



INDUSTRIAL MOTHERBOARD

CT-XAR01

Mini-ITX Industrial Motherboard with LGA 1851 Intel® Core™ Ultra Series 2 Processors, Arrow Lake-S, W880 PCH



Features

- Support Intel® Core Ultra 200S Series Processors
- Intel W880 chipset support ECC-Memory
- 2x 262-pin DDR5 5600MT/s SO-DIMM. Max. up to 96GB
- 2x SATA-3.0
- 3x 2.5GbE
- 4x independent display supported 2x DP, HDMI, LVDS/eDP
- 1x PCIe x16 (Gen 5)
- 1x M.2 M Key, 1x M.2 B Key, 1x M.2 E Key
- 6x USB 3.2 Gen 2 Type A
- TPM 2.0
- 1x MCIO Gen4 x4

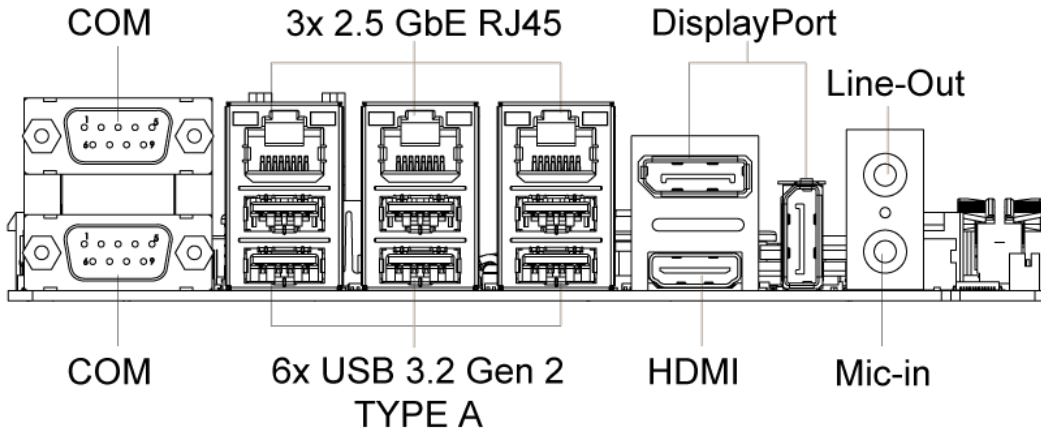


Specifications

System	
Processor	Intel®Arrow Lake-S Core™ Ultra Processors (Series 2, FCLGA1851) <ul style="list-style-type: none"> •Intel® Core™ Ultra 5 Processor 225T, 35W •Intel® Core™ Ultra 5 Processor 225, 65W •Intel® Core™ Ultra 7 Processor 265T, 35W •Intel® Core™ Ultra 7 Processor 265, 65W •Intel® Core™ Ultra 9 Processor 285T, 35W •Intel® Core™ Ultra 9 Processor 285, 65W
System Chipset	Intel W880
LAN Chipset	GbE1: Intel® I226-LM 2.5GbE LAN iAMT GbE2: Intel® I226-V 2.5GbE LAN GbE3: Intel® I226-V 2.5GbE LAN
Audio Codec	Realtek® ALC888 Audio Codec
System Memory	2x 262-pin DDR5 5600MT/s ECC & non-ECC SODIMM. Max Up to 96GB
BIOS	AMI UEFI
Watchdog	256-level Watchdog Timer
TPM	TPM2.0
Display	
Display Port	2x DP up to 4096 x 2160@60Hz
eDP	1x eDP up to 3840 x 2160@60Hz
HDMI	1x HDMI up to 4096 x 2160@30Hz
LVDS	1x LVDS up to 1920 x 1200@60Hz
Multiple Display	Quad Independent Displays
Storage	
M.2	1x M key (PCIe x4 NVMe, SATA-3.0), 2280
SSD/HDD	2x SATA-3.0 (RAID 0/1, AHCI Mode Supported)
Expansion	
PCIe	1x PCIe x16 (Gen 5) (lockable connector) (BIOS support 2 x8 or 1 x16 configure)
Expansion Modules	1x E key (PCIe x1 & USB 2.0), 2230 1x B key (PCIe x2 NVMe,USB3.0), 2242/3042/3052 with SIM Holder
I/O	
Audio	1x Mic-in, 1x Line-out
COM	2 x COM ports COM1/2 RS-232/422/485, No Signal/5V/12V, Auto-flow Control (real IO)
LAN	3x 2.5GbE RJ45
USB	6x USB 3.2 Gen 2 TYPE A
Internal I/O	
COM	4 x COM ports COM3/4 RS-232 Pin header COM5/6 (CN1) RS-232 Pin header (TX/RX only)
GPIO	GPIO 8 bit non-isolation
USB	1x USB 3.0 vertical Type A 2x USB 2.0-Ports Pin header
MCIO	1x PCIe Gen 4 x4-lane
Operating System	
Windows	Windows 10 IoT Enterprise LTSC (64-bit) Windows 11 IoT Enterprise LTSC (64-bit)
Linux	Ubuntu 22.04 / 24.04 LTS , Linux 5.x / 6.x
Power	
Power Mode	ATX24P

