

# ASUS IoT Q670EA-IM-A

Industrial ATX motherboard with Intel® Q670E chipset and Intel® Core™ 14th/13th/12th Gen. CPU



## Features

- Supports Intel® processors of the 14th/13th/12th Gen.
- 4x DDR5 4400 MHz U-DIMM, up to 128GB
- Intel® Q670E chipset
- 2x PCIe x16 slots for dual graphics cards
- Supports up to 4x displays (VGA/HDMI/DP)

## ASUS IoT Q670EA-IM-A: Industrial motherboard with extensive connectivity options

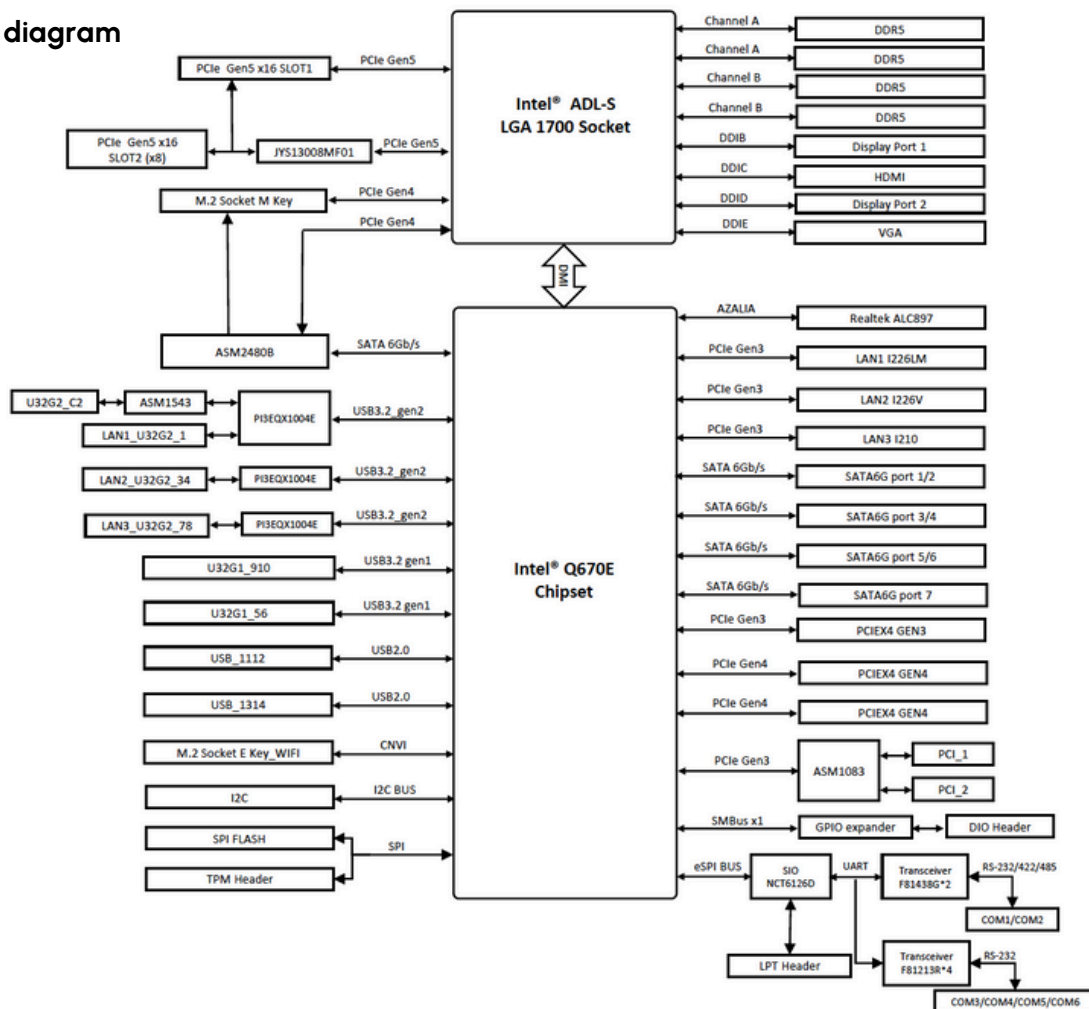
The ASUS IoT Q670EA-IM-A is an ATX industrial motherboard characterized by its extensive I/O capabilities and advanced connectivity options. It offers multiple display outputs, legacy options for industrial applications, COM ports and three Intel LAN ports. With one PCIe slot, one PCI slot, one M.2 E-key and one M.2 M-key, the ASUS IoT Q670EA-IM-A offers a wide range of expansion options. This versatility makes it the ideal choice for a wide range of embedded applications.

