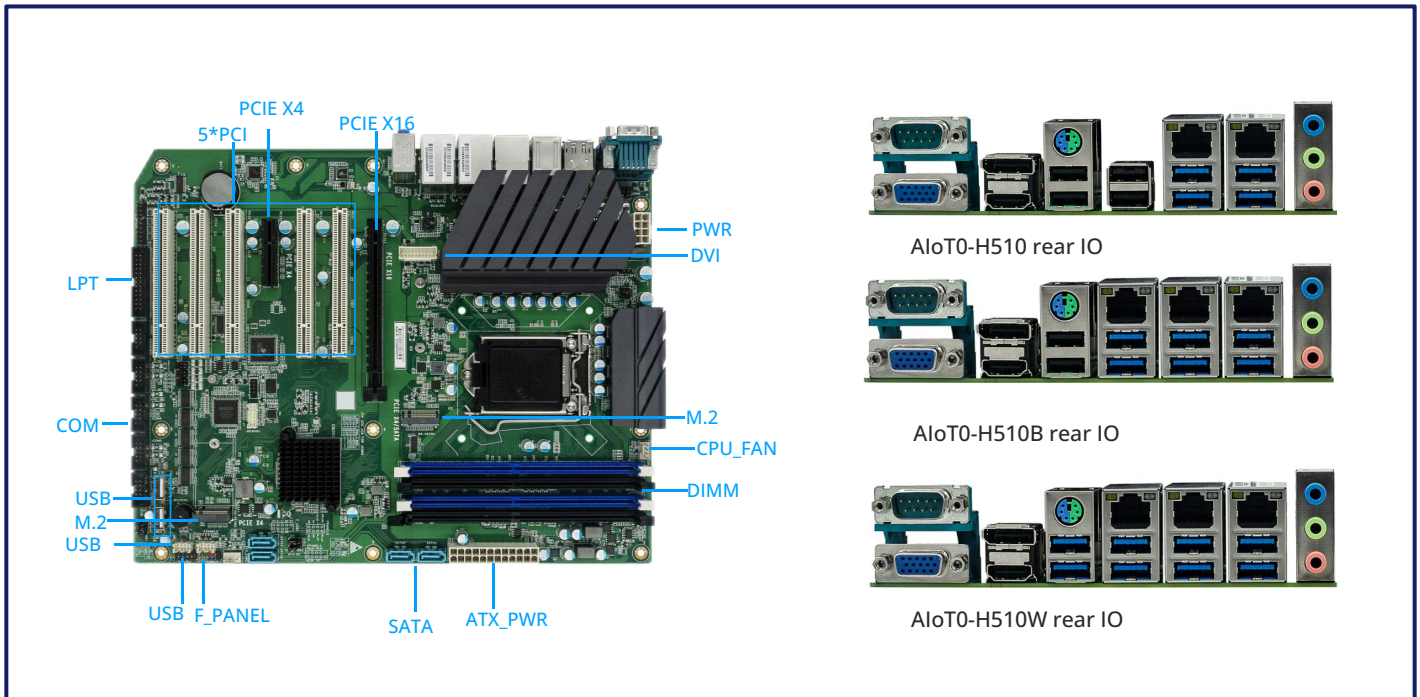# AIoT0-H510

Standard ATX industrial motherboard

- Support Intel LGA1200 Gen10&11 i9/i7/i5/i3/G series CPU
- 2/4 DDR4 U-DIMM slots maximum support 128GB
- 4/8 USB3.0 interface can be connected to Industrial cameras
- Using high Tg grade PCB boards to ensure wide temperature stability
- Industrial grade IO protection device, blocking ESD and surges, ensuring system stability and reliability
- Optimized interface and expansion layout effectively avoid interference and facilitate expansion for industry users
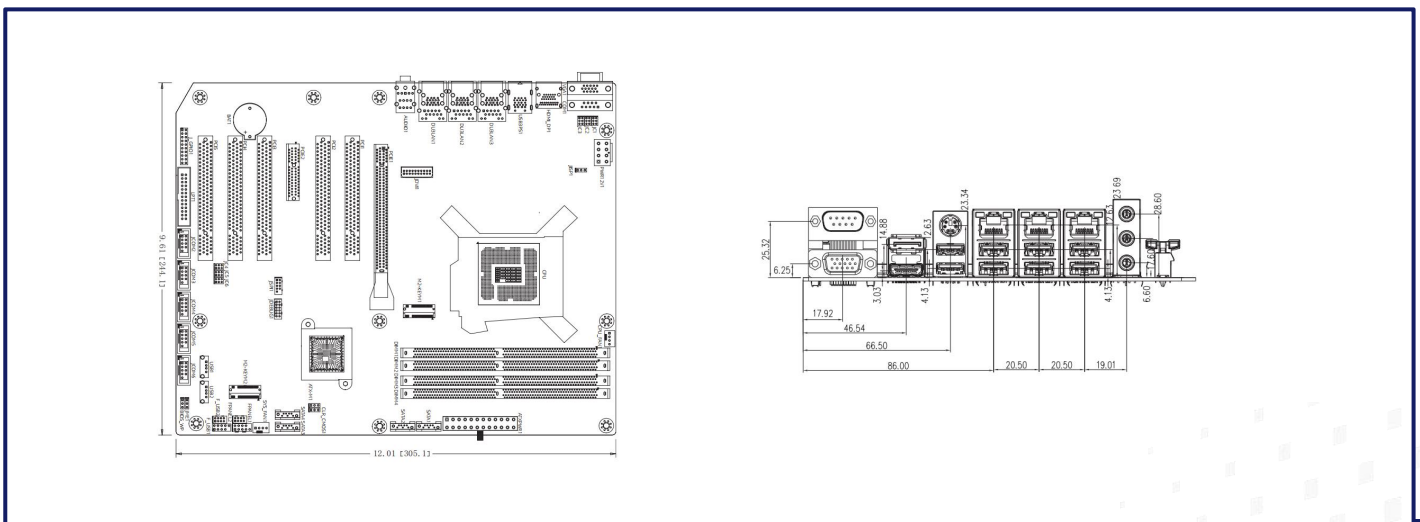
01

