

M50B

Small-size and High-Performance Fanless Embedded System

M50B is a fanless embedded product with a small size and high performance, featuring onboard 6th-generation Intel® Core™ i7/ i5/i3 U series processors, onboard J1900 processor + BayTrail platform chip, and onboard Intel® Celeron™ J6412/Intel® Atom™ X6425E processor. It supports WIN7 (64bit), WIN10, LINUX, and other operating systems. The design is simple with compact dimensions, a fanless structure, and excellent sealing for dust prevention, heat dissipation, and vibration resistance.M50B is primarily used in various embedded intelligence fields such as mechanical testing equipment, industrial automation control, and robot controllers.



Product Features



Fully sealed and fanless



Low power consumption and high performance



Small size

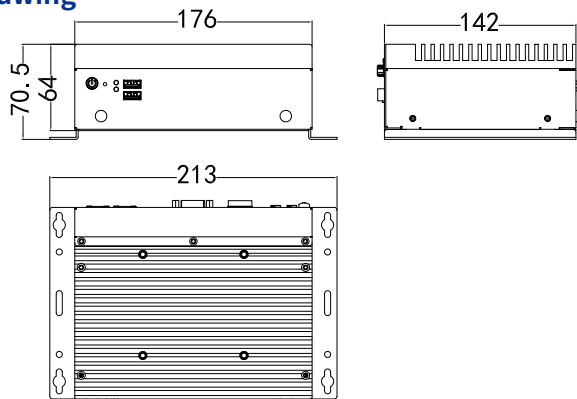


Operating in a wide temperature range



Rich and expandable port

Product Dimensions Drawing



(Please refer to the user manual to check detailed specifications and dimensions) (unit: MM)

Product Specifications

Item		Description
System Configuration	Processor	M50B-E: Intel® Celeron J1900 2.0Ghz, quad-core, Intel® Celeron™ J6412/Intel® Atom™ X6425E processor, onboard processors which are non-replaceable
		M50B-H: supports Intel® I3-6100U/I5-6300U/I7-6600U processor, and onboard processors which are non-replaceable
	Chipset	M50B-E: Intel® BayTrail, Elkhart lake
		M50B-H: Intel® SkyLake-U
	Memory	BayTrail: supports 1 x 204Pin DDR3L SO-DIMM slot
		Standard configuration: 4GB, with the slot supporting up to 8GB and the PC memory supporting up to 8GB
		Elkhart lake: supports 1 x 260Pin DDR4 SO-DIMM slot, with the slot supporting up to 32GB and the PC memory supporting up to 32GB
		SkyLake-U: supports 1x 260Pin DDR4 SO-DIMM slot
I/O Port	Onboard 4GB; the slot supporting up to 16GB, and the PC memory supporting up to 20GB	
	LAN Port	2 x RJ45 10/100/1000Mbps LAN port,expandable up to 4LAN ports . LAN1 supporting Wake-on-LAN
	Display	Provide 1 VGA and 1 HDMI display, and support dual display
	USB	BayTrail: supports up to 1 x USB3.0 + 5 x USB2.0 port
		Elkhart lake: Standard configuration 1x USB3.0 + 3 x USB2.0 port, supporting up to 1x USB3.0 + 5x USB2.0 port
	COM	SkyLake-U: supports up to 2 x USB3.0 + 4 x USB2.0 port
		2~4x serial port, COM1~COM4, RS232/485/422 (optional)
Expansion Bus	Audio	1 group of Audio ports (supporting MIC-IN and LINE-OUT)
	Motherboard Integration	BayTrail/ SkyLake-U:
		1 x M.2 key E slot (for WIFI function)
		1 x M-SATA slot (for 4G or storage function. The 4G function and storage expansion cannot be used simultaneously)
		Elkhart lake:
		1 x M.2 key B-slot (for 5G or storage)
		1 x Mini-PCIE slot (for 4G or WiFi)
Storage	Hard Disk	1 x M.2 key M or PCIe4 (X2 resources), horizontal (supporting M.2 key M function by default)
	M-SATA/M.2	1 x SATA port (with optional 2.5-inch HDD or SSD)
		BayTrail/SkyLake-U: supports 1x M-SATA slot
Working Environment		Elkhalt lake: supports 1 M.2 KEY M and 1 M.2 KEY B slots
		0°C~+45°C (HDD) -10°C~+60°C (wide-temperature SSD/DOM) Note: The air flow rate in the working environment of the PC must be greater than 0.5m/s.
Storage Environment	-40°C~+85°C; humidity: 5%~95% (non-condensing state)	
Installation Method	Wall-mounted, desktop, VESA standard arm	
Product Dimensions	176 mm (W) × 142 mm (D) × 64 mm (H) (excluding mounting bracket)	
Power Supply	1 x 4Pin Phoenix terminal power port External AC 220V power adapter for power supply or DC 9-30V wide voltage input (optional) Standard single-voltage DC output of the complete PC: Intel® SkyLake-U: DC 19V single power supply Intel® BayTrail/Elkhart lake: DC 12V single power supply	
Operating System	Intel® BayTrail/SkyLake-U: supports WIN7 (64bit), WIN10, LINUX (Kernel 2.6) and other operating systems Intel® Elkhart lake: LINUX systems with high kernel versions such as WIN10, CentOS, Linux and Ubuntu	

