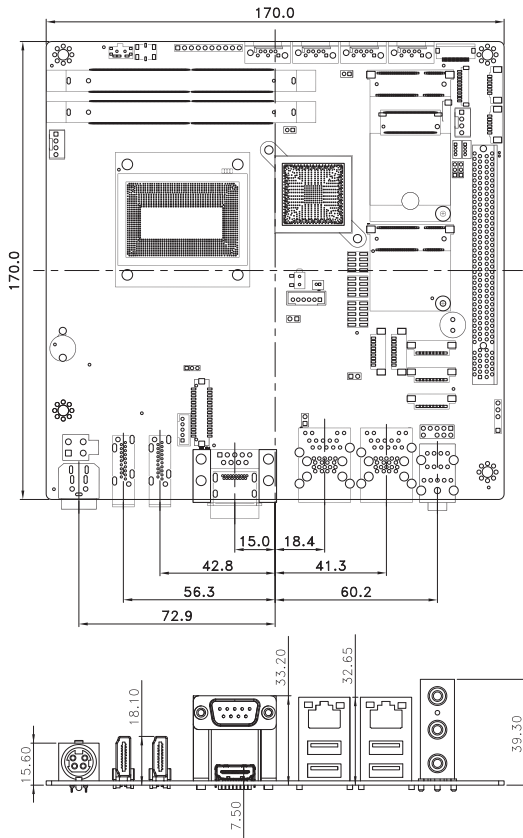
4 Open Frame Monitor

5 Power Supply/Peripherals

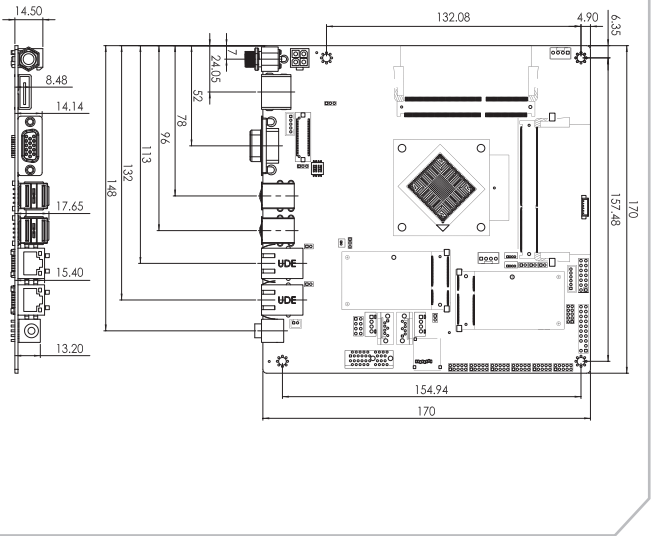
6 All-in-One System

Mini-ITX Dimensions (Unit: mm)

