

R680EA-IM-Z

ATX, Intel® Core™ 14th/13th/12th Gen. Socket LGA1700, R680E Chipset, 4x U-DIMM, 3x 2.5GbE LAN, 1x 1GbE LAN (w/ OOB*), 2 x PCIe x16 slots, 3 x PCIe x4 slots, HDMI 2.0, DP 1.2, 2 x NVMe M.2 slots, 6 x COM, 6 x SATA, Dedicated V-Core, M.2 Heatsink, DIMM Locker and PCIe Holder, ASUS iBMC Solutions

Features

- Supports up to 125W Intel® 14th/13th/12th Gen K-series Processors
- 4 x U-DIMM slots, up to 128GB DDR5 4400 MHz
- 2 x PCIe x16 slots, 3 x PCIe x4 slots, meeting high-end machine vision requirements
- Integrated I/O shield and dedicated heat sink for easier assembly and comprehensive cooling
- PCIe slot holder and DIMM locker design meet MIL-STD 810H criteria
- ASUS dedicated WDT2.0 improves system reliability
- Integrated Out-of-Band functionality*
- 7-year longevity supply



Specifications

Processor System	CPU	Intel® Core™ 14 th /13 th /12 th Gen. socket LGA1700. Intel® Core™ i9/ i7/ i5/ i3/ Pentium® /Celeron® Processors Max. 125W TDP (Support K Series CPU)
	Chipset	Intel® R680E Chipset
Memory	Technology	DDR5 4400MT/s (2DPC - 1DIMM 1R&2R, ECC) DDR5 4000MT/s (2DPC - 2DIMM 1R) DDR5 3600MT/s (2DPC - 2DIMM 2R)
	Max	128 GB
	Socket	4 x U-DIMM
Display	Display Port	2, Supports DP 1.2, up to 4K @60Hz
	HDMI	1, Supports HDMI 2.0, up to 4K @60Hz
	Multiple displays	Max. 3 Displays, Dual DP + HDMI
Expansion Slot	PCIe/ PCI	1 x PCIe 5.0 x16 slot (x16/x8 mode) 1 x PCIe 3.0 x4 slot (x4 mode) 1 x PCIe 5.0 x16 slot (x8 mode) 1 x PCIe 4.0 x4 slot (x4 mode) 1 x PCIe 4.0 x4 slot (x4 mode)
	M.2	1 x M.2 2280 M key from CPU (PCIe4.0 x4 / SATA mode, both support RAID 0, 1, 10) 1 x M.2 2280 M key from PCH (PCIe3.0 x4 / SATA mode, both support RAID 0, 1, 10)
Ethernet	Speed	10/100/1000/2500 Mbps
	Controller	1 x Intel® i210-AT 2 x Intel® i226-V 1 x Intel® i226-LM (Intel vPro supported)
	Connector	4 x RJ-45
Audio	Codec	Realtek ALC897
Storage	SATA port	6 x SATA Gen 3.0, Up to 6Gb/s, Support RAID 0,1,5,10
Integrated Rear I/O	Display Port	2, Supports DP 1.2 , up to 4K @60Hz
	HDMI	1, Supports HDMI 2.0, up to 4K @60Hz
	USB 3.2 Gen2	4 (3 x Type-A, 1 x Type-C)
	Ethernet	4 x RJ45
	Serial Port	1 (RS232/422/485)
	Audio Jack	3 (Line-Out, Line-In, Mic in)
	Others	1 x Multi Function Button, 1 x Multi Function LED

Specifications

Internal Connector	COM Header	5 x COM Headers (1 x RS232/422/485, 4 x RS232)
	USB 3.2 Gen1	3 x Headers support additional 6 x USB3.2 Gen1 Ports
	CPU Fan / Chassis Fan	2 x Header (PWM Mode) / 3 x Headers (PWM Mode)
	System Panel	1 x Header
	Chassis Intrusion	1 x Header
	I ² C Header	1 x Header
	Clear CMOS	1 x Header
	COM Debug	1 x Header
	Extended Temperature Sensor	2 x Extended Temperature Sensor
	Buzzer	1 x Buzzer
	GPIO	1 x Header (8-Bit)
	DIS ME Jumper	1 x Header
	AT/ATX Select Jumper	1 x Header
	Power Connector	1 x 24-pin ATX Power Connector, 1 x 8-pin + 4-pin ATX 12V Power Connector 1 x PCIe Slot Additional Power Connector
EC	ASUS IoT Automated BIOS Repair Mechanism	Default enable
iBMC*	Remote Power On/Off	Remote power on/off, force shutdown and detect the power status to check device alive.
	Remote Reset Control	Remote system cold-reboot
	Remote Serial Console	Serial console, remote BIOS setup & UEFI shell (serial over LAN)
	Remote Firmware Update	Remote update of iBMC firmware
	<i>Remote BIOS Update*</i>	<i>(Optional)</i>
	<i>Remote OS Recovery*</i>	<i>(Optional)</i>
Security	TPM	1 x SPI TPM Header
Watchdog Timer	H/W	YES
Power Type	Power Type	AT/ATX mode
OS & Software Support	Microsoft Windows	Windows® 10 (64bit) / Windows® IoT enterprise
	Linux	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE
	ASUS IoT Suite	<input checked="" type="checkbox"/> HW Monitor <input checked="" type="checkbox"/> Power Scheduling <input checked="" type="checkbox"/> Fan Control <input checked="" type="checkbox"/> Watch Dog Timer <input checked="" type="checkbox"/> GPIO <input checked="" type="checkbox"/> I2C (API only) <input checked="" type="checkbox"/> Buzzer (API ony) <input checked="" type="checkbox"/> Linux Sample code
	User Interfaces	<input checked="" type="checkbox"/> API <input checked="" type="checkbox"/> GUI
Environment	Operating Temperature	-10~70°C
	Non-Operating Temperature	-40~85°C
	Relative Humidity	Operational humidity: 40°C @10%~95%
Mechanical	Dimensions	ATX, 305 x 244 mm
Certification	EMC (CLASS B)	CE, FCC, BSMI, VCCI, RCM
	Safety	CE-LVD