

AMB-1AR0

Pico-ITX Board
with Intel® Core™ Ultra Processors



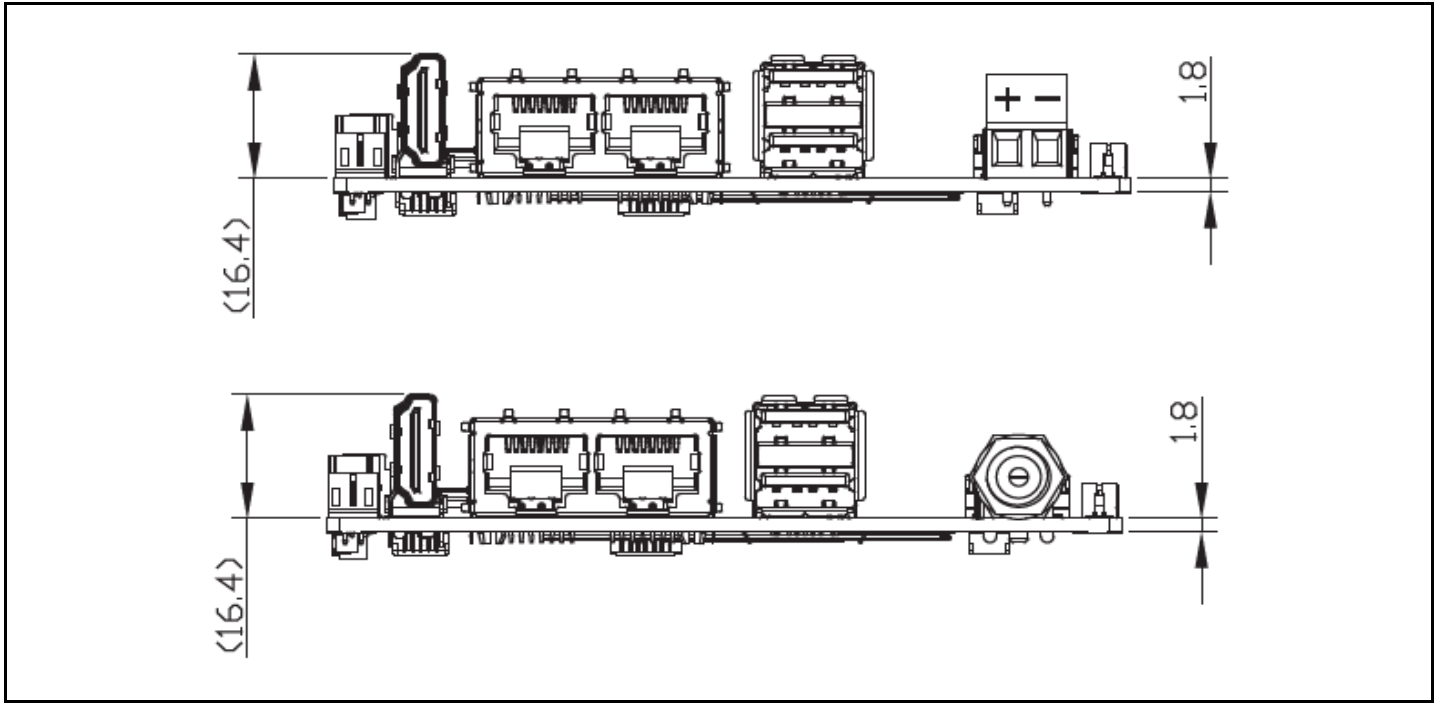
Features

- Intel® Core™ Ultra Processors (Series 2) SoC
- Onboard LPDDR5 up to 32GB
- 2.5GbE + 1GbE
- HDMI 1.4 + eDP 1.4
- M.2 2280 M-Key x 1 (PCIe 4.0 [x4]/SATA)
- M.2 2230 E-Key x 1 (PCIe 4.0 [x1] + USB 2.0)
- USB 3.2 Gen 2 x 2 + USB 2.0 x 2
- RS-232/422/485 x 2
- TPM, GPIO 4-bit, SATA 6Gb/s x 1
- SMBus/I2C (Default: SMBus)
- Intel® AMT Support

Specifications

System	
Form Factor	PICO-ITX
CPU	Intel® Core™ Ultra 7 Processor 255U (2PC+10EC/14T, P-core 2.00 GHz, E-core 1.70 GHz, 15W) Intel® Core™ Ultra 5 Processor 225U (2PC+10EC/14T, P-core 1.50 GHz, E-core 1.30 GHz, 15W)
Chipset	Integrated with Intel® SoC
Memory	Single-Channel LPDDR5 6400, up to 32GB
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0
RTC Battery	Lithium Battery 3V/240mAh
Dimension	3.94" x 2.84" (100mm x 72mm)
Gross Weight	0.18 lb (0.08 kg)
OS Support	Windows 10/11 (64bit) Linux Ubuntu 22.04.2 kernel 5.19.0 32 generic
Power Requirement	
Power Requirement	12V only
Power Type	AT/ATX
Connector	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (Optional)
Power Consumption	Intel® Core™ Ultra 7 Processor 255U, DDR5 32GB x 1, 2.85A @+12V (Typical) Intel® Core™ Ultra 7 Processor 255U, DDR5 32GB x 1, 6.96A @+12V (Max)
Display	
Controller	Intel® Graphics
LVDS/eDP	eDP 1.4 x 1
Display Interface	HDMI 1.4 x 1, 3840 x 2160 @30Hz
Multiple Display	Up to 2 Simultaneous Displays

External I/O	
Ethernet	Intel® Ethernet Connection I219-LM, GbE RJ-45 x 1 Intel® Ethernet Controller I226-LM, 2.5GbE x 1
USB	USB 3.2 Gen 2 x 2 ports
Video	HDMI 1.4 x 1
Internal I/O	
USB	USB 2.0 x 2
Serial Port	COM 1 ~ 2 (RS-232/422/485, supports 5V/12V/RI)
Video	—
SATA	SATA 6Gb/s x 1 +5V SATA Power Connector x 1
DIO/GPIO	GPIO 4-bit
SMBus/I2C	I2C/SMBus (Default: SMBus)
Fan	4pins Smart Fan x1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Expansion	
M.2	M.2 2280 M-Key x 1 (PCIe 4.0 [x4] / SATA, Default: PCIe [x4], select by BOM) M.2 2230 E-Key x 1 (PCIe 4.0 [x1] + USB 2.0)
Environmental	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	1,063,716
EMC	CE/FCC Class A



Ordering Information

Part Number / Item

AMB-1AR0-001	Intel® Core™ Ultra 7 Processor 255U
AMB-1AR0-002	Intel® Core™ Ultra 5 Processor 225U