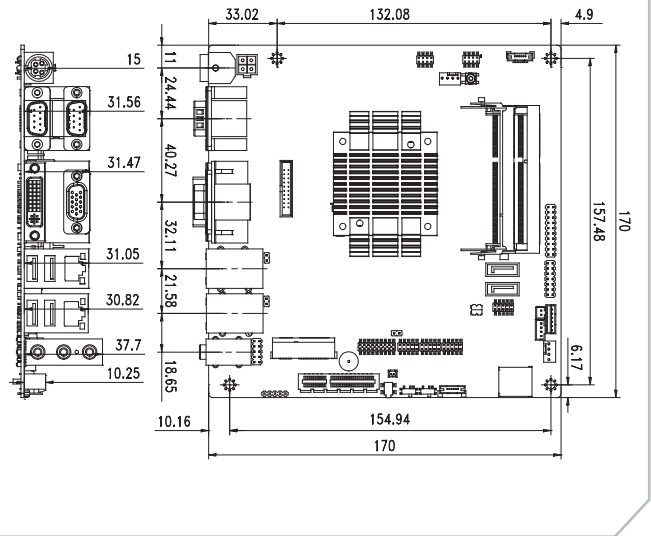
KINO-DQM170 *New*



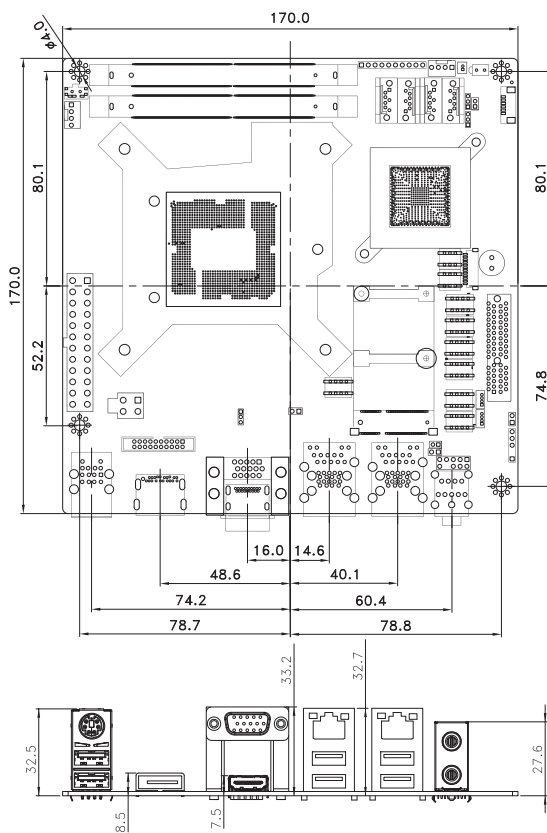
tKINO-BW *New*



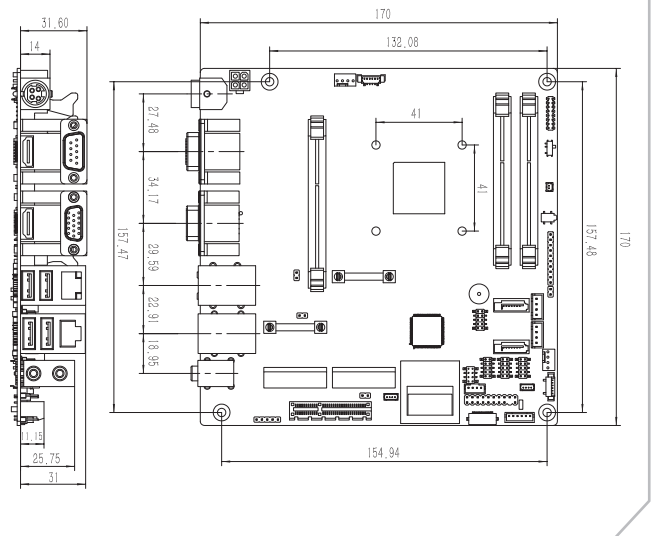
