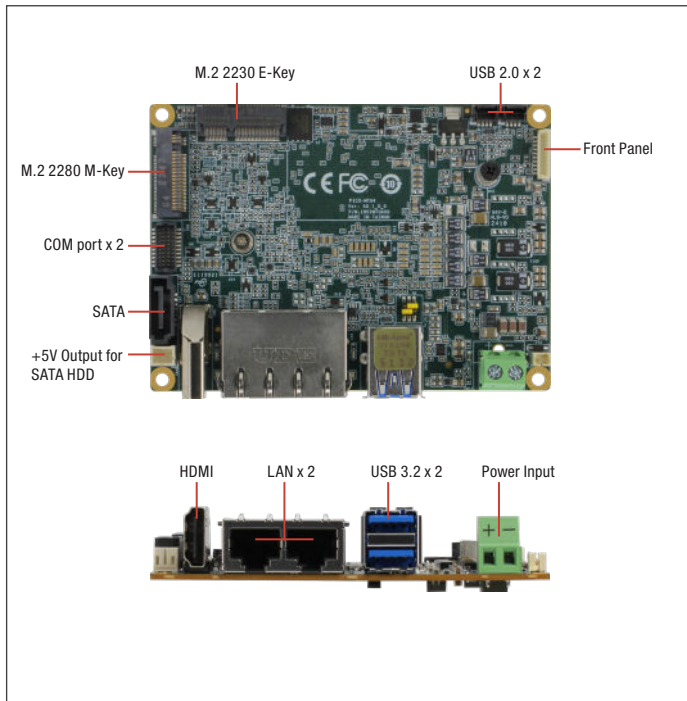


PICO-MTU4

Pico-ITX Board with Intel® Core™ Ultra 7/Ultra 5 Processors



Specifications

System	
Form Factor	PICO-ITX
CPU	Intel® Core™ Ultra 7 Processor 165U (2PC+10EC/14T, P-core 1.70 GHz, E-core 1.20 GHz, 15W)
	Intel® Core™ Ultra 7 Processor 155U (2PC+10EC/14T, P-core 1.70 GHz, E-core 1.20 GHz, 15W)
	Intel® Core™ Ultra 5 Processor 135U (2PC+10EC/14T, P-core 1.60 GHz, E-core 1.10 GHz, 15W)
	Intel® Core™ Ultra 5 Processor 125U (2PC+10EC/14T, P-core 1.30 GHz, E-core 0.80 GHz, 15W)
Chipset	Integrated with Intel® SoC
Memory Type	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 lbs (0.08 kg)
OS Support	Windows 10/11 (64bit) Linux Ubuntu 22.04.2 kernel 5.19.0 32 generic
Power	
Power Requirement	12V only
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (Optional)
Power Consumption	Intel® Core™ Ultra 7 Processor 165U, DDR5 32GB x1, 2.94A@+12V (Typical) Intel® Core™ Ultra 7 Processor 165U, DDR5 32GB x1, 5.13A@+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
Audio	
Codec	—
Audio Interface	—
Speaker	—
External I/O	
Ethernet	Intel® Ethernet Controller I226 2.5GbE, RJ-45 x 1 Intel® Ethernet Connection I219, 1GbE, RJ-45 x 1
USB	USB 3.2 Gen 2 x 2 ports
Serial Port	—

Features

- Intel® Core™ Ultra 7/Ultra 5 Processor 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 ports + USB 2.0 x 2
- RS-232/422/485 x 2
- TPM, GPIO 4-bit, SATA 6.0 Gb/s x 1
- SMBus/I2C (Default SMBus)



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
Audio	—
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
Others	—
Expansion	
Mini PCIe/mSATA	—
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)
Others	—
Environment & Certification	
Operating Temp	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Temp	-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

