

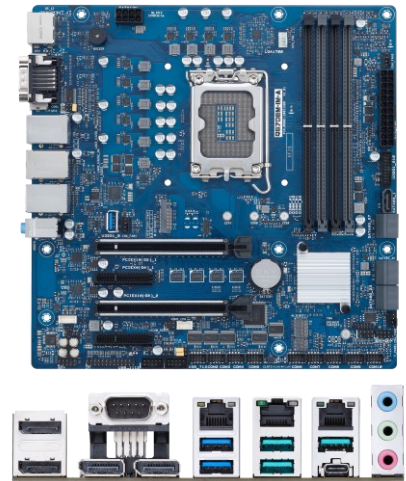
R680EM-IM-A

Micro-ATX, LGA1700 Socket for 14th / 13th / 12th Gen. CPU, R680E Chipset, 4*U-DIMM, 3*LAN, 2*PCIe x16 slots, 2*PCIe x4 slots, 4*DP++, 2*M.2 slot, 10*COM, 7*SATA

Features

- Support up to 125W Intel® 14th / 13th / 12th Gen. CPU
- 2* PCIe x16 slots support dual graphic cards
- Four U-DIMM up to 192GB DDR5 4400 MHz
- Supports 4*DP
- 7-year longevity supply

Specifications

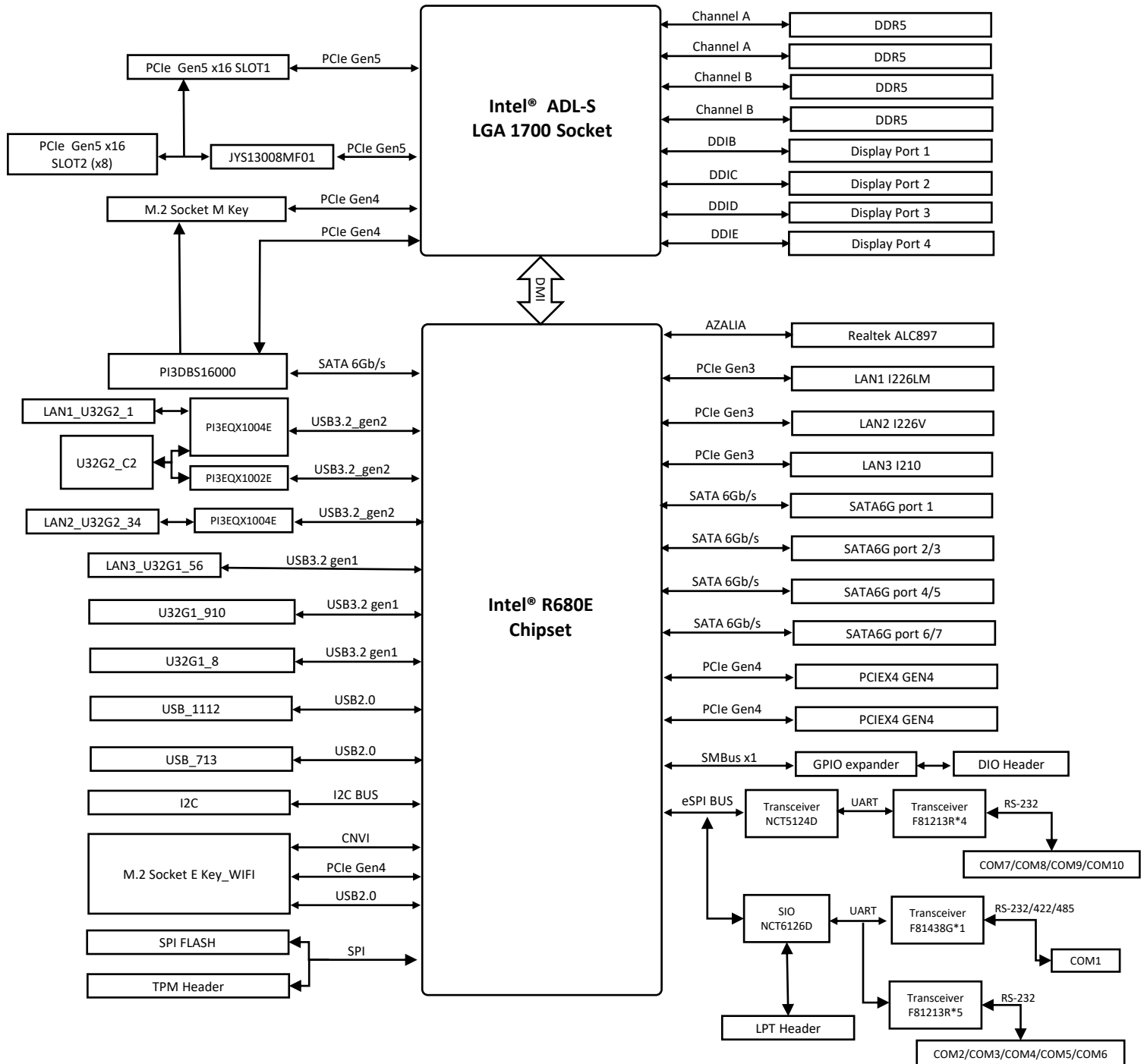


Processor System	CPU	LGA1700 for Intel® 14 th / 13 th / 12 th Gen. Core™ i9/ i7/ i5/ i3/ Pentium® /Celeron® Processors Max. 125W TDP
	Chipset	Intel® R680E Chipset
Memory	Technology	DDR5 4400MT/s (2DPC - 1DIMM 1R&2R) (ECC support)* 4000MT/s (2DPC – 2DIMM 1R) 3600MT/s (2DPC – 2DIMM 2R) *ECC is available only while using ECC memory.
	Max.	192GB
	Socket	4 x U-DIMM
	Display Port	4, Supports DP++ 1.4, up to 3840 x 2160 @ 60Hz
Expansion Slot	PCIe	1 x PCIe 5.0 x16 Slot (1 x16 mode/ 2 x8 mode) 1 x PCIe 4.0 x4 Slot (x4 mode) 1 x PCIe 5.0 x16 Slot (x8 mode) 1 x PCIe 4.0 x4 Slot (x4 mode)
	M.2	1 x M.2 E key, Type 2230 for WIFI/BT device (PCIe x1 & USB2.0 & CNVI) 1 x M.2 M key, Type 2242/2260/2280 (PCIe x4 /SATA mode) supports NVMe
Ethernet	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
Audio	Codec	Realtek ALC897
Storage	SATA port	7 x SATA Gen 3.0, Up to 6Gb/s, Support RAID 0,1,5,10
Rear I/O	Display Port	4, Supports DP++ 1.4, up to 3840 x 2160 @ 60Hz
	USB 3.2 Gen1	2
	USB 3.2 Gen2	4 (3 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)
