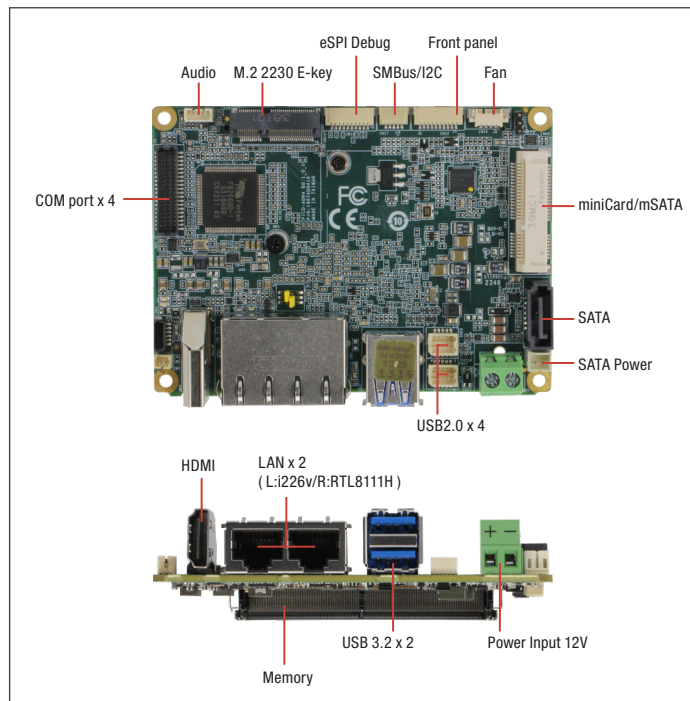


PICO-TWL4 Rev.B

Intel® Processor N150 & Intel® Core™ 3 Processor N355



Specifications

System	
Form Factor	PICO-ITX
CPU	Intel® Processor N150 (4C, 0.80GHz, 6W) Intel® Core™ 3 Processor N355 (8C, 1.90GHz, 15W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR5 4800, Single Channel SODIMM x 1, Max.16GB, Non-ECC
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM2.0
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 (64-bit) Ubuntu 22.04.2/Kernel 5.19
Power	
Power Requirement	+12V (Optional: +9 ~ 36V, support by power adapter card)
Power Supply Type	AT/ATX
Connector	Phoenix 2-pin Connector (Default) Lockable DC Jack Connector (Optional)
Power Consumption	Intel® Core™ 3 Processor N355, DDR5 16GB x 1, 3.53A @+12V (Typical) Intel® Core™ 3 Processor N355, DDR5 16GB x 1, 5.25A @+12V (Max)
Display	
Controller	Intel® UHD Graphics for 12th Gen Intel® Processors
LVDS/eDP	LVDS x 1 (18/24bit 2CH) 1920 x 1200 @60Hz eDP 1.4 x 1, 3840 x 2160 @60Hz (Optional)
Display Interface	HDMI 1.4 x 1, 3840 x 2160 @30Hz
Multiple Display	Up to 2 Simultaneous Displays
Audio	
Codec	Realtek ALC256 (Optional)
Audio Interface	Line-out (Optional, audio function not available for WiTAS SKU)
Speaker	—
External I/O	
Ethernet	Intel® Ethernet Controller I226, 2.5GbE, RJ-45 x 1 Realtek RTL8111H-CG, 1GbE, RJ-45 x 1
USB	USB 3.2 Gen2[x1] x 2 ports
Serial Port	—
Video	HDMI 1.4 x 1

Features

- Intel® Processor N150 & Intel® Core™ 3 Processor N355
- DDR5 4800MHz SODIMM x 1, up to 16GB
- HDMI 1.4 x 1, eDP 1.4b/LVDS x 1
- Intel® Ethernet Controller I226, 2.5GbE RJ-45 x 1, Realtek RTL8111H, 1GbE RJ-45 x 1
- Full-size mSATA/mPCIe x 1, M.2 2230 E-Key x 1
- USB 3.2 Gen2[x1] x 2, USB 2.0 x 4
- RS-232/422/485 x 2, RS-232 x 2
- TPM 2.0, SATA 6Gb/s x 1, 4-bit GPIO, SMBus/I2C x 1