### ASUS: Market leader and quality guarantee

As the world's leading motherboard brand, ASUS offers industrial motherboards with durable, industrial-grade components that ensure reliable 24/7 operation in harsh environments. These components are ideal for use in various vertical markets.

ASUS enables faster time-to-market with customized solutions and motherboard modulations through its 30+ years of design and innovation experience. The first-class after-sales service, flexible material supply, quick response to forecast changes and long-term technical support ensure that first-class customers can find the perfect solution for their requirements.

## Block diagram



# ASUS IoT Q670EA-IM-A

Industrial ATX motherboard with Intel® Q670E chipset and Intel® Core™ 14th/13th/12th Gen. CPU

Specifications	ASUS IoT Q670EA-IM-A
<b>SYSTEM</b>	
CPU	LGA1700 for Intel® Core™ 14th/13th/12th Gen. i9/ i7/ i5/ i3/ Pentium® / Celeron® processors, max. 125W TDP
Chipset	Intel® Q670E
RAM	Up to 128GB DDR5 4400MT/s (2DPC 1DIMM 1R&2R), 4000MT/s (2DPC 2DIMM 1R), 3600MT/s (2DPC 2DIMM 2R) (four U-DIMM slots)
TPM	1x SPI TPM header
Watchdog	Yes
Storage	7x SATA Gen 3.0, up to 6Gb/s, supports RAID 0,1,5,10
Expansion	1x PCIe 5.0 x16 slot (1 x16 mode/ 2 x8 mode) 1x PCIe 4.0 x4 slot (x4 mode, open slot) 1x PCIe 5.0 x16 slot (x8 mode) 1x PCIe 3.0 x4 slot (x4 mode, open slot) 1x PCIe 4.0 x4 slot (x4 mode, open slot) 2x PCI slots 1x M.2 M key, type 2242/2260/2280 (PCIe x4 /SATA mode) supports NVMe 1x M.2 E-Key, type 2230 for Wi-Fi/BT devices (supports Intel®CNVi only) *When the CNVi Wi-Fi card is installed in the M.2 E-Key slot, the USB port 14 is disabled.
Operating System	Windows® 10 (64bit) Windows® IoT Enterprise 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 example code
User Interface	API GUI
<b>INTERFACE</b>	
Ethernet	3x RJ-45 (10/100/1000/2500 Mbps): 1x Intel® i210AT 1x Intel® i226V 1x Intel® i226LM (Intel vPro supported)
USB	5x USB 3.2 Gen 2 (Type A) port 1x USB 3.2 Gen 2 (Type C) port
COM	1x COM: RS-232/ 422/ 485 port
Video	x HDMI port, supports 2.1, up to 4096 X 2160 @ 30Hz 2x DisplayPort port, supports DP++ 1.4, up to 3840 x 2160 @ 60Hz 1x VGA port Multiple displays: Max. 4 displays, VGA+Dual DP+HDMI
Audio	3x Audio-Jack (Line-Out, Line-In, Mic in) Audio codec RealtekALC897
Internal Connectors	COM header: 5x COM header (1x RS-232/ 422/ 485, 4x RS-232) USB 3.0 Gen1: 2x header additionally support 4x USB 3.2 Gen1 ports USB 2.0: 2x header additionally support 4x USB 2.0 ports CPU fan/chassis fan: 1x header (PWM mode) / 3x header (PWM mode) Front panel audio (AAFP): 1x header System control: 1x header Chassis intrusion: 1x header Speaker header: 1x header I2C header : 1x header Clear CMOS: 1x header COM Debug: 1x header LPT header: 1x header Buzzer: 1 PS/2: 1x header SPDIF: 1x header GPIO: 1x header (8-bit) DIS ME jumper: 1x cheader Jumper for AT/ATX selection: 1x header Power connection: 1x 24-pin ATX power supply, 1x 8-pin ATX 12V power supply

# ASUS IoT Q670EA-IM-A

Industrial ATX motherboard with Intel® Q670E chipset and Intel® Core™ 14th/13th/12th Gen. CPU

Specifications	ASUS IoT Q670EA-IM-A
<b>ENVIRONMENTAL</b>	
Power Supply	AT mode/ ATX mode
Operating Temperature	0° ~ 60°C
Storage Temperature	-40° ~ 85°C
Humidity	40°C @ 10%~95%
Dimensions	ATX, 305 x 244 mm
Certifications	CE, FCC, BSMI, VCCI, RCM, CE-LVD

Order Information	ASUS IoT Q670EA-IM-A
<b>MODEL NO. [1]</b>	
90ME06J*	Q670EA-IM-A, LGA1700, Q670E, DP, HDMI, VGA, MB
<b>PACKING LIST [2]</b>	
I3020	1x I/O shield
I40I3	1x SATA 6G cable
I3020	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.

