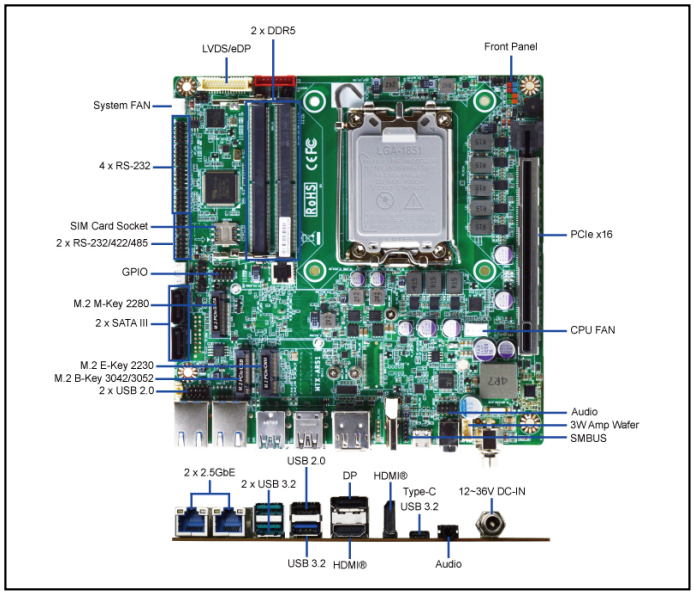
MTX-ARS1-H810

ATX

Mini-ITX Industrial Motherboard Supporting Intel® Core Ultra Processors (Series 2), Socket LGA1851



Features

- **Powered by Intel® LGA1851 Gen Socket Processors (Arrow Lake-S) with H810 chipset**
- **High-Performance Memory: Dual DDR5 CSO-DIMM, up to 96GB**
- **Dual Ethernet Ports: 2 x 2.5GbE for for fast and reliable networking**
- **Triple Display Support: 2 x HDMI®, 2 x DP, 1 x LVDS/eDP**
- **Rich Storage & Expansion: 2 x SATA, 1 x M.2 M-key, 1 x M.2 E-key, 1 x M.2 B-key, 1 x PCIe Gen 5 x16**
- **Comprehensive I/O: 4x USB 3.2 Gen2, 3 x USB 2.0, 2 x RS232/422/485, 4 x RS232**
- **Wide Range Power Input: DC-in 12V–36V for industrial applications**
- **Enhanced Security: Onboard TPM 2.0 (optional)**

Packing List

PART NUMBER	DESCRIPTION	QTY
MTX-ARS1	MTX-ARS1 MB	1
G01-COM-H2M22-1F	COM Port Cable, 22cm, Pitch 2.0	1
G01-SATA3-BL-1F	SATA Cable, 50cm	1
G01-PW4PS2S-322-1F	SATA Power Y cable, 5.0pitch for 32cm, 2.54pitch for 20cm	1
F04-MB-114-F	I/O Shield	1
F01-SP-A-BK-3F	Jumper	2