KINO-DBT



KINO-AQ170 *New*



KINO-SE-i2/KBN-i2



1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

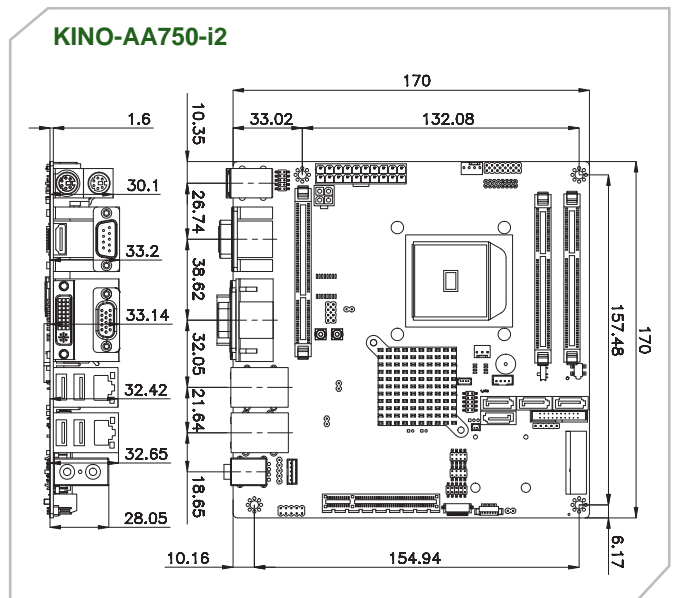