Internal Connector	COM Header	9 x COM Header (RS232)
	USB3.2 Gen1	1 x Header Support Additional 2 x USB3.2 Gen1 Ports 1 x vertical connector
	USB2.0	2 x Header Support Additional 4 x USB2.0 Ports
	CPU Fan/ Chassis Fan	1 x Header (PWM Mode) / 3 x Header (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

Specifications

Internal Connector	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	1 x Header
	Power connector	1 x 24-pin ATX Power connector, 1 x 8-pin ATX 12V Power connector
Security	TPM	1 x SPI TPM header
Watchdog Timer	H/W	YES
Power Type	Power Type	ATX
OS & Software Support	Microsoft Windows	Windows® 10 (64bit) / Windows® IoT enterprise
	Linux	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE
	ASUS IoT Suite	☒ HW Monitor ☒ Power Scheduling ☒ Fan Control ☒ Watch Dog Timer ☒ GPIO ☒ I2C (API only) ☒ Buzzer (API only) ☒ Linux Sample code
	User Interfaces	☒ API ☒ GUI
	Operating Temperature	0~60° C
Environment	Non-Operating Temperature	-40~85° C
	Relative Humidity	Operational humidity: 40° C@10%~95%
Mechanical	Dimensions	Micro ATX, 244 x 244 mm
Certification	EMC (CLASS B)	CE, FCC, BSMI, VCCI, RCM
	Safety	CE-LVD

Block Diagram



Order Information

Model name	Part number	Description
R680EM-IM-A	90ME081*	LGA1700, R680E, DP, MB

* The part number might vary for different regulations and package. Please consult the TPM in your region for exact 90PN.

Packing List

Part number	Description	Quantity
13020*	IO shield	1
14013*	SATA 6G CABLE	1
13020*	M.2 SCREW PACK	2

* The part number might vary due to part number revision.