

M60A

Low-power High-performance Fanless Embedded System

M60A is a low-power and high-performance fanless embedded product. The chassis of the product is formed by aluminum alloy die-casting. The product has a compact structure, fanless design, excellent sealing, dust-proof, heat dissipation, and anti-vibration performance, and can be used in harsh environments such as high pollution, high dust, and severe electromagnetic interference. The product is implemented using Intel C236/H110/Baytrail multiple platform technology solutions, supporting Intel® Core™ 6/7/8/9 CPU, supporting multiple gigabit LAN ports, and supporting PCI and PCIE expansion. The complete PC has complete functions and strong environmental adaptability. The product is suitable for addressing mid to high-end customer needs and can be widely used in various embedded fields such as machine vision, autonomous driving, highway lane control, mechanical testing equipment, industrial automation control, etc.



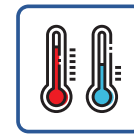
Product Features



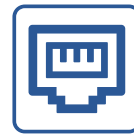
Fully-sealed and fanless design



Low power and high performance

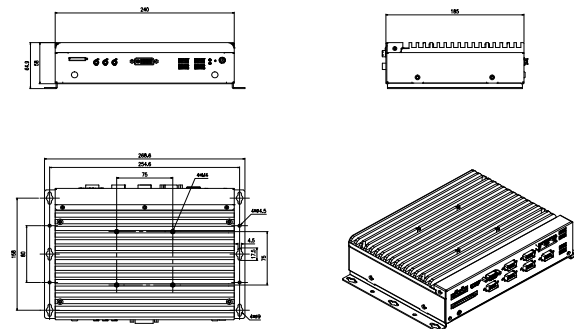


Wide-temperature operation



Multiple ports and expansibility

Product Dimensions Drawing



Please refer to the user manual to check detailed specifications and dimension. (Unit: MM)

Product Specifications

Item	Description	
System Configuration	Processor	M60A-E: Intel® Celeron J1900 2.0Ghz quad-core, onboard processor which is non-replaceable M60A-H: Intel® H110/C236: supports 6/7/8th Gen Intel® Core™ i3/i5/i7 series, and supports 9th Gen Intel® Core™ i3/i5 series, LGA1151, CPU TDP ≤ 65W
	Chipset	M60A-E: Intel® BayTrail M60A-H: Intel® H110/C236
	Memory	M60A-E (BayTrail): supports 1 x 204Pin DDR3L SO-DIMM slot, supporting up to 8GB M60A-H (H110/C236): supports 2 x 260Pin DDR4 SO-DIMM memory slot, single slot supporting up to 32GB, and the PC memory supporting up to 64GB
I/O Ports	LAN Ports	2/4/6 x RJ45 10/100/1000Mbps LAN port optional
	Display	M60A-E (BayTrail)/M60A-H (H110): supports any two of VGA, HDMI and DVI-D, simultaneous triple display not supported; M60A-H (C236): supports VGA, HDMI and DVI-D simultaneous triple independent displays;
	USB	M60A-E (BayTrail): 1 x USB3.0+7 x USB2.0 port; M60A-H (H110): 4 x USB3.0+4 x USB2.0 port; M60A-H (C236): 8 x USB3.0 port;
	COM	4/5/6 x COM port optional, COM1~COM6 supporting RS232/485/422 optional (MAX), and supporting 10 x COM port by means of an expansion box, four COM ports of the expansion box being RS-232 mode.
	GPIO	1 x 8-channel GPIO (1 x 10 phoenix terminal)
	Audio	1 group of Audio ports (supports MIC-IN, LINE-IN and LINE-OUT)
Expansion Bus	Motherboard Integration	1 x M-SATA slot (realizes 4G or storage function); 1 x SIM card slot, supporting external insertion of SIM card, which facilitates installation; 1 x M.2 key E slot (realizes WIFI function); M60A-H (C236) : supports 1 x M.2 keyM (PCIe X4 signal); M60A-H (H110) : supports 1 x M.2 keyM (PCIe X1 signal);
	Expansion Box	Dual expansion card 1: 2 x PCI (optional); Dual expansion card 2: 1 x PCI+1 x PCIe x16 (optional); Four expansion card 1: 4 x PCI (optional); For M60A-H (H110/C236): PCIe slot is PCIe3.0 x16 signal; For M60A-E (J1900): PCIe slot is PCIe3.0 x1 signal; Note: PCI slot supports PCI2.3 standard; PCI card supports the dimensions: 106.68mm (height) x 74.63mm (length), and PCIe card supports the dimensions: 106.68mm (height) x 167.65mm (length)
Storage	Hard Disk	Provides 2 x SATA interface, supports 2 x 2.5" laptop hard disk and supports hotswap function;
	M-SATA	Provides 1 x M-SATA slot; M60A-H (C236) : supports 1 x M.2 keyM (PCIe X4 signal); M60A-H (H110) : supports 1 x M.2 keyM (PCIe X1 signal);
Working Environment	CPU power consumption	With HDD 0°C~+45°C -10°C~+60°C
	CPU TDP=35W	With SSD/electronic hard disk 0°C~+40°C -10°C~+60°C
	35W<CPU TDP≤65W	0°C~+40°C -10°C~+50°C
Storage Environment	-40°C~+85°C; humidity: 5%~95% (non-condensing)	
Mounting Method	Wall mount, desktop and VESA standard arm	
Product Dimensions	Without expansion box: M60A-E: 240mm (W) × 185mm (D) × 58mm (H) ; M60A-H: 240mm (W) × 185mm (D) × 78mm (H) With expansion box: M60A-E-2P: 240mm (W) × 196.8mm(D) × 113mm (H) ; M60A-H-2P: 240mm (W) × 196.8mm(D) × 133mm (H)	
Power Supply	1 x 4Pin phoenix terminal power connector; External AC 220V power adapter power supply or DC 9-36V wide-voltage input optional; M60A-H (H110/C236) : standard configuration DC 19V single power supply (optional 9VDC-36VDC wide-voltage module) M60A-E (BayTrail): standard configuration DC 12V single power supply (optional 9VDC-36VDC wide-voltage module)	