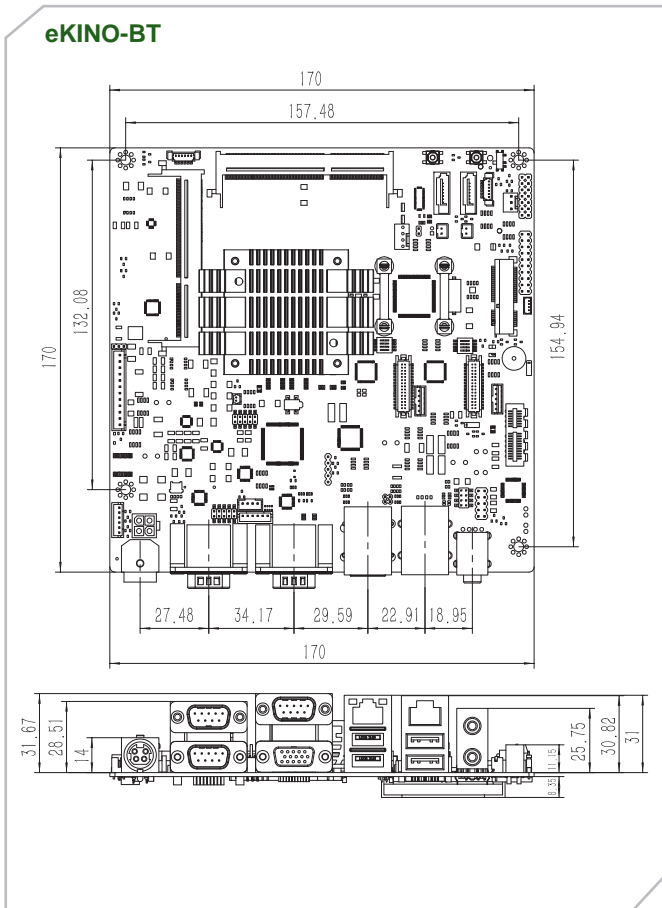
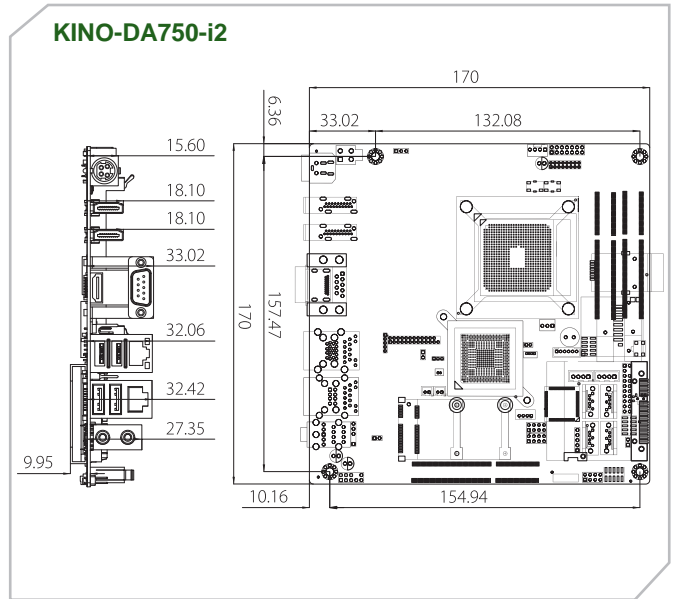
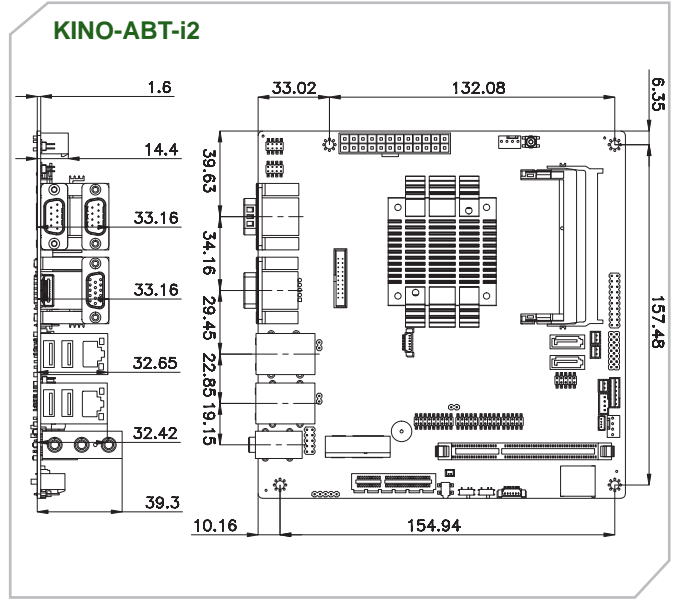
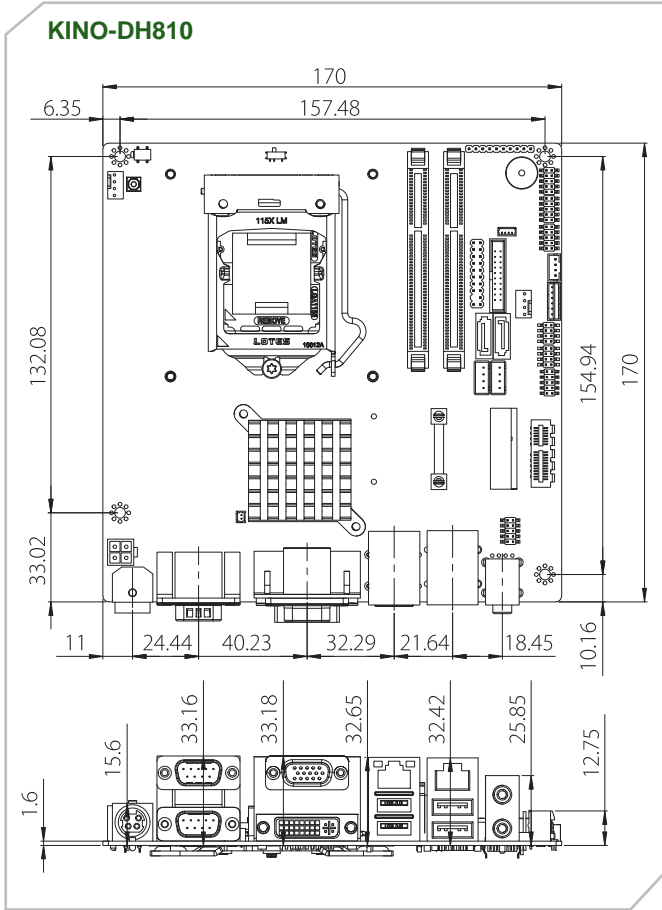
5

