

# R680EI-IM-A

Mini-ITX, LGA 1700 Socket for 12<sup>th</sup> Gen. Intel CPU, R680E Chipset, DDR5 2\*SO-DIMM  
1\*PCIe Gen 5 x16 slot, 3\*DP, HDMI, 2\*M.2 slots, 4\*USB 3.2 Gen2 ports, USB Type C



## Features

- Support up to 65W Intel® 12<sup>th</sup> Gen. CPU
- Dual DDR5 SO-DIMM
- Support PCIe Gen 5 x16 slot
- Up to four displays: 3\*DP/HDMI
- M.2 M key, M.2 E key
- Up to 7-year longevity supply

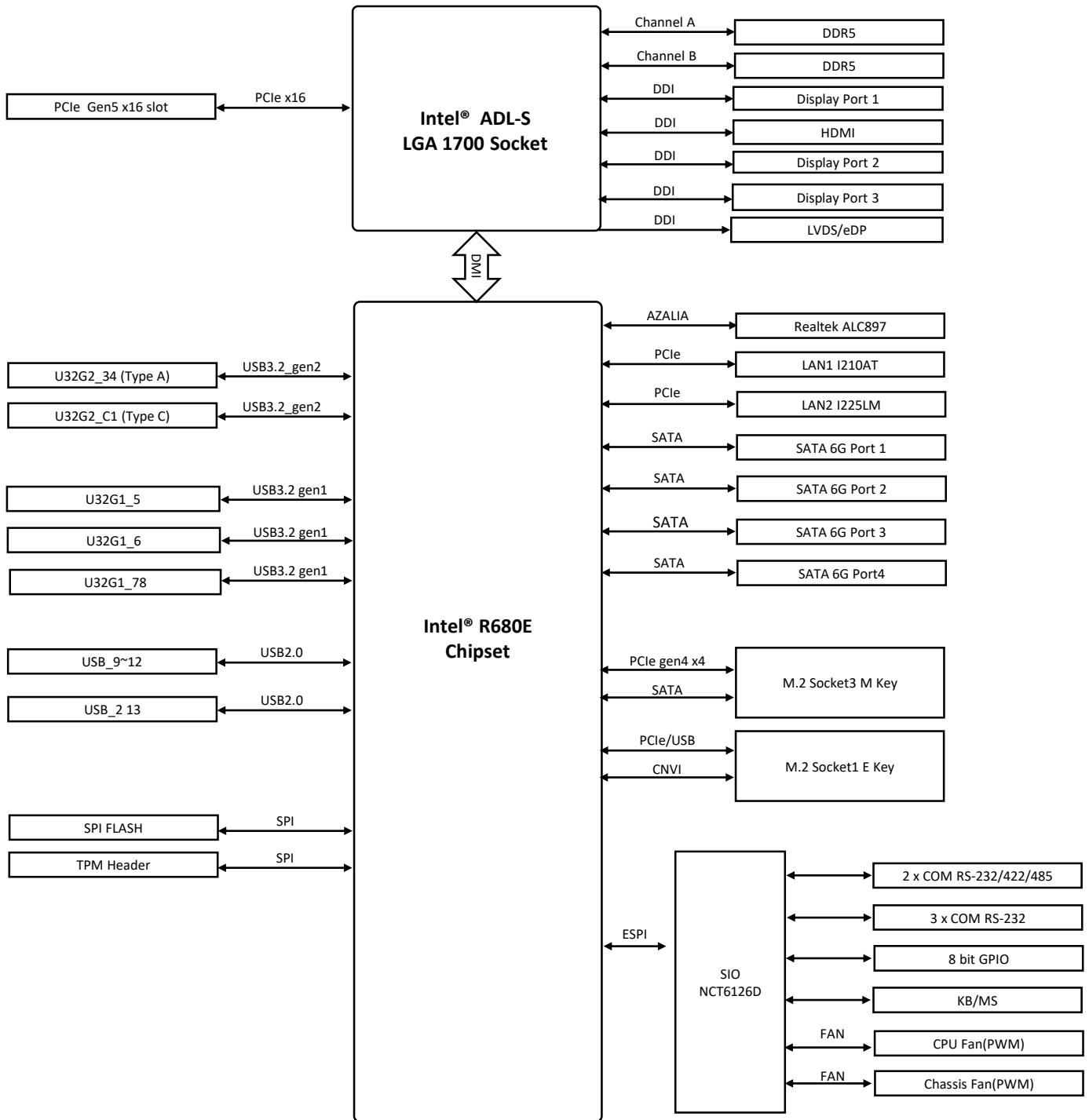
## Specifications

<b>Processor System</b>	CPU	LGA1700 for Intel® 12 <sup>th</sup> Gen. Core™ i9/ i7/ i5/ i3/ Pentium® /Celeron® Processors Max. 65W TDP
	Chipset	Intel® R680E Chipset
<b>Memory</b>	Technology	Up to DDR5 4800 MHz, ECC support
	Max.	2 x 32GB (Total 64GB)
	Socket	2 x SO-DIMM
<b>Display</b>	Display Port	3, Supports DP 1.4, up to 4K resolution
	HDMI	1
	eDP/LVDS	1 x Header (Support either eDP or LVDS ; switched by BIOS)
<b>Expansion Slot</b>	PCIe	1 x PCIe 5.0 x16 Slot (Bifurcation Support: 16x to 8x+8x)
	M.2	1 x M.2 E key, Type 2230 for WIFI/BT device (PCIe & CNVi) 1 x M.2 M key, Type 2242/2260/2280 (PCIe x4 & SATA mode)
<b>Ethernet</b>	Speed	10/100/1000/2500 Mbps
	Controller	1 x Intel® i210AT (co-lay i211AT), 1 x Intel® I225LM (Intel vPro supported)
	Teaming	Yes
	Connector	2 x RJ-45
<b>Audio</b>	Codec	Realtek ALC897 High Definition Audio
	Connector	Line-Out, Line-In
<b>Storage</b>	SATA port	4 x SATA Gen 3.0, Up to 6Gb/s, Support RAID 0,1,5,10
<b>Rear I/O</b>	Display Port	3
