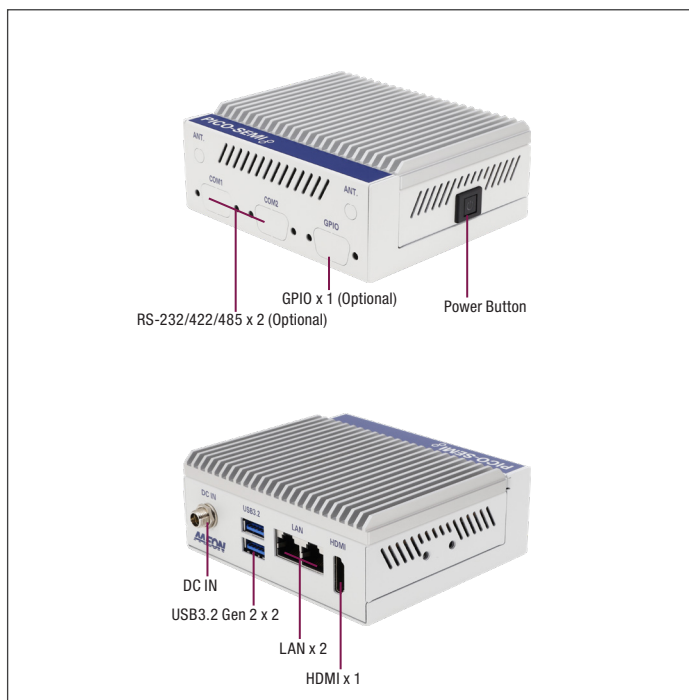


PICO-MTU4-SEMI

PICO-SEMI with Intel® Core™ Ultra 5 Processors



Features

- Intel® Core™ Ultra 5 Processor SoC
- Onboard LPDDR5, up to 32GB
- 2.5GbE Intel® Ethernet Controller I226 + 1GbE Intel® Ethernet Connection I219
- HDMI 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
- RS-232/422/485 x 2 (Optional)
- TPM, GPIO 4-bit (Optional)



Video	HDMI 1.4 x 1
Internal I/O	
USB	—
Serial Port	—
Video	—
SATA	—
Audio	—
DIO/GPIO	GPIO 4-bit (Optional)
SMBus/I2C	—
Fan	—
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	14°F ~ 122°F (-10°C ~ 50°C) with 0.7m/s air flow
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

Specifications

System	
Form Factor	PICO-SEMI
CPU	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	TPM2.0
RTC Battery	Lithium Battery 3V/240mAh
Dimension	4.25" x 3.74" x 1.69" (108mm x 95mm x 43mm)
Gross Weight	1.10 lb (0.60 kg)
OS Support	Windows 10/11 (64 bit) Linux Ubuntu 22.04.2 kernel 5.19.0 32 generic
Power	
Power Requirement	+12V
Power Supply Type	ATX
Connector	Lockable DC Jack Connector
Power Consumption	Intel® Core™ Ultra 5 Processor 125U, LPDDR5 32GB (Micron 3UC47 D8DRX x2), 2.75A @ +12V (Typical) Intel® Core™ Ultra 5 Processor 125U, LPDDR5 32GB (Micron 3UC47 D8DRX x2), 4.95A @ +12V (Max)
Display	
Controller	Intel® Graphics
LVDS/eDP	—
Display Interface	HDMI 1.4 x 1, 3840 x 2160 @30Hz
Multiple Display	1 Display
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 Gen2 x 2
Serial Port	COM 1~2 (RS-232/422/485, support 5V/12V/RI, Optional)