Power Supply/Peripherals

6

All-in-One System

Mini-ITX Dimensions (Unit: mm)



1 Industrial Computing Solutions

2 Video Capture Solutions

3 Industrial Computer Chassis

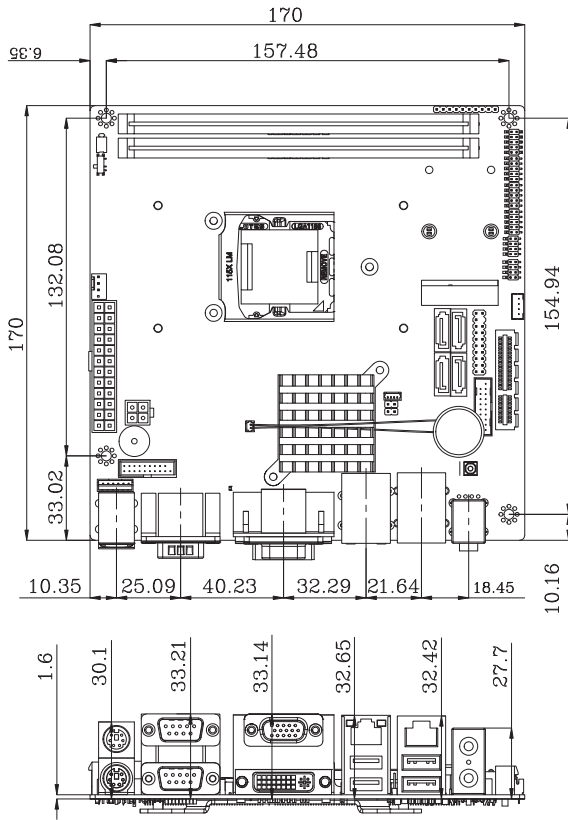
4 Open Frame Monitor

5 Power Supply/Peripherals

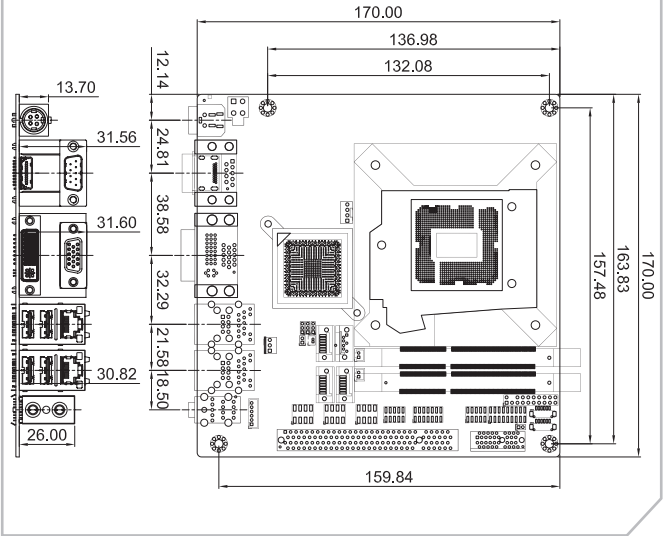
6 All-in-One System

Mini-ITX Dimensions (Unit: mm)

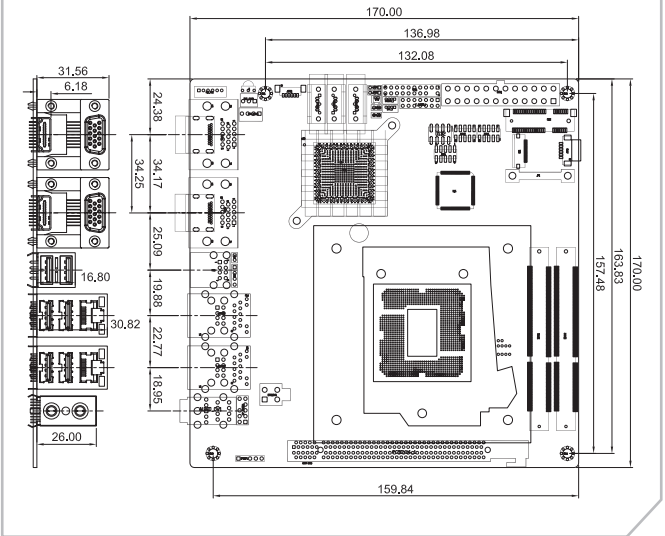
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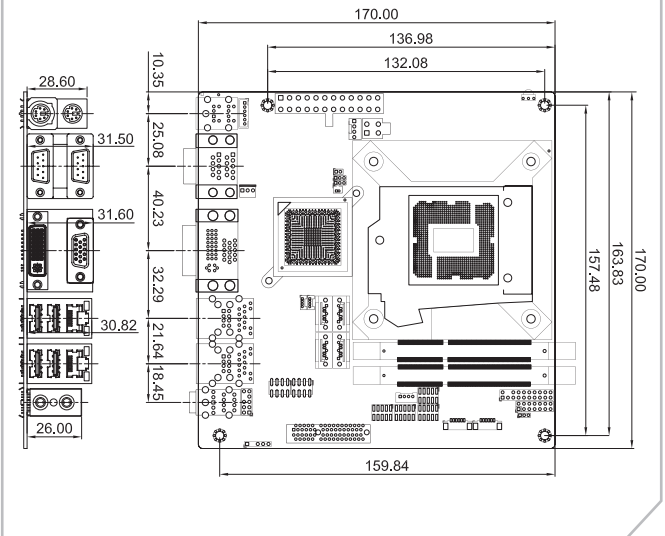
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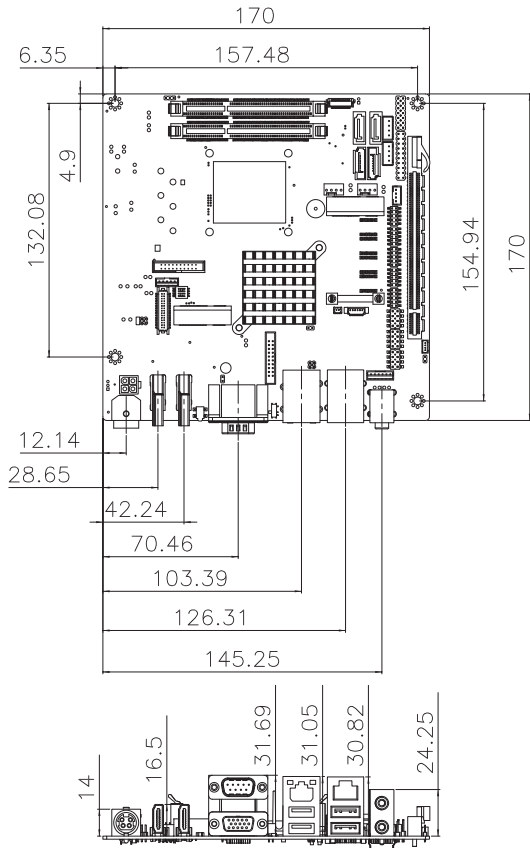
KINO-AH611