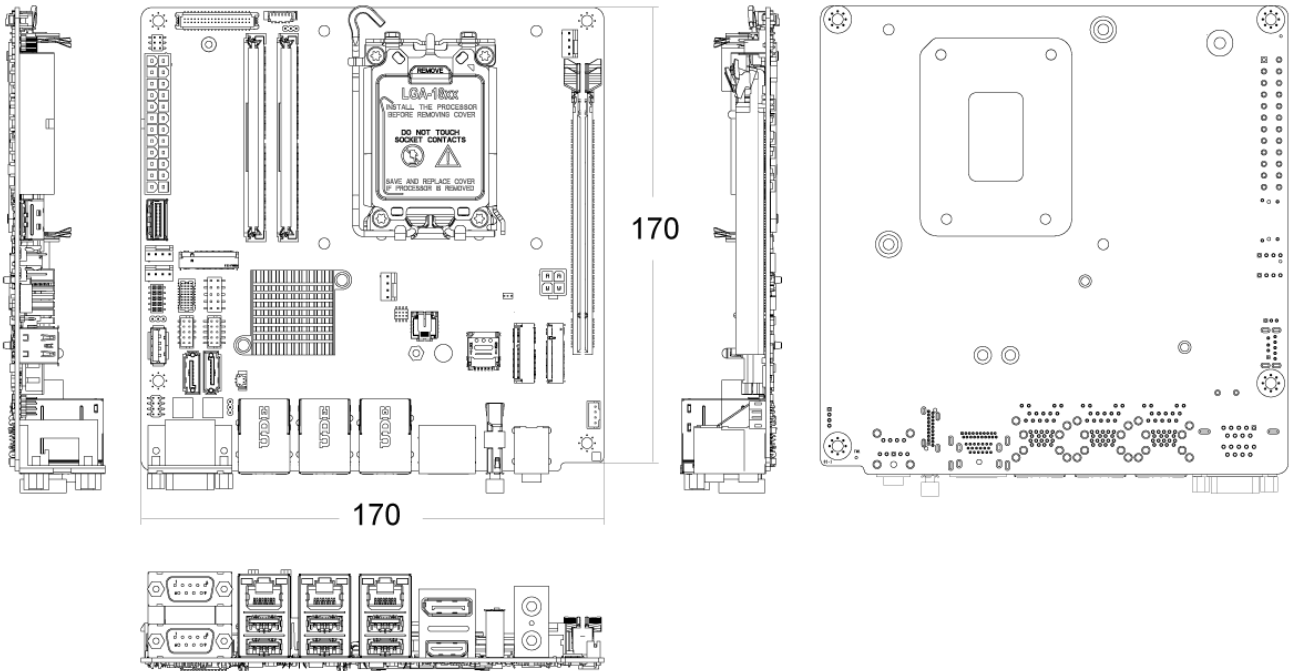
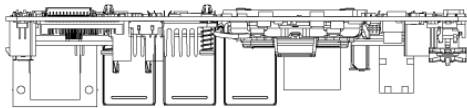
Environment	
Form Factor	Mini-ITX
Operating Temperature	0°C to 60°C
Storage Temperature	-20°C to 80°C
Relative Humidity	10% ~ 90% relative humidity, non-condensing
Certification	CE, FCC Class A , UKCA
Physical	
Dimensions	170mm x 170mm

External I/O Mechanical Layout



Dimension

Unit: mm



Compliances and Standards

Shock	IEC60068-2-27:2008 Designed to comply with MIL-STD-810H Method 516.8 Procedure I
Vibration	IEC60068-2-64:2008 Designed to comply with MIL-STD-810H Method 514.8 Procedure I
Operating Temperature	0°C to 60°C IEC60068-2-1:2007 (Cold test procedure) IEC60068-2-2:2007 (Dry heat test procedure) IEC60068-2-3:2007 (Damp heat, steady state, test procedure) IEC60068-2-14:2009 (Wide temperature range thermal shock)
EMI	<ul style="list-style-type: none"> • FCC Class A (47 CFR part 15.109 and part 15.107) • CE • ICES-003 • UKCA

Available Models

Model No.	Description
CT-XAR01-MB	MB, MINI ITX, W880, LGA1851, DDR5 6x USB, 2xDP, HDMI w/ 1x PCIe x16

Packing List

1x CT-XAR01 Industrial Motherboard

Exports And Tariff Codes

ECCN	5A992.c
HTS	8504.90.2000
ScheduleB	8473.30.0002

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