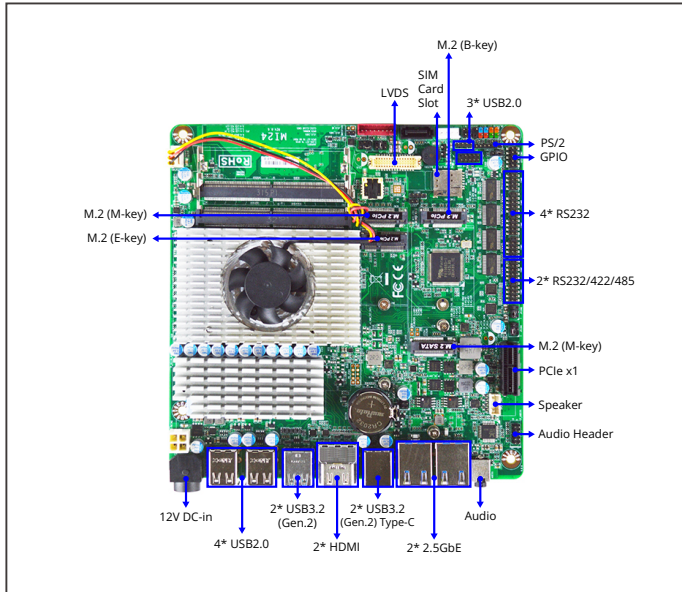


MI24

Mini-ITX with 13th Generation Intel® Core™ i5 Processors (formerly Raptor Lake)



Specifications

SYSTEM	
FORM FACTOR	Mini-ITX
CPU	13th Generation Intel® Core™ i5 Processors (formerly Raptor Lake) Intel® Core™ i5-1335UE Intel® Core™ i5-1335U
CPU TDP	15W
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	2 x DDR5 5200MHz, Dual Channel SODIMM, up to 64GB *If using 32GB DDR5 Memory Module, Slot2 can support up to 5200MHz, Slot1 or Slot1+Slot2 can only support up to 4400 MHz. Please refer to user manual.
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0 (optional)
RTC Battery	Lithium Battery
DIMENSION (L X W)	170mm x 170mm (6.7" x 6.7")
OS SUPPORT	Windows® 10 (64bit), Windows® 11 (64bit), Linux
POWER	
POWER REQUIREMENT	+12-24V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	4pin DC-in Power Jack 4pin Header
DISPLAY	
CONTROLLER	Intel® Iris® Xe Graphics
LVDS/eDP/MIPI-DSI	1 x 24 Bit Dual Channel LVDS, up to 1920 x 1080 @60Hz, co-lay eDP
DISPLAY INTERFACE	2 x HDMI 2.0b, up to 4K x 2K @60Hz 2 x Type-C DP1.4a, up to 4K x 2K @60Hz
MULTIPLE DISPLAY	Support 4 Displays
AUDIO	
CODEC	Realtek ALC888S with 3W Amp.
AUDIO INTERFACE	Combo Line-out/MIC
Speaker	1 x Speaker Connector
EXTERNAL I/O	
ETHERNET	1 x Intel® i225LM, 10/100/2500Base 1 x Intel® i225V, 10/100/2500Base
USB	2 x USB3.2 Gen 2 2 x USB3.2 Gen 2 Type-C support DP ALT mode 4 x USB2.0
SERIAL PORT	—
VIDEO	2 x HDMI 2.0b 2 x DP1.4a (USB Type-C)
INTERNAL I/O	
USB	3 x USB2.0
SERIAL PORT	2 x RS232/422/485, 4 x RS232
VIDEO	1 x 24 Bit Dual Channel LVDS, up to 1920 x 1080 @60Hz, co-lay eDP
AUDIO	1 x 3W Speaker Connector 1 x Audio Header
GPIO	8-Bit
SMBUS	Yes
I2C	—
FAN	1 x CPU Fan
SIM	1 x SIM Card
FRONT PANEL	HDD LED, PWR LED, Power Button, Reset
OTHERS	1 x PS/2
STORAGE	
SATA	1 x SATA3 1 x SATA Power Connector
MINI PCI-E/MSATA	—
M.2	1 x M-Key 2242/2280 (SATA/PCIe 4.0 x4) support NVMe 1 x M-Key 2242 (SATA)
eMMC	—
EXPANSION	
M.2	1 x E-key 2230 (USB2.0/PCIe 3.0 x1) support CNVi 1 x B-key 3042/3052 (USB3.1/USB2.0/PCIe 3.0 x1) for 4G/5G module
OTHERS	1 x PCIe 3.0 x1
ENVIRONMENT & CERTIFICATION	
OPERATING TEMPERATURE	0°C ~ 60°C (32°F ~ 140°F)
STORAGE TEMPERATURE	-20°C ~ 85°C (-4°F ~ 185°F)
OPERATING HUMIDITY	10% ~ 90% relative humidity, non-condensing
CERTIFICATION	Meet CE/FCC Class A