	HDMI	1
	USB3.2 Gen2	3 (2*Type A, 1*Type C)
	USB3.2 Gen1	1 (Type A)
	USB2.0	4 (Type A)
	Ethernet	2 x RJ45
	Serial Port	1 (RS-232/422/485)
	Audio jack	2
PS/2	1 x Keyboard, 1x Mouse	

# Specifications

<b>Internal Connector</b>	Serial Port Header	4 x COM Header (1 x RS-232/422/485, 3 x RS-232)
	USB3.2 Gen1	1 x USB3.2 Gen1 Stick Connector
		1 x Header Support Additional 2 x USB3.2 Gen1 Ports
	USB2.0	1 x Header Support Additional 2 x USB2.0 Ports
	CPU Fan/ Chassis Fan	1 x Header (PWM Mode) / 1 x Header (PWM Mode)
	Disable ME	1 x Header
	LVDS/ eDP selection	1 x Header
	Panel SW	1 x Header
	Front Panel Audio (AAFP)	1 x Header
	System Panel	1 x Header (10-1 Pin)
	SP/DIF	1 x Header
	Chassis Intrusion	1 x Header
	Speaker	1 x Header
	Clear CMOS	1 x Header
	COM Debug	1 x Header
GPIO	1 x Header (8 Bit)	
<b>H/W</b>	YES	
<b>TPM</b>	1 x SPI TPM header	
<b>IAMT/vPRO</b>	Yes	
<b>Power Type</b>	ATX	
	12V DC-IN (supported by additional cable)	
<b>Microsoft Windows Linux</b>	Windows® 10 (64bit )	
	Ubuntu, RedHat Enterprise, Fedora Workstation, OpenSUSE	
<b>Operating Temperature</b>	0~60° C	
<b>Non-Operating Temperature</b>	-40~85° C	
<b>Relative Humidity</b>	5%~95%	
<b>Form Factor</b>	Mini-IX, 170 x 170 mm	
<b>Safety</b>	CE (CLASS B), FCC (CLASS B)	

# Block diagrams



## Order Information

Model name	Part number	Description
R680EI-IM-A	90ME04S*	LGA1700, R680E, DP, HDMI, 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.