Specifications

SYSTEM	
MB FORM FACTOR	Mini-ITX
CPU	Intel® LGA1851 Socket, Processor Arrow Lake-S (MAX. TDP 65W)
CHIPSET	Intel® H810
MEMORY	2 x DDR5 6400MT/s, Dual Channel CSO-DIMM, up to 96GB
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	Intel® PTT (Integrated fTPM) TPM2.0 (dTPM, Optional)
RTC BATTERY	Lithium Battery
DIMENSION (W X D)	170.0 (W) x 170.0 (D) mm (6.7" x 6.7")
OS SUPPORT	Windows® 11 (64bit), Linux
POWER	
POWER REQUIREMENT	DC-in 12~36V
POWER ON MODE	AT / ATX (Default) Mode
CONNECTOR	Lockable DC Jack
DISPLAY	
GPU	Intel® Graphics
LVDS	1 x 24-bit Dual Channel LVDS (Max. Resolution: 1920 x 1200 @60Hz, co-layout eDP)
Type-C DP	1 x Type-C DP1.4a (Max Resolution: 4096 x 2160@60Hz)
DP	1 x DP1.4a (Max Resolution: 4096 x 2160@60Hz)
HDMI®	2 x HDMI® 2.1 TMDS (Max Resolution: 4096 x 2160@60Hz)
MULTIPLE DISPLAY	Support 3 Displays
AUDIO	
CODEC	Realtek Codec
COMBO	1 x Combo Audio Jack for Line-Out / Mic-In
AMPLIFIER	3W
LAN	
ETHERNET	2 x RJ45 for Intel® I226-V 2.5GbE
USB PORT	
USB	3 x USB 3.2 Gen 2x1 (10Gbps, Formerly USB 3.1 Gen 2) 1 x USB 3.2 Gen 2x2 Type-C (20Gbps) Support DP ALT Mode 1 x USB 2.0 Internal Header for 2 x USB 2.0
SERIAL PORT	
COM	Internal Header for 2 x RS-232/422/485 Internal Header for 4 x RS-232
INTERNAL I/O	
GPIO	8-Bit
SMBUS	Yes
FAN	1 x System Fan Header 1 x CPU Fan Header (Smart Fan)
FRONT PANEL	HDD Active LED, Power LED, Power On/Off, Reset, Audio
ADDITIONAL	1 x Chassis intrusion 1 x AT/ATX Mode Selection
STORAGE	
SATA	2 x SATA III 1 x SATA Power Connector
EXPANSION	
PCIe	1 x PCIe Gen 5 x16
M.2	1 x M-Key 2280 (PCIe Gen 4*4 w/ SATA interface) support NVMe 1 x E-Key 2230 (USB 2.0/PCIe Gen 4 x1) Support CNVio 1 x B-Key 3042/3052 (PCIe Gen 4x1/USB3.2/USB 2.0) Support 4G/5G Module
SIM	1 x Nano SIM Card Slot
ENVIRONMENT & CERTIFICATION	
SHOCK	15G, 11ms duration
VIBRATION	1 Grms/ 5~ 500Hz/ Operation
OPERATING TEMPERATURE	-20°C ~ 60°C (-4°F ~ 140°F)
STORAGE TEMPERATURE	-20°C ~ 85°C (-4°F ~ 185°F)
OPERATING HUMIDITY	10 ~ 90% relative humidity, non-condensing
STORAGE HUMIDITY	10 ~ 90% @40°C, Non-condensing
CERTIFICATION	CE/FCC Class A LVD
ESG DECLARATION	EU RoHS, China RoHS, WEEE, REACH, TSCA Declaration, PRO65 Declaration, CMRT Report

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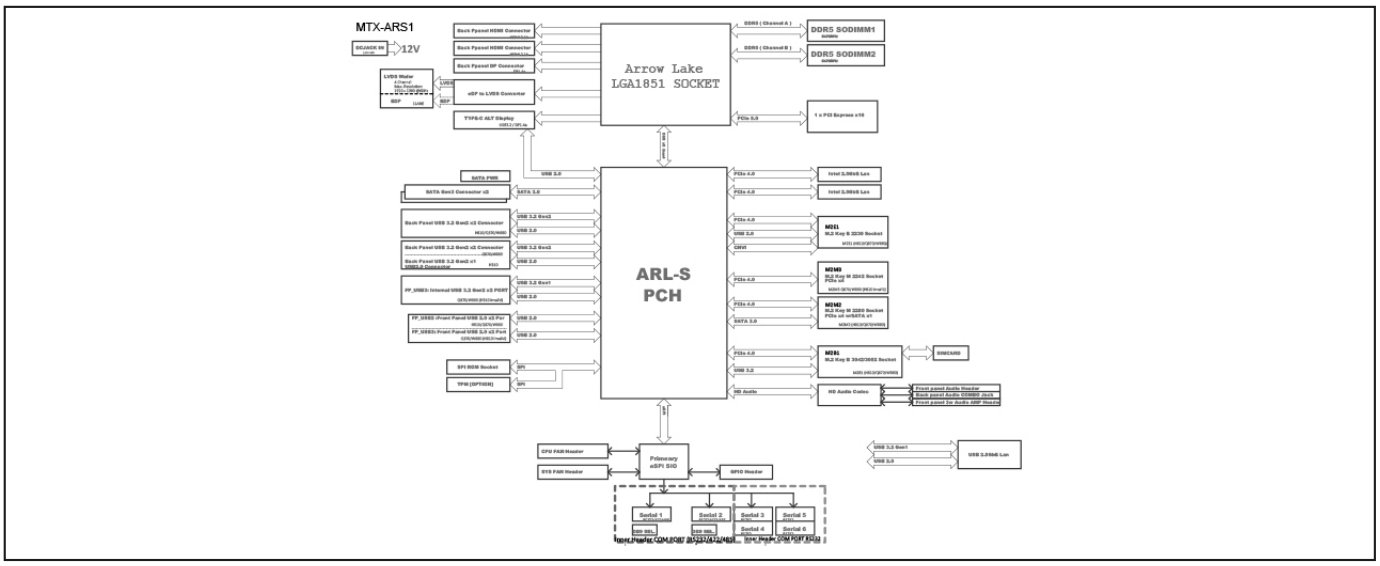
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Note: All specifications are subject to change without notice.