Features

- 13th Generation Intel® Core™ i5 Processors SoC
- 2 x DDR5 5200MHz SODIMM up to 64GB
- 2 x 2.5GbE support vPro Essentials, 1 x SATAIII, GPIO, SMBUS, PS/2
- 2 x USB 3.2 Gen2, 2 x USB3.2 Gen2 Type-C, 7 x USB2.0
- 2 x RS232/422/485, 4 x RS232
- 1 x M.2 2242/2280 M-key, 1 x M.2 2242 E-key, 1 x M.2 2230 E-key, 1 x M.2 3042/3052 B-key
- 2 x HDMI, 2 x Type-C DP, 1 x LVDS/eDP
- DC Input 12-24V
- Support RVP, OCP, and OVP design

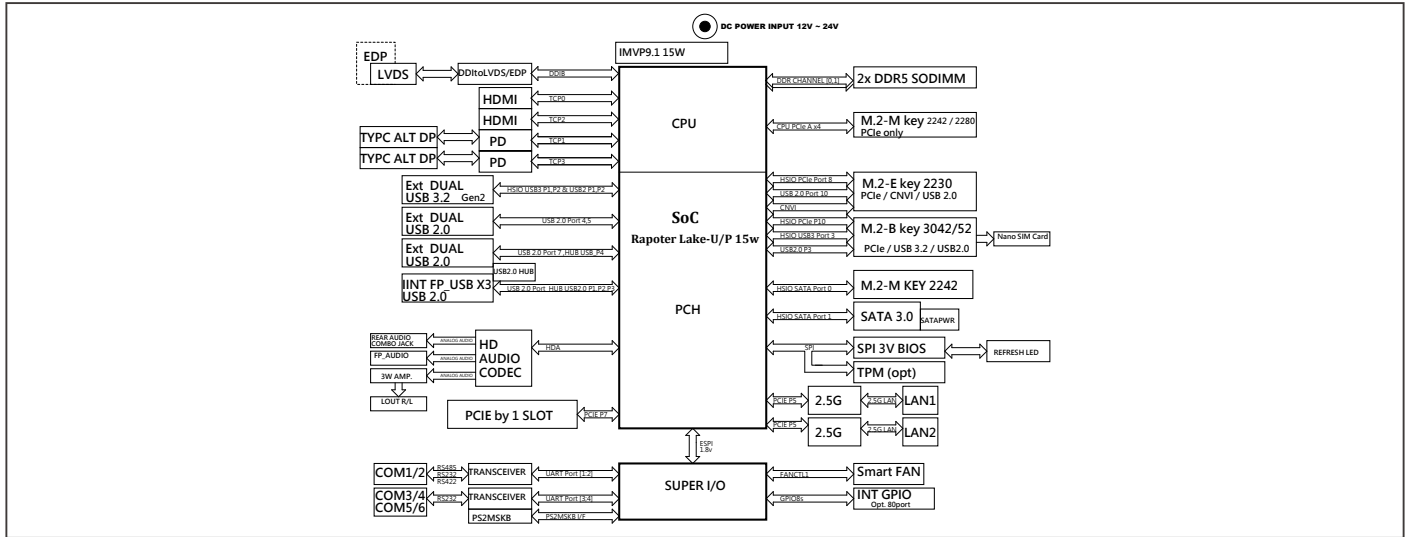
Applications

- Industrial Automation
- KIOSK
- Signage

Packing List

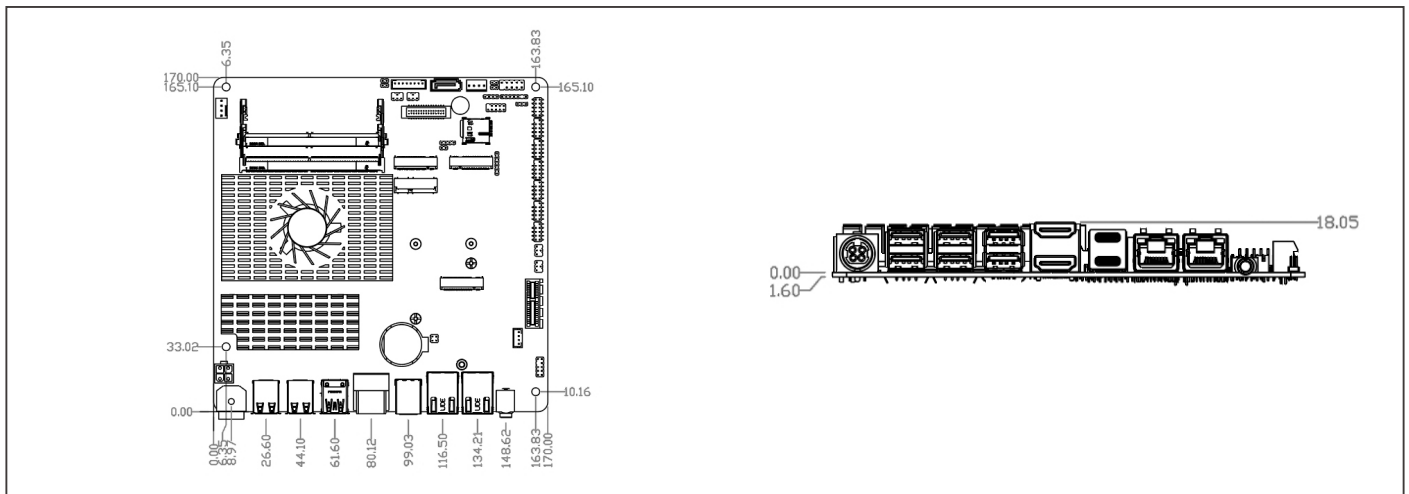
Part Number	Description	QTY per Board
	MI24 MB	1
F04-MB-101-F	MI24 I/O shield	1
G01-COM-H2M22-1F	COM cable	2
G01-SATA3-BL-1F	SATAIII cable	1
G01-PW4PS2S-322-1F	SATA PWR cable	1

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	MI24-133E0	MI24-133E2	MI24-13350	MI24-13352
CPU	Intel® Core™ i5-1335UE	Intel® Core™ i5-1335UE	Intel® Core™ i5-1335U	Intel® Core™ i5-1335U
