



INDUSTRIAL MOTHERBOARD

# CT-XRL02

Mini-ITX Industrial Motherboard with LGA 1700 Socket Supporting 14th/13th/12th Gen Intel Core i9/i7/i5/i3, Pentium, Celeron Processor, Intel Q670E Chipset



## Features

- Support 14/13/12th Gen. Intel Alder Lake-S / Raptor Lake-S Processor
- Intel Q670E chipset
- 2x 260-pin DDR4 SO-DIMM. Max. up to 64GB
- 3x 2.5GbE (Support Wake-on-LAN and PXE)
- 3x independent display supported DP, HDMI
- 1x PCIe x16 (Gen 4) via PCB Golden Finger
- 1x M.2 B-Key (3042) with Nano SIM Holder for 4G/5G support
- 6x USB 3.2 Gen 2 (Rear), 2x USB 3.2 Gen 1 (Internal), 2x USB 2.0 (Internal)
- 2x RS-232/422/485 (Rear), 2x RS-232 (Internal)
- 3x SATA Gen 3 6.0 Gb/s
- TPM 2.0



## Specifications

### System

#### Processor

- 14th Gen Intel Raptor Lake-S i9/i7/i5/i3/Pentium /Celeron IOTG Series Processor, Max 65W
- 13th Gen Intel Raptor Lake-S i9/i7/i5/i3/Pentium /Celeron IOTG Series Processor, Max 65W
- 12th Gen Intel Alder Lake-S i9/i7/i5/i3/Pentium /Celeron IOTG Series Processor, Max 65W

System Chipset	Intel Q670E Express
LAN Chipset	GbE1: Intel I226LM PCIe 2.5GbE LAN PXE Support GbE2: Intel I226V PCIe 2.5GbE LAN PXE Support GbE3: Intel I226V PCIe 2.5GbE LAN PXE Support
Audio Codec	Realtek ALC897 High Definition Audio CODEC (Co-lay ALC888S-VD2)
System Memory	2 x 260-pin DDR4 SO-DIMMs 3200 MHz (Non-ECC) 64 GB Max
Graphics	Intel Integrated Iris Xe Graphic (CPU Dependent)
BIOS	AMI 256Mbit SPI BIOS
Watchdog	1 ~ 255 second timer
iAMT	AMT 16.x
TPM	TPM 2.0

### Display

Display Port	2x DP (4096x2304 @60Hz)
HDMI	1x HDMI (4096x2304 @24Hz)
Multiple Display	Triple Displays

### Storage

M.2	2 x M.2 M-Key (2242/2280, PCIe x4 Gen3) for NVMe SSD
SATA	3x SATA Gen 3 6.0 Gb/s (RAID 0/1/5) AHCI Mode Supported

### Expansion

M.2	• 1x M.2 E-Key (2230, PCIe x1 + USB 2.0) for WiFi 6E & BT-5.1 • 1x M.2 B-key (3042, PCIe x1 +USB 3.2 Gen 2x1 + USB 2.0) with Nano SIM Holder for 4G/5G support
PCIe	1x PCIe x16 Gen4 via PCB customized 200-pin Golden Finger (Support riser card, one x16 or two x8 via BIOS setting)

### Rear I/O

Audio	1x Mic-in, 1x Line-out
COM	2x RS-232/422/486
LAN	3x 2.5 GbE LAN
USB	6 x USB 3.2 Gen 2 (10 Gbps)

### Internal I/O

Audio	1x Front panel audio
DIO	1x 16-bit DIO (8-in/8-out)
SATA	3x SATA Gen 3, support RAID 0/1/5
USB	2x USB 3.2 Gen 1 (5 Gbps), 2x USB 2.1

### Operating System

Windows	Windows 10/11
Linux	Linux Kernel

### Power

Power Mode	ATX-Power 24P, 12V-8P
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### Environment

Form Factor	Mini-ITX
Operating Temperature	0°C to 60°C
Storage Temperature	-20°C to 80°C

Relative Humidity	10% ~ 90% relative humidity, non-condensing
Certification	CE, FCC Class A

### Physical

Dimensions	170mm x 170mm
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### Available Models

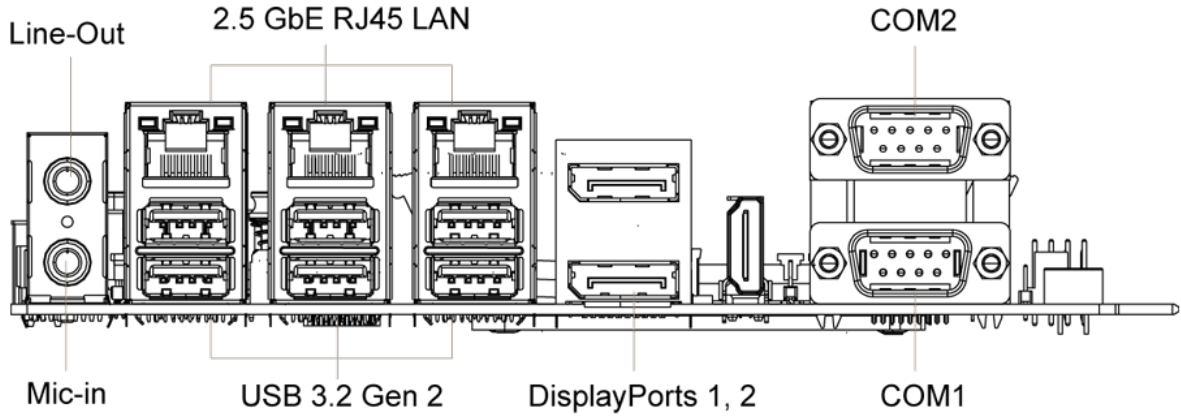
- CT-XRL02-MB  
Mini ITX, LGA 1700 Socket, Q670E CH (I225-V), 6x USB, 2xDP, HDMI
- CT-XRL02-1E16-P  
Mini ITX, LGA 1700 Socket, Q670E CH (I225-V), 6x USB, 2xDP, HDMI w/ 1x PCIe x16 Riser Card
- CT-XRL02-2E8-P  
Mini ITX, LGA 1700 Socket, Q670E CH (I225-V), 6x USB, 2xDP, HDMI w/ 2x PCIe x8 Riser Card

### Exports And Tariff Codes

ECCN	5A992.c
HTS	8504.90.2000
ScheduleB	8473.30.0002

\* All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



Dimension

Unit: mm

