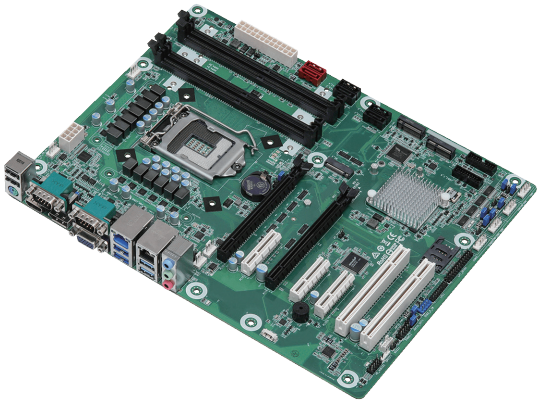
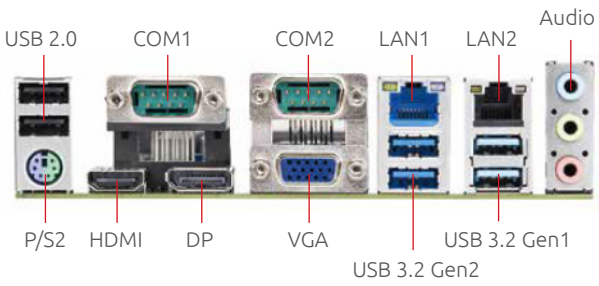
IMB-M46

Industrial ATX Motherboard with 10th Gen Intel® Core™ i9/i7/i5/i3 Processors



Features

- 10th Gen Intel® Core™ i9/i7/i5/i3 processors and Q470E chipset
- Dual-channel DDR4 2933/2666/2400 MHz memory up to 128 GB (based on CPU)
- Triple independent display: 1x DP1.2, 1x VGA, 1x HDMI 2.0a
- Dual GbE ports: 1x Intel 1Gigabit, 1 x Intel 2.5Gigabit
- Expansion slots: 1x PCIe x16 Gen3, 1x PCIe x8 Gen3, 3x PCIe x4 Gen3, 2x PCI
- TPM 2.0 onboard



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Specifications

Processor System	CPU	Intel® Core™ i9-10900E, up to 4.70GHz, 10 Core, 20M Cache, DDR4 2933MHz support, 65W Intel® Core™ i9-10900TE, up to 4.50GHz, 10 Core, 20M Cache, DDR4 2933MHz support, 35W Intel® Core™ i7-10700E, up to 4.50GHz, 8 Core, 16M Cache, DDR4 2933MHz support, 65W Intel® Core™ i7-10700TE, up to 4.40GHz, 8 Core, 16M Cache, DDR4 2933MHz support, 35W Intel® Core™ i5-10500E, up to 4.20GHz, 6 Core, 12M Cache, DDR4 2666MHz support, 65W Intel® Core™ i5-10500TE, up to 3.70GHz, 6 Core, 12M Cache, DDR4 2666MHz support, 35W Intel® Core™ i3-10100E, up to 3.80 GHz, 4 Core, 6M Cache, DDR4 2666MHz support, 65W Intel® Core™ i3-10100TE, up to 3.60 GHz, 4 Core, 6M Cache, DDR4 2666MHz support, 35W Intel® Pentium® Gold G6400, 3.20GHz, 2 Core, 4M Cache, DDR4 2400MHz support, 35W Intel® Pentium® Gold G6400E, 3.80 GHz, 2 Core, 4M Cache, DDR4 2400MHz support, 58W Intel® Celeron® Processor G5900TE, 2 Core, 3.00GHz, 2M Cache, DDR4 2666MHz support, 35W Intel® Celeron® Processor G5900E, 2 Core, 3.20GHz, 2M Cache, DDR4 2666MHz support, 58W
	Chipset	Chipset Intel® Q470E Express Chipset
	Memory	Four 288-pin non-ECC sockets Dual-channel DDR4 2400/2666/2933 MHz, up to 128 GB
	BIOS	BIOS AMI® UEFI BIOS, 256Mb SPI Flash Memory
	Hardware Monitor	CPU voltage +3.3 V voltage +5 V voltage +12 V voltage CPU temperature System temperature CPU fan speed System fan speed
	Operating Systems	Microsoft® Windows® 10 64-bit
I/O Interfaces	Serial Ports	2x RS-232/422/485 (rear I/O) 4x RS-232 pin headers
	Ethernet	1x Intel® I219-LM, 1x Intel® I225LM
	LAN LED	2.5Gps / 1Gbps/ 100Mbps / 10Mbps
	SATA	6x SATA 6.0 Gb/s connectors Intel® Software RAID support 0/1/5/10
	USB	4x USB 3.2 Gen2 (rear I/O) 2x USB 2.0 (rear I/O) 4x USB 3.2 Gen1 by pin header 2x USB 2.0 by pin header
	Expansion Slot	1x PCIe x16 Gen3 1x PCIe x8 Gen3 3x PCIe x4 Gen3 2x PCI
	M.2 Connector	1x M.2 (Key E, 2230) with PCIe x1, USB 2.0 and CNVi for Wireless 1x M.2 (Key B, 3042/3052) with PCIe x1 / USB 3.2 Gen1 / USB 2.0 and SIM socket for 4G/5G 1x M.2 (Key M, 2242/2260/2280)

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Specifications

I/O Interfaces	DIO	8-bit GPIO (shared with LPT header)
	Parallel Port	1x LPT pin header
	PS/2	1x PS/2 keyboard & mouse pin header
	TPM	TPM 2.0
Audio	Audio	Realtek ALC887/ALC897
	Interface	1x Line-out, 1x Line-in, and 1x Mic-in connector (rear I/O)
Graphics	VGA	1x VGA connector (rear I/O), resolution up to 1920 x 1200 @ 60Hz
	DP1.2	1x DP connector (rear I/O), resolution up to 3840 x 2160 @ 60Hz
	HDMI 2.0a	1x HDMI connector (rear I/O) resolution up to 3840 x 2160 @ 30Hz
Mechanical and Environmental	Form Factor	ATX
	Dimension	305 mm x 244 mm (W x L)
	Operating Temperature	0 °C to 60 °C
	Storage Temperature	-40°C ~ 85°C
	Relative Humidity	60 °C @ 95% RH, Non-condensing
	Certification	CE & FCC Class B

Ordering Information

- IMB-M46
  ATX 10th Intel® Core™ i9/i7/i5/i3 industrial motherboard
  Note: CPU, memory module, and cooler kit are not included

Packing Lists

- IMB-M46, bulk package
- IMB-M46 I/O shield
- M.2 screws kits

Optional Accessories

• CPU cooler for 65W CPU	32-20495-0000
• CPU cooler for 35W CPU	32-20530-0010
• 2-port USB 2.0 port cable with bracket	30-25010-3010
• 4-port USB 2.0 port cable with bracket	30-25009-3000
• 2-port USB 3.0 port cable with bracket	30-25046-0100
• 1-port LPT port cable with bracket	30-25019-2000
• 2-port COM port cable with bracket	30-25116-0000-A0

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