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Ordering Information

Part No.	Model	Specification
0010-165661	M50B-E-01	Micro fanless PC/ Intel®BayTrail chipset/ Celeron J1900 2.0Ghz quad-core processor/ 4GB memory/ 128G SSD/ serial port*4/ USB2.0 *3+USB3.0*1/ Gigabit LAN port*2/ VGA *1/ HDMI*1 /Line-out*1/ MIC*1/ 12V DC power supply/ 12V power adapter*1
0020-066531	M50B-E-01	Micro fanless barebone system/ Intel®BayTrail chipset/ Celeron J1900 2.0Ghz quad-core processor/ no memory/ no hard disk/ serial port*4/ USB2.0 *5+USB3.0*1/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1 / 12V DC power supply/ no power adapter
0010-165671	M50B-E-02	Micro fanless PC/ Intel®BayTrail chipset/ Celeron J1900 2.0Ghz quad-core processor/ 4GB memory/ 128G SSD/ serial port*2/ USB2.0 *5+ USB3.0*1/ Gigabit LAN port*4/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1/ 12V DC power supply/ 12V power adapter*1
0020-066541	M50B-E-02	Micro fanless barebone system/ Intel®BayTrail chipset/ Celeron J1900 2.0Ghz quad-core processor/ no memory /no hard disk/ serial port*2/ USB2.0 *5+USB3.0 *1/ Gigabit LAN port*4/ VGA port*1/ HDMI*1/ Line-out*1/ MIC*1/ 12V DC power supply/ no power adapter
0010-177931	M50B-E-11	Compact fanless PC/ Intel Celeron J6412 2.0 GHz quad-core processor/ 4GB memory/ 128G SSD/serial port*4/ USB2.0 *3+USB3.0 *1/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1/ 12V DC power supply/ power adapter*1
0010-177941	M50B-E-12	Compact fanless PC /Intel Atom X6425E 2.0 GHz quad-core processor/ 4GB memory/ 128G SSD/ serial port*4/ USB2.0 *3+USB3.0 *1/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1 / 12V DC power supply/ power adapter*1
0010-165681	M50B-H-01	Micro fanless PC/ Intel®Skylake SOC chipset/ I3-6100U 2.3Ghz dual-core processor/ 4GB memory/ 128G SSD/ serial port*4/ USB2.0 *2+USB3.0 *2/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1/ 19V DC power supply/ 19V power adapter*1
0020-066551	M50B-H-01	Micro fanless barebone system/ Intel®Skylake SOC chipset/ I3-6100U 2.3Ghz dual-core processor/ no memory/ no hard disk/ serial port*4/ USB2.0 *2+USB3.0*2/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1 / MIC*1/ 19V DC power supply/ no power adapter
0010-165691	M50B-H-02	Micro fanless PC/ Intel®Skylake SOC chipset/ I5-6300U 2.4Ghz dual-core processor/ 4GB memory/ 128G SSD/ serial port*4/ USB2.0 *2+USB3.0*2/ Gigabit LAN port*2/ VGA*1/ HDMI*1/ Line-out*1/ MIC*1/ 19V DC power supply/ 19V power adapter*1
0020-066561	M50B-H-02	Micro fanless barebone system/ Intel®Skylake SOC chipset/ I5-6300U 2.4Ghz dual-core processor/ no memory/ no hard disk/ serial port*4/ USB2.0 *2+USB3.0*2/ Gigabit LAN port*2/ VGA*1/ HDMI*1/ Line-out*1/ MIC*1 / 19V DC power supply/ no power adapter
0010-165731	M50B-H-03	Micro fanless PC/ Intel®Skylake SOC chipset/ I7-6600U 2.6Ghz dual-core processor/ 4GB memory/ 128G SSD/ serial port*2/ USB2.0 *4+USB3.0*2/ Gigabit LAN port*4/ VGA*1/ HDMI*1/ Line-out*1/ MIC*1/ 19V DC power supply/ 19V power adapter*1
0020-066571	M50B-H-03	Micro fanless barebone system/ Intel®Skylake SOC chipset/ I7-6600U 2.6Ghz dual-core processor/ no memory/ no hard disk/ serial port*2/ USB2.0 *4+USB3.0*2/ Gigabit LAN port*4/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1/ 19V DC power supply/ no power adapter
0010-173641	M50B-H-04	Compact and high-performance fanless PC/ Intel®Skylake SOC chipset/ I5-6300U 2.4Ghz dual-core processor/ 8GB memory/ 128G SSD/ serial port*4/ USB2.0*2+USB3.0 *2/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1/ 19V DC power supply/ 19V power adapter*1
0010-173651	M50B-H-05	Compact and high-performance fanless PC/ Intel®Skylake SOC chipset/ I7-6600U 2.6Ghz dual-core processor/ 8GB memory/ 128G SSD/ serial port*2/ USB2.0*4+USB3.0 *2/ Gigabit LAN port*4/ VGA*1/ HDMI*1/ Line-out*1/ MIC*1/ 19V DC power supply/ 19V power adapter*1
0010-186741	M50B-E-13	Compact fanless PC/ Intel Celeron J6412 2.0 GHz quad-core processor/ 4GB memory/ 128G SSD/serial port*2/ USB2.0 *5+USB3.0 *1/ Gigabit LAN port*4/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1 / 12V DC power supply/ power adapter*1
0020-068051	M50B-E-17	Compact fanless barebone system/ Intel Celeron J6412 2.0 GHz quad-core processor/ no memory/ no hard disk/serial port*4/ USB2.0 *3+USB3.0 *1/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1 / 12V DC power supply/ no power adapter
0020-068021	M50B-E-18	Compact fanless barebone system/ Intel Atom X6425E 2.0 GHz quad-core processor/ no memory/ no hard disk/serial port*4/ USB2.0 *3+USB3.0 *1/ Gigabit LAN port*2/ VGA *1/ HDMI*1/ Line-out*1/ MIC*1 / 12V DC power supply/ no power adapter