DISPLAY	2 x HDMI 2 x Typ-C DP 1 x LVDS, co-lay eDP	2 x HDMI 2 x Typ-C DP 1 x LVDS, co-lay eDP	2 x HDMI 2 x Typ-C DP 1 x LVDS, co-lay eDP	2 x HDMI 2 x Typ-C DP 1 x LVDS, co-lay eDP
LAN	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE	2 x 2.5GbE
USB	2 x USB 3.2 Gen2 2 x USB3.2 Gen2 Type-C 7 x USB2.0	2 x USB 3.2 Gen2 2 x USB3.2 Gen2 Type-C 7 x USB2.0	2 x USB 3.2 Gen2 2 x USB3.2 Gen2 Type-C 7 x USB2.0	2 x USB 3.2 Gen2 2 x USB3.2 Gen2 Type-C 7 x USB2.0
RS-232	4	4	4	4
RS-232/422/485	2	2	2	2
STORAGE	1 x SATAIII 1 x M.2 M-key 2242/2280 1 x M.2 M-key 2242	1 x SATAIII 1 x M.2 M-key 2242/2280 1 x M.2 M-key 2242	1 x SATAIII 1 x M.2 M-key 2242/2280 1 x M.2 M-key 2242	1 x SATAIII 1 x M.2 M-key 2242/2280 1 x M.2 M-key 2242
EXPANSION SLOT	1 x PCIe 3.0 x1 1 x M.2 E-key 2230 1 x M.2 B-key 3042/3052	1 x PCIe 3.0 x1 1 x M.2 E-key 2230 1 x M.2 B-key 3042/3052	1 x PCIe 3.0 x1 1 x M.2 E-key 2230 1 x M.2 B-key 3042/3052	1 x PCIe 3.0 x1 1 x M.2 E-key 2230 1 x M.2 B-key 3042/3052
TPM	—	TPM2.0	—	TPM2.0
eMMC	—	—	—	—
POWER	12-24V	12-24V	12-24V	12-24V
OPERATING TEMP	0°C ~ 60°C	0°C ~ 60°C	0°C ~ 60°C	0°C ~ 60°C