ASUS IoT R680EI-IM-A

Industrial Mini-ITX motherboard with Intel® R680E chipset
and Intel® Core™ 14th/13th/12th Gen. CPU

Features

- Supports Intel® processors of the 14th/13th/12th Gen.
- 2x DDR5 4800 MHz SO-DIMM, up to 64GB
- Intel® R680E chipset
- Supports up to 4x displays (3x DP, 1x HDMI)
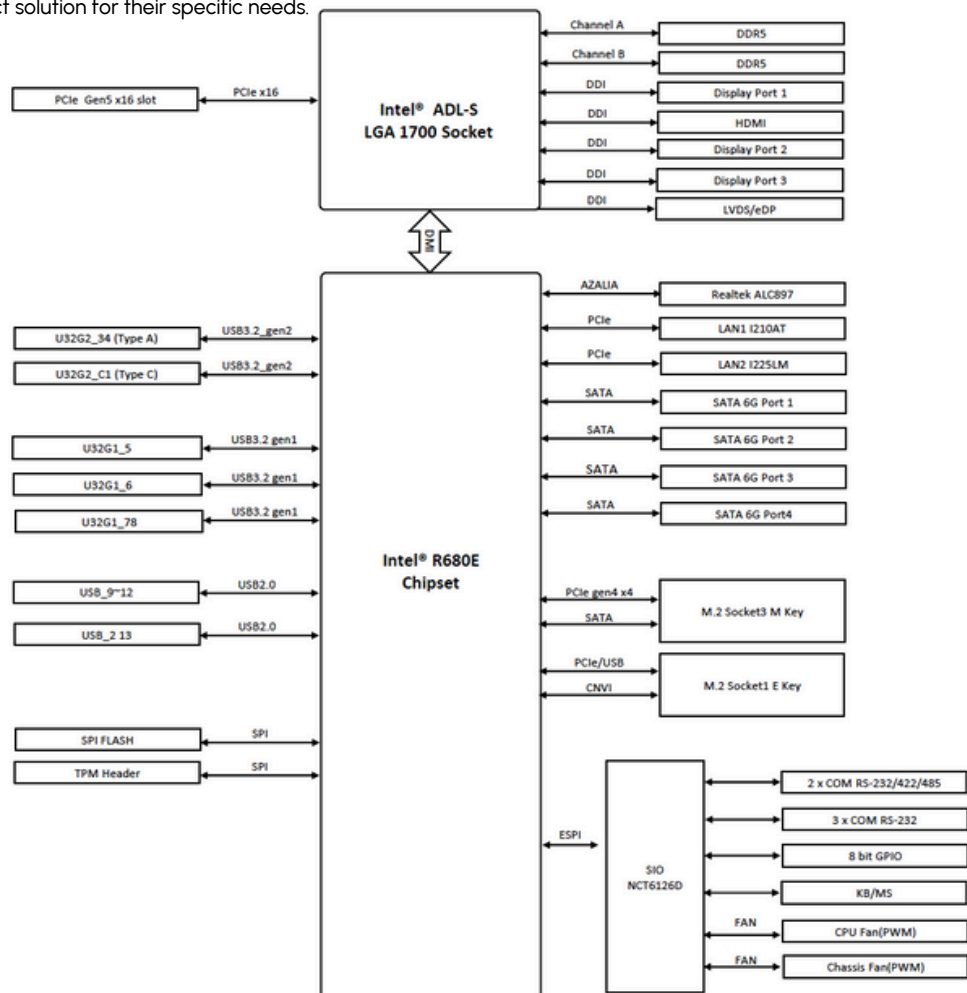- Mini-ITX form factor

ASUS IoT R680EI-IM-A: Compact industrial motherboard with premium features

The ASUS IoT R680EI-IM-A is a mini-ITX industrial motherboard that offers versatile I/O capabilities and advanced connectivity options. Despite its compact and slim design, which allows a reduction in case size for installation-constrained environments, it offers multiple display outputs, legacy options for industrial applications, GPIO ports and dual Intel LAN ports. With a Mini PCIe slot and an M.2 M-Key, the ASUS IoT R680EI-IM-A offers a wide range of expansion options. This flexibility makes it the ideal choice for a wide range of embedded applications where compact and customizable solutions are required.