Optional Accessories

Part No.	Model	Specification
1100-004811	Power Adapter	60W 12V adapter accessory kit
1100-007411		150W 19V adapter accessory kit
1097-000031	EF-PWR-073ECS	DC19V input
1067-000361	EF-PWR-072ECS	DC12V input
1097-000041	EF-PWR-074ECS	DC9V-30V wide voltage input
1067-000521	M50B/EF-EIO-137ECS (B)	Rear I/O board kit: 4 serial ports (RS232/422/485, optional), 1 group of audio ports (Line-out, MIC-in)
1067-000511	M50B/EF-EIO-136ECS (B)	Rear I/O board kit: 2 serial ports (RS232/422/485, optional) 2 x RJ45 10/100/1000 LAN port, 1 group of audio ports (Line-out, MIC-in), 2 x USB 2.0

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SMALL SIZE
EASY USE



Intel® BayTrail/Skylake-U Compact Fanless System

M50B

- Small size

Onboard Intel SkyLake-U BayTrail platform processor with low power consumption and high reliability
- Low power consumption

Onboard Intel SkyLake-U BayTrail platform processor with low power consumption and high reliability
- Flexible and rapid deployment

Modular kit design
Change required ports rapidly
- Wide voltage input

Optional 9~30VDC input
Support remote startup/shutdown
- Safety and stability

Rigorous Tests
Quality Assurance