KINO-AH612



KINO-DQM871-i1



1

Industrial Computing Solutions

2

Video Capture Solutions

3

Industrial Computer Chassis

4

Open Frame Monitor

5

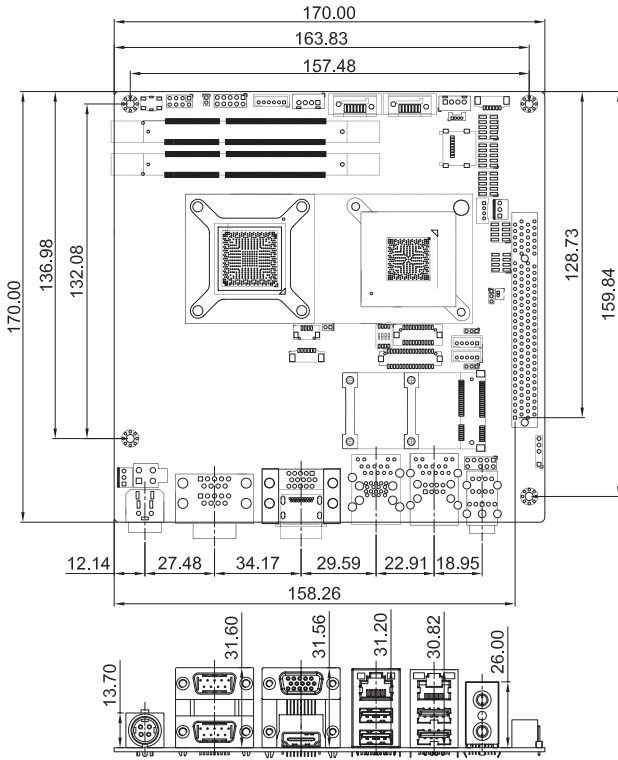
Power Supply/Peripherals

6

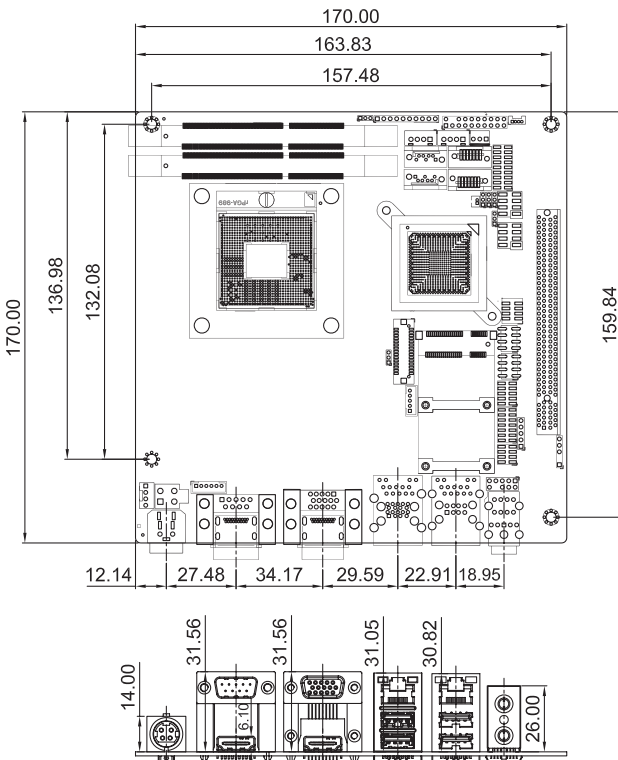
All-in-One System

Mini-ITX Dimensions (Unit: mm)