Packing List

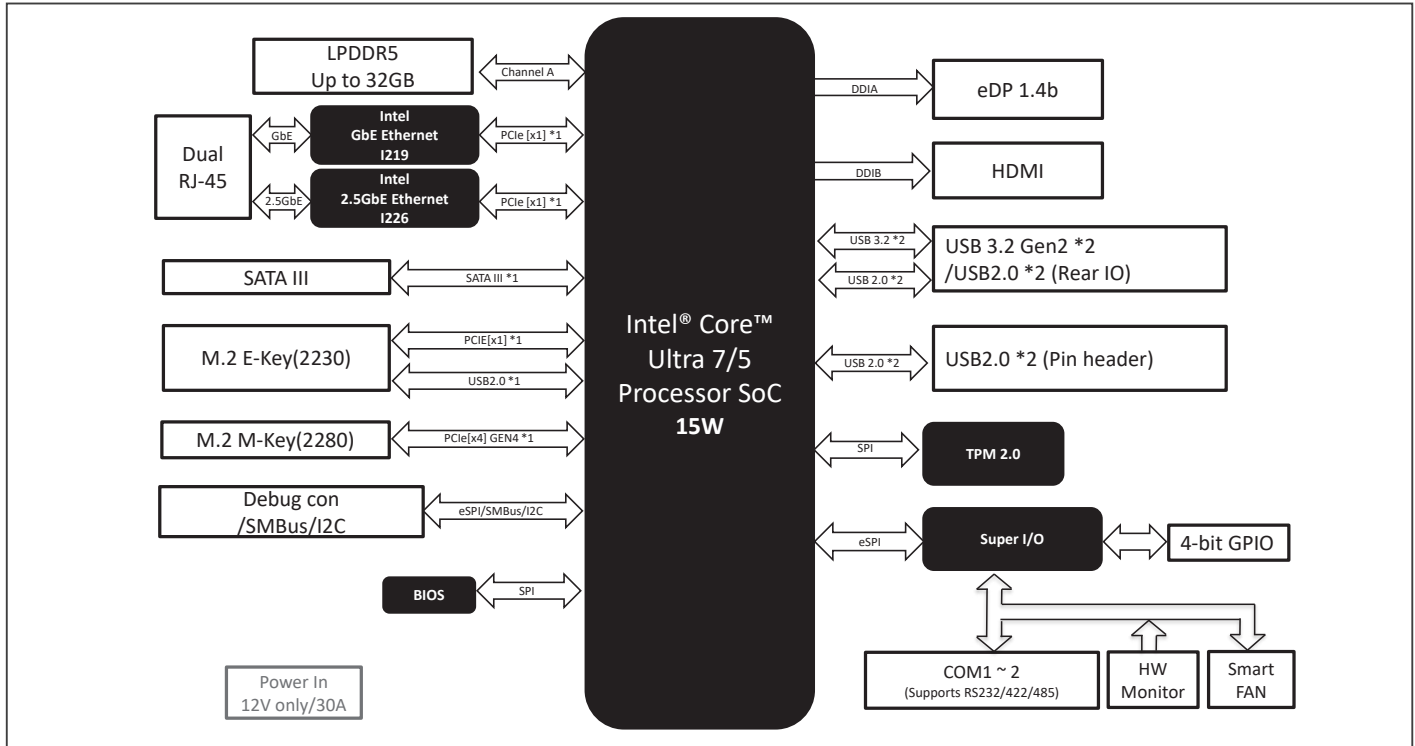
- PICO-MTU4

Optional Accessories

Part Number	Description	Qty.
170X000603	Front Panel cable.10cm	1
170X000231	Dual COM cable.30cm	1
170X000880	Single USB 2.0 lockable cable.20cm	2
1709070500	SATA cable.50cm	1
1702150155	SATA power cable.15cm	1
1702030200	Power cable (Phoenix type to DC Jack) 20cm	1
PICO-MTU4-FAN01	Cooler.100*72*14mm.5200rpm.for PICO-MTU4	1
PER-P30D-A10-0001	120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.0, 30 x 72mm	1

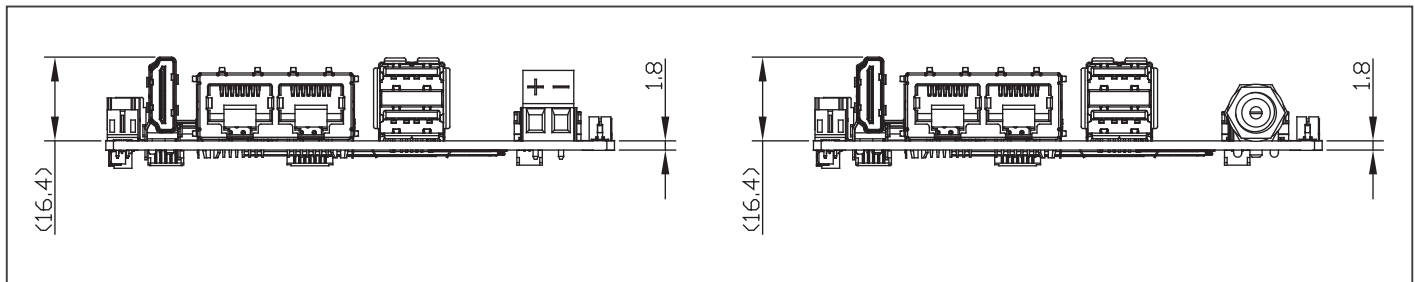


Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Display	Storage	LAN	USB	COM	Expansion slot	Power	Operating Temp	Audio	Others
PICO-MTU4-A10-0001	Intel® Core™ Ultra 5 Processor 125U	LPDDR5 8GB	HDMI x 1 eDP x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	RS232/422/485 x 2	M.2 2230 E-key x 1 M.2 2280 M-key x 1	+12V (Terminal block)	-20°C ~ 70°C	—	SMBus x 1, TPM2.0, GPIO
PICO-MTU4-A10-0002	Intel® Core™ Ultra 5 Processor 125U	LPDDR5 16GB	HDMI x 1 eDP x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	RS232/422/485 x 2	M.2 2230 E-key x 1 M.2 2280 M-key x 1	+12V (Terminal block)	-20°C ~ 70°C	—	SMBus x 1, TPM2.0, GPIO
PICO-MTU4-A10-0003	Intel® Core™ Ultra 5 Processor 125U	LPDDR5 32GB	HDMI x 1 eDP x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	RS232/422/485 x 2	M.2 2230 E-key x 1 M.2 2280 M-key x 1	+12V (Terminal block)	-20°C ~ 70°C	—	SMBus x 1, TPM2.0, GPIO
PICO-MTU4-A10-0004	Intel® Core™ Ultra 7 Processor 155U	LPDDR5 32GB	HDMI x 1 eDP x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 2 USB3.2 Gen 2 x 2	RS232/422/485 x 2	M.2 2230 E-key x 1 M.2 2280 M-key x 1	+12V (Terminal block)	-20°C ~ 70°C	—	SMBus x 1, TPM2.0, GPIO