Ordering Information

Part No.	Model	Specifications
0010-162111	M60A-E-01	Fanless PC/Intel® BayTrail chipset/Celeron J1900 2.0Ghz quad-core processor/4GB memory/128G SSD/COM port*6/USB3.0*1+USB2.0*7/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/ Line-in*1/12V DC power supply/12V power adapter*1
0020-066581	M60A-E-01	Fanless barebone system/Intel® BayTrail chipset/Celeron J1900 2.0Ghz quad-core processor/no memory/no hard disk/COM port*6/ USB3.0*1+ USB2.0*7/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/ Line-in*1/12V DC power supply/no power adapter
0010-162121	M60A-E-2P-01	Fanless PC/Intel® BayTrail chipset/Celeron J1900 2.0Ghz quad-core processor/4GB memory/128G SSD/COM port*10/USB3.0*1+USB2.0*7/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/ Line-in*1/PCI expansion*2/12V DC power supply/12V power adapter*1
0020-066591	M60A-E-2P-01	Fanless barebone system/Intel® BayTrail chipset/Celeron J1900 2.0Ghz quad-core processor/no memory/no hard disk/COM port*10/USB3.0*1+USB2.0*7/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/ Line-in*1/PCI expansion*2/12V DC power supply/no power adapter
0010-162131	M60A-H-01	Fanless PC/Intel® H110 chipset/I5-7500T 2.7Ghz quad-core processor/4GB memory/128G SSD/COM port*6/ USB3.0*4+ USB2.0*4/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/Line-in*1/19V DC power supply/19V power adapter*1
0020-066601	M60A-H-01	Fanless barebone system/Intel® H110 chipset/no CPU/no memory/no hard disk/COM port*6/USB3.0*4+ USB2.0*4/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/Line-in*1/19V DC power supply/no power adapter
0010-162141	M60A-H-2P-01	Fanless PC/Intel® H110 chipset/I5-7500T 2.7Ghz quad-core processor/4GB memory/128G SSD/COM port*10/USB3.0*4+ USB2.0*4/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/Line-in*1/PCI+PCIE*1 expansion/19V DC power supply/ 19V power adapter*1
0020-066611	M60A-H-2P-01	Fanless barebone system/Intel® H110 chipset/no CPU/no memory/no hard disk/COM port*10/ USB3.0*4+ USB2.0*4/Gigabit LAN port*2/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/Line-in*1/ PCI*1+PCIE*1 expansion/19V DC power supply/no power adapter
0010-162151	M60A-H-21	Fanless PC/Intel® C236 chipset/I7-8700 3.2Ghz six-core processor/4GB memory/128G SSD/COM port*5/USB3.0*8/Gigabit LAN port*4/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/ Line-in*1/19V DC power supply/ 19V power adapter*1
0020-066621	M60A-H-21	Fanless barebone system/Intel® C236 chipset/no CPU/no memory/no hard disk/COM port*5/USB3.0*8/Gigabit LAN port*4/VGA*1/HDMI*1/DVI*1/ GPIO*1/Line-out*1/MIC*1/ Line-in*1/19V DC power supply/no power adapter

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