Specifications

CPU	Support Intel LGA1200 Gen10&11 i9/i7/i5/i3/G series CPU, TDP up to 125W The AIoT0-H510W can also support the Gen10 & 11 Xeon W series server CPU
Chipset	Intel 500 series chipset(H510,B560,W580)
Memory	AIoT 0-H 510,2*288PIN DDR 4 UDIMM , single 32GB maximum support of 64GB AIoT 0-H 510B, 4*288PIN DDR 4 UDIMM, single 32GB maximum support of 128GB AIoT 0-H 510W, 4*288PIN DDR 4 UDIMM , single 32GB maximum support of 128GB with ECC Depending on the different CPU , support DDR4-2133/2400/2666/2933/3200
Display controller	Intel CPU Integrated display controller (depending on the assigned CPU)
Display interface	4 display port VGA+DP+HDMI+ DVI-D AIoT 0-H 510 supports dual display, AIoT 0-H 510B and AIoT 0-H 510W supports triple display.
Storage	3 * SATA 3.0 ; AIoT0-H510, M2-KEYM1 supports SATA SSD AIoT0-H510B/W, M2-KEYM1 supports SATA/Nvme SSD(Gen11 for nVME),M2-KEYM2 supports Nvme SSD
Audio	Rear IO supports MIC-In, Speaker-Out, Line-In, and three-hole audio
Network	AIoT 0-H 510, 2 Intel high-speed Ethernet ports: i 219V, i226V AIoT 0-H 510B, 3 Intel high-speed Ethernet ports: i 219V, 2 * i 226-V AIoT 0-H 510W, 3 Intel high-speed Ethernet ports: i219V, i226-LM, i226-V
USB	AIoT 0-H510 supports 4 USB3.0 and 6 USB2.0; AIoT 0-H510B supports 6 US B 3.0 and 6 USB 2.0; AIoT0-H 510W supports 8 USB 3.0 and 4 USB 2.0 Chassis front panel USB interface F_USB1 and F_USB2 , choose one from two
Parallel port	1 * parallel port
Serial port	6 serial port (COM1 & 2 supports RS232 / 422 / 485, COM3-6 supports RS232)
Keyboard & mouse	1 PS/2 Keyboard & mouse via 2-in-1 connector on the rear IO
Digital I/O	16-bit band isolation digital I / O, providing power supply and ground, + 5V level
LPC	Provide 1 eSPI, bus interface (2x6Pin wafer extended by four more RS232 or RS422 / 485 serial ports)
TPM interface	Onboard encryption chip SLB 9670 (SLB 9672) supports TPM 2.0 (default) / BOM optional
Power supply	ATX power Socket, supports ATX/AT On/Off mode Chassis front panel FPANEL1 and FPANEL2 Pin-header , choose one from two
Expansion bus	1 PCIe4.0 x16 slot supports maximum data bandwidth up to 32GT 1 PCIe 3.0 x4 slot supports maximum data bandwidth up to 4GT 5 PCI slot (32bit)
Operating temperature and humidity	0~60˚C, 5%~95% no condensation
Non-operating temperature and humidity	-40~80˚C, 5%~95% without condensation
Watch Dog	255 level programmable seconds / minute, support timeout interruption or system reset
BIOS	AMI UEFI BIOS
Operating System	Win10 x64, Win11 x64, Linux Ubuntu 21.04
PCB dimensions (L*W)	305mm X 244mm

02 Product view

AIoT0-H510 rear IO

AIoT0-H510B rear IO

AIoT0-H510W rear IO

03 Dimensions

04 Product Selection

Product model	Chipset	Memory	Display	Storage	USB3	USB2	COM	LAN	PCI	PCIe
AIoT0-H510	H510	2DDR4	4(2)	3SATA	4	6	6	2	5PCI	2PCIe
AIoT0-H510B	B560	4DDR4	4(3)	3SATA	6	6	6	3	5PCI	2PCIe
AIoT0-H510W	W580	4 DDR4	4(3)	3SATA	8	4	6	3	5PCI	2PCIe