Packing List

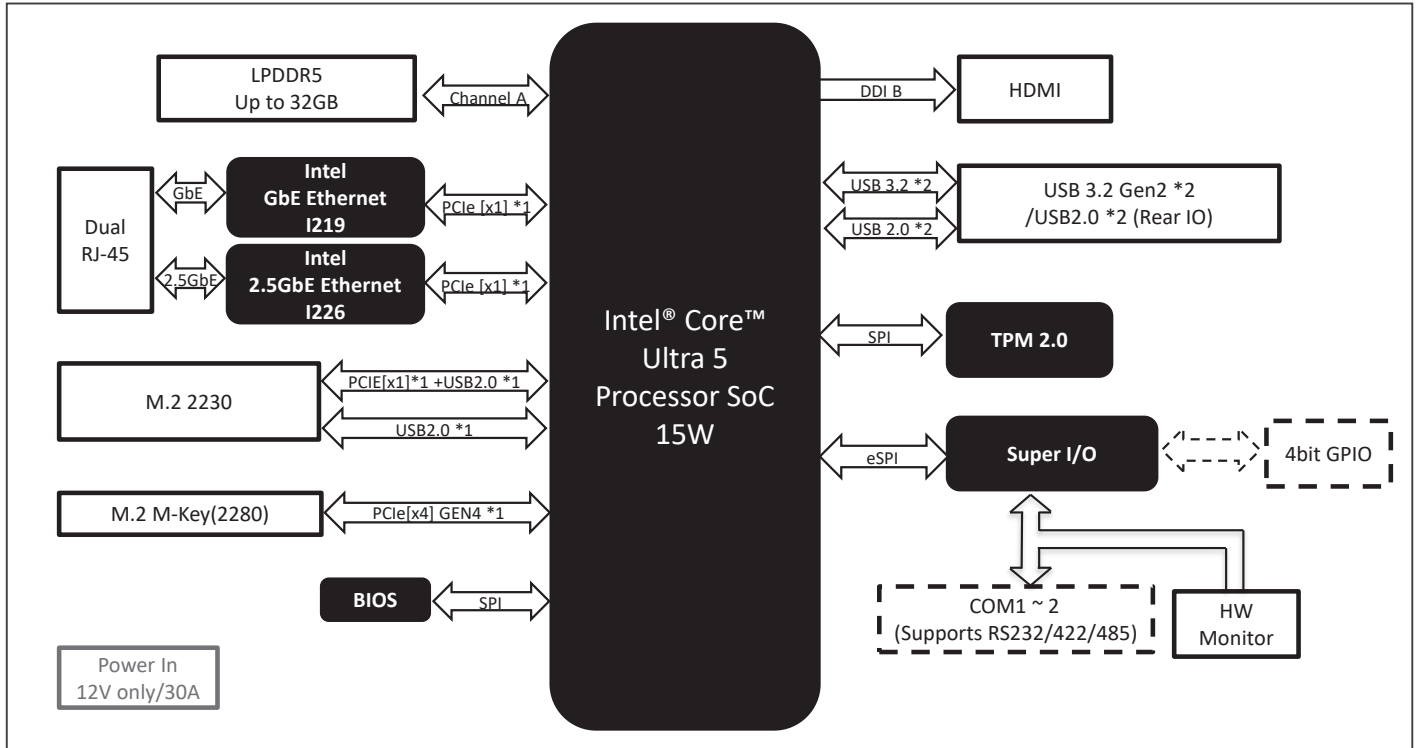
- PICO-MTU4-SEMI

Optional Accessories

Part Number	Description	Qty.
1702031802	Power Cord (US Type)	1
1702031803	Power Cord (Europe Type)	1
170203180E	Power Cord (Japan)	1
1255X00063	AC/DC Adapter.100~240V.150W.12V/12.5A.AC C14 DC JACK W/ Lock 180D. DELTA.DPS-150AB-15 J	1
170X001114	GPIO cable (150mm)	1
170X001117	Dual COM port cable (120mm)	1
PICO-SEMI-WMT1	PICO-MTU4-SEMI Wallmount bracket kit	1
PICO-SEMI-DIN01	Din rail kit.25mm*48.3mm	1

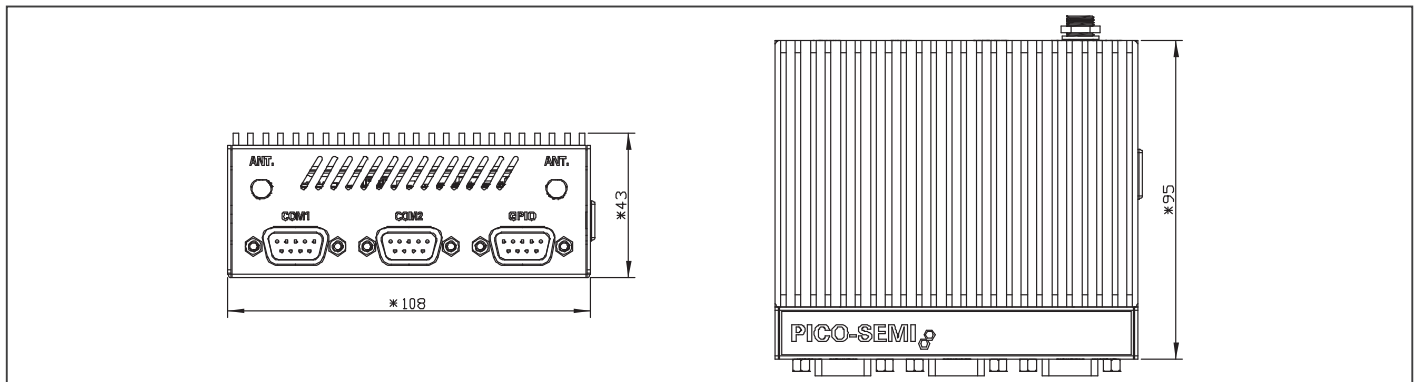


Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Display	Storage	LAN	USB	RS-232/422/485	Expansion slot	Power	Operating Temp	Others
PICO-MTU4-SEMI-A10-P001	Intel® Core™ Ultra 5 Processor 125U	LPDDR5 16GB	HDMI x 1	—	GbE x 1 2.5GbE x 1	USB3.2 Gen 2 x 2	—	M.2 2230 E-key x 1 M.2 2280 M-key x 1	+12V ATX	-10°C ~ 50°C	TPM2.0
PICO-MTU4-SEMI-A10-P002	Intel® Core™ Ultra 5 Processor 125U	LPDDR5 32GB	HDMI x 1	—	GbE x 1 2.5GbE x 1	USB3.2 Gen 2 x 2	—	M.2 2230 E-key x 1 M.2 2280 M-key x 1	+12V ATX	-10°C ~ 50°C	TPM2.0