ASUS: Industry leader and guarantee of reliability

As the world's leading motherboard brand, ASUS offers industrial motherboards with durable, industrial-grade components. These ensure reliable 24/7 operation even in harsh environments and are ideal for use in various vertical markets. With over 30 years of experience in design and innovation, ASUS enables faster time-to-market through customization and motherboard modulation. First-class after-sales service, flexible material supply, quick response to market changes and long-term technical support ensure that customers can find the perfect solution for their specific needs.

Block diagram

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Specifications	ASUS IoT R680EI-IM-A
SYSTEM	
CPU	LGA1700 for Intel® Core ™ 14th/13th/12th Gen. i9/ i7/ i5/ i3/ Pentium® / Celeron® processors, Max. 65W TDP
Chipset	Intel® R680E
RAM	Up to 64GB DDR5 4800 MHz, ECC support, (two SO-DIMM slots 32GB)
TPM	1x SPI TPM header
AMT	iAMT vPRO
Storage	4x SATA Gen 3.0, up to 6Gb/s, supports RAID 0,1,5,10
Expansion	1x PCIe 5.0 x16 slot (bifurcation support: 16x up to 8x+8x) 1x M.2 E Key, type 2230 for WIFI/BT device (PCIe & CNVi) 1x M.2 M Key, type 2242/2260/2280 (PCIe x4 & SATA mode)
Operating System	Windows® 10 (64bit) Ubuntu RedHat Enterprise Fedora Workstation OpenSUSE
INTERFACE	
Ethernet	2x RJ-45 (10/100/1000/2500 Mbps): 1x Intel® i210AT (colay i211AT) 1x Intel® I225LM (Intel vPro support)
USB	2x USB 3.2 Gen 2 (Type A) ports 1x USB 3.2 Gen 2 (Type C) ports 1x USB 3.2 Gen 1 (Type A) ports 4x USB 2.0 (Type A) ports
COM	1x COM: RS-232/ 422/ 485 port
Video	1x HDMI port 3x DisplayPort ports, supports DP 1.4, up to 4K resolution 1x header (supports either eDP or LVDS; switching via BIOS) Up to 4 displays: 3x DP+HDMI
Audio	2x Audio-Jack (Line-Out, Line-in) Audio codec Realtek ALC897 High Definition Audio
Other	PS/2: 1x keyboard, 1x mouse
Internal Connectors	Serial port connector: 4x COM ports (1x RS-232/422/485, 3x RS-232) USB 3.2 Gen 1: 1x USB 3.2 Gen 1 stick connection, 1x header support for 2x USB 3.2 Gen 1 ports USB 2.0: 1x header support for 2x USB 2.0 ports CPU fan/chassis fan: 1x header (PWM mode) / 1x header (PWM mode) Deactivation of ME: 1x header LVDS/eDP selection: 1x header Panel SW: 1x header Audio front panel (AAFP): 1x header System panel: 1x header (10-1pin) SP/DIF: 1x header Housing intrusion: 1x header Loudspeaker: 1x header Clear CMOS: 1x header COM Debug: 1x header GPIO: 1x header (8 bit)
ENVIRONMENTAL	
Power Supply	ATX 12V DC-IN (supported by additional cable)
Operating Temperature	0° ~ 60°C
Storage Temperature	-40° ~ 85°C
Humidity	5% ~ 95%
Dimensions	Mini-ITX, 170 x 170 mm
Certifications	CE (Class B), FCC (Class B)

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Order Information	ASUS IoT R680EI-IM-A
MODEL NO. [1]	
90ME04S	R680EI-IM-A, LGA1700, R680E, DP, HDMI,MB
PACKING LIST [2]	
13020	1x I/O shield
14013	1x SATA 6G cable
13020	2x M.2 screw pack

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

[2] The part number might vary due to part number revision.