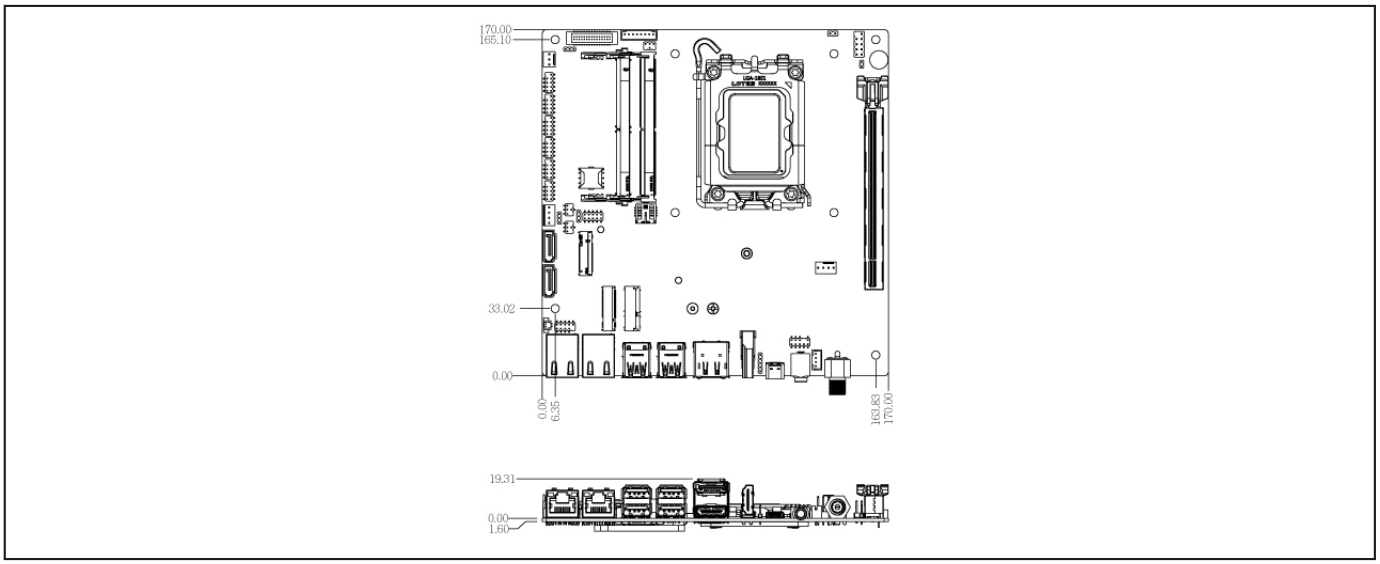
MTX-ARS1-H810

ATX

Block Diagram



Dimension Unit: mm



Ordering Information

PART NUMBER	MTX-ARS1-H8100010	MTX-ARS1-H8100210
CPU	Intel® Socket LGA1851 CPU	Intel® Socket LGA1851 CPU
SECURITY	Intel® PTT (fTPM)	Intel® PTT (fTPM) & TPM 2.0 (dTPM) Default

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