

# R680EI-IM-A

ITX, LGA 1700 Socket for 12<sup>th</sup> /13<sup>th</sup> /14<sup>th</sup> Gen. CPU, R680E Chipset, DDR5 2\*SO-DIMM  
1\*PCIe Gen 5.0 x16 slot, DP\*3, HDMI, 2\*M.2 slot, USB 3.2 Gen2 port \*4, USB Type C

## Features

- Support up to 65W Intel® 12<sup>th</sup> /13<sup>th</sup> /14<sup>th</sup> Gen. CPU
- Dual DDR5 SO-DIMM
- Support PCIe Gen 5 \*16 slot
- Up to four displays: DP\*3/HDMI
- M.2 M key, M.2 E key
- Up to 7-year longevity supply



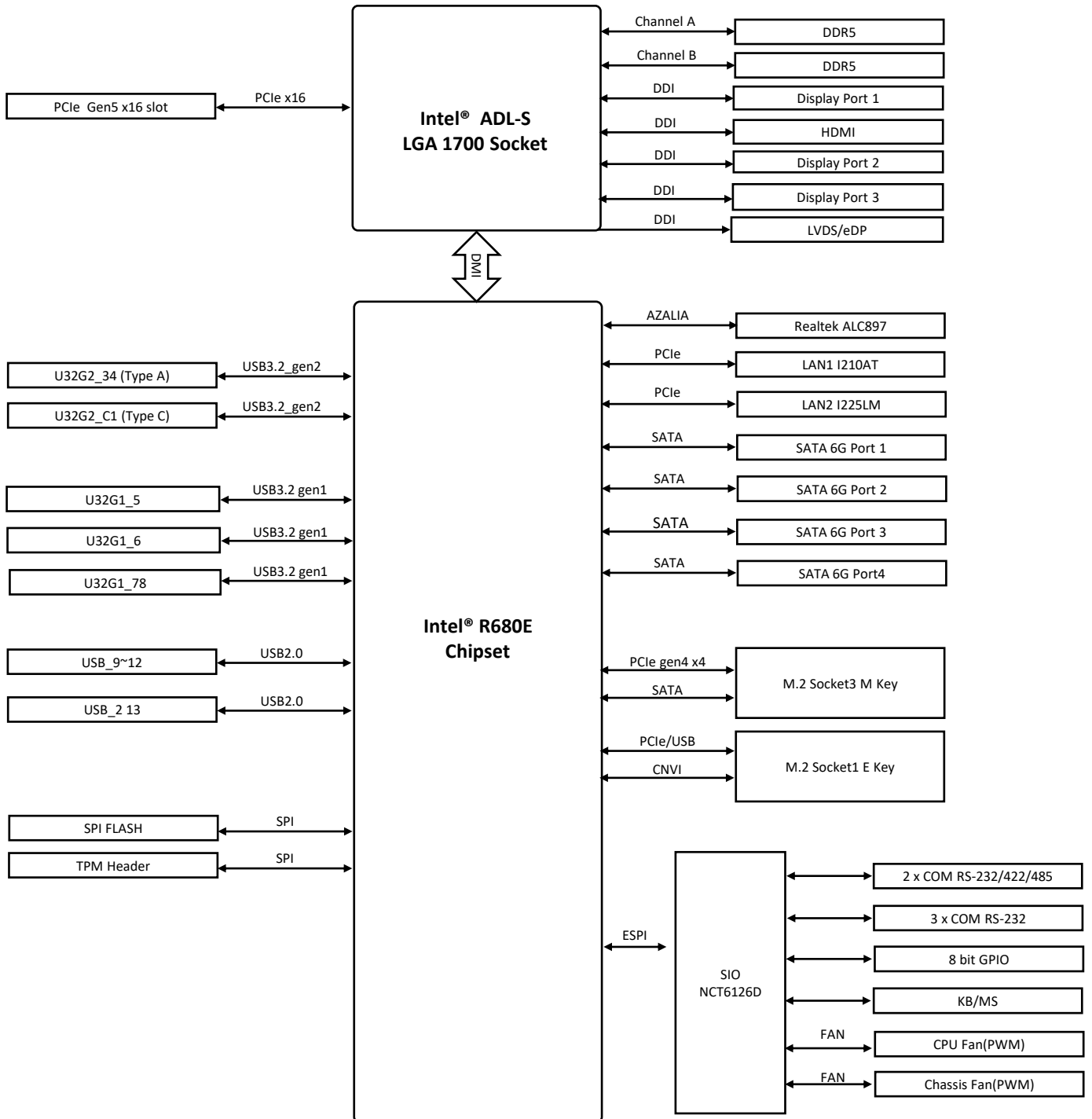
## Specifications

|                  |              |  |
|------------------|--------------|--|
| Processor System | CPU          | LGA1700 for Intel® 12 <sup>th</sup> /13 <sup>th</sup> /14 <sup>th</sup> Gen. Core™ i9/ i7/ i5/ i3/ Pentium® /Celeron® Processors<br>Max. 65W TDP |
|                  | Chipset      | Intel® R680E Chipset   |
| Memory           | Technology   | Up to DDR5 4800 MHz, ECC support   |
|                  | Max.         | 2 x 32GB (Total 64GB)  |
|                  | Socket       | 2 x SO-DIMM  |
| Display          | 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)   |
| Expansion Slot   | 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)<br>1 x M.2 M key, Type 2242/2260/2280 (PCIe x4 & SATA mode)                            |
| Ethernet         | 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  |
| Audio            | Codec        | Realtek ALC897 High Definition Audio   |
|                  | Connector    | Line-Out, Line-In  |
| Storage          | SATA port    | 4 x SATA Gen 3.0, Up to 6Gb/s, Support RAID 0,1,5,10   |
| Rear I/O         | 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 (RS232/422/485)  |
|                  | Audio jack   | 2  |
|                  | PS/2         | 1 x Keyboard, 1x Mouse   |

## Specifications

|                                  |   |  |
|----------------------------------|---|--|
| <b>Internal Connector</b>        | Serial Port Header                                      | 4 x COM Header (1 x RS232/422/485, 3 x RS232)  |
|                                  | USB3.2 Gen1   | 1 x USB3.2 Gen1 Stick Connector<br>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</b>         | Windows® 10 (64bit )                                    |  |
| <b>Linux</b>                     | 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-ITX, 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.