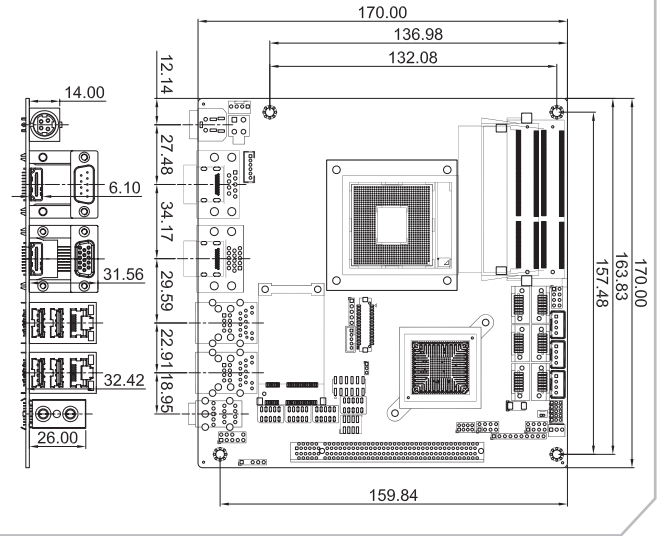
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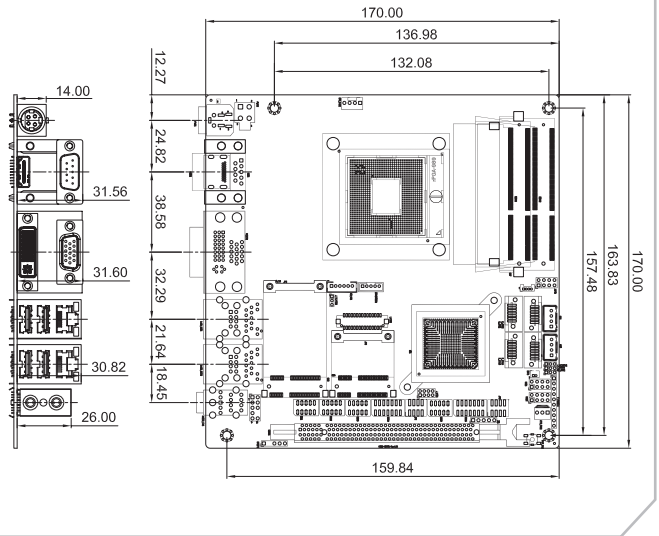
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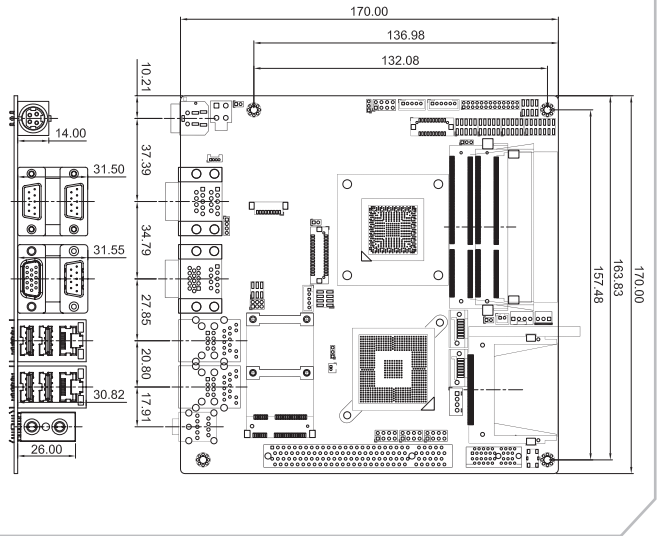
KINO-QM57A



KINO-HM551



KINO-PV-D5252/D4252



1 Industrial Computing Solutions

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