

# R680EA-IM-A

ATX, LGA1700 Socket for 14<sup>th</sup> / 13<sup>th</sup> / 12<sup>th</sup> Gen. CPU, R680E Chipset, 4\*U-DIMM, 3\*Lan, 2\*PCIe x16 slots, 2\*PCI, VGA, HDMI, DP++, 2\*M.2 slot, 6\*COM, 7\*SATA

## Features

- Support up to 125W Intel® 14<sup>th</sup> / 13<sup>th</sup> / 12<sup>th</sup> Gen. CPU
- 2\* PCIe x16 slots support dual graphic cards
- Four U-DIMM up to 128GB DDR5 4400 MHz
- Supports multiple displays: VGA/ HDMI / DP
- 7-year longevity supply

## Specifications



<b>Processor System</b>	CPU	LGA1700 for Intel® 14 <sup>th</sup> / 13 <sup>th</sup> / 12 <sup>th</sup> Gen. Core™ i9/ i7/ i5/ i3/ Pentium® /Celeron® Processors Max. 125W TDP
	Chipset	Intel® R680E Chipset
<b>Memory</b>	Technology	DDR5 4400MT/s (2DPC - 1DIMM 1R&2R) (ECC support)* 4000MT/s (2DPC – 2DIMM 1R) 3600MT/s (2DPC – 2DIMM 2R) *ECC is available only while using ECC memory.
	Max.	128GB
	Socket	4 x U-DIMM
<b>Display</b>	Display Port	2, Supports DP++ 1.4, up to 3840 x 2160 @ 60Hz
	HDMI	1, Supports 2.1, up to 4096 X 2160 @ 60Hz
	VGA	1
	Multiple displays	Max.4 displays, VGA+Dual DP.+HDMI
<b>Expansion Slot</b>	PCIe	1 x PCIe 5.0 x16 Slot (1 x16 mode/ 2 x8 mode) 1 x PCIe 4.0 x4 Slot (x4 mode, open slot) 1 x PCIe 5.0 x16 Slot (x8 mode) 1 x PCIe 3.0 x4 Slot (x4 mode, open slot) 1 x PCIe 4.0 x4 Slot (x4 mode, open slot)
	PCI	2
	M.2	1 x M.2 M key, Type 2242/2260/2280 (PCIe x4 /SATA mode) supports NVMe 1 x M.2 E key, type 2230 for WIFI/BT device (only support Intel® CNVi) *If install CNVI Wifi card on M.2 E key slot, USB port14 will be disabled.
<b>Ethernet</b>	Speed	10/100/1000/2500 Mbps
	Controller	1 x Intel® i210AT 1 x Intel® i226V 1 x Intel® i226LM (Intel vPro supported)
	Connector	3 x RJ-45
<b>Audio</b>	Codec	Realtek ALC897
<b>Storage</b>	SATA port	7 x SATA Gen 3.0, Up to 6Gb/s, Support RAID 0,1,5,10
<b>Rear I/O</b>	Display Port	2, Supports DP++ 1.4, up to 3840 x2160 @ 60Hz
	HDMI	1, Supports 2.1, up to 4096 X 2160 @ 30Hz
	VGA	1
	USB 3.2 Gen2	6 (5 x type A, 1 x Type C)
	Ethernet	3 x RJ45
	Serial Port	1 (RS232/422/485)
	Audio jack	3 (Line-Out, Line-In, Mic in)

## Specifications

<b>Internal Connector</b>	COM Header	5 x COM Headers (1 x RS232/422/485, 4 x RS232)
	USB3.0 Gen1	2 x Headers Support Additional 4 x USB3.2 Gen1 Ports
	USB2.0	2 x Headers Support Additional 4 x USB2.0 Ports
	CPU Fan/ Chassis Fan	1 x Header (PWM Mode) / 3 x Headers (PWM Mode)
	Front Panel Audio (AAFP)	1 x Header
	System Panel	1 x Header
	Chassis Intrusion	1 x Header
	Speaker connector	1 x Header
	I2C Header	1 x Header
	Clear CMOS	1 x Header
	COM Debug	1 x Header
	LPT port header	1 x Header
	Buzzer	1
	PS/2	1 x Header
	SPDIF	1 x Header
	GPIO	1 x Header (8 Bit)
	DIS ME jumper	1 x Header
	AT/ATX Select Header (Jumper)	1 x Header
	Power connector	1 x 24-pin ATX Power connector, 1 x 8-pin ATX 12V Power connector
<b>Security</b>	TPM	1 x SPI TPM header
<b>Watchdog Timer</b>	H/W	YES
<b>Power Type</b>	Power Type	AT mode/ ATX mode
<b>OS &amp; Software Support</b>	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 only) <input checked="" type="checkbox"/> Linux Sample code
	User Interfaces	<input checked="" type="checkbox"/> API <input checked="" type="checkbox"/> GUI
<b>Environment</b>	Operating Temperature	0~60° C
	Non-Operating Temperature	-40~85° C
	Relative Humidity	Operational humidity: 40° C@10%~95%
<b>Mechanical</b>	Dimensions	ATX, 305 x 244 mm
<b>Certification</b>	EMC (CLASS B)	CE, FCC, BSMI, VCCI, RCM
	Safety	CE-LVD

## Block Diagram