Internal I/O	
USB	USB 2.0 x 4
Serial Port	COM 1~2 (RS-232/422/485, supports 5V/12V/Ri) COM 3~4 (RS-232)
Video	LVDS/eDP x 1 (Default: LVDS) Inverter x 1 (12V/2A)
SATA	SATA 6.0Gbps x 1 +5V SATA Power Connector x 1
Audio	Line-out header x 1 (Optional, audio function not available for WiTAS SKU)
DIO/GPIO	GPIO 4-bit
SMBus/I2C	SMBus/I2C x 1 (Default: SMBus)
Fan	4-pin Smart Fan x 1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
Expansion	
Mini PCIe/msATA	Full-size mSATA/mPCIe x 1 (default: mSATA, select with BIOS)
M.2	M.2 2230 E-Key x 1
Others	—
Environment & Certification	
Operating Temp	32°F ~ 140°F (0°C ~ 60°C) WiTAS 2 -40°F ~ 185°F (-40°C ~ 85°C), airflow 0.5m/s
Storage Temp	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	2,219,397
EMC	CE/FCC Class A

Packing List

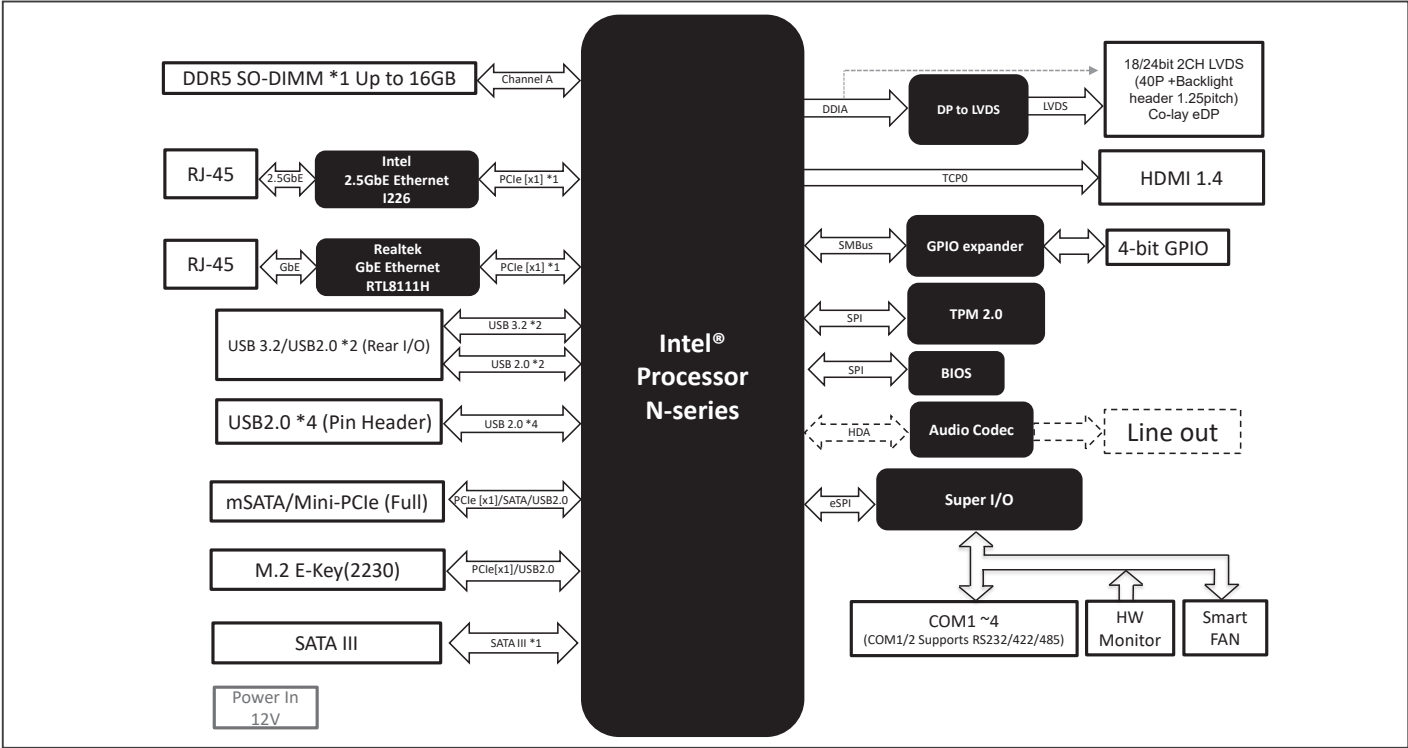
- PICO-TWL4 Rev.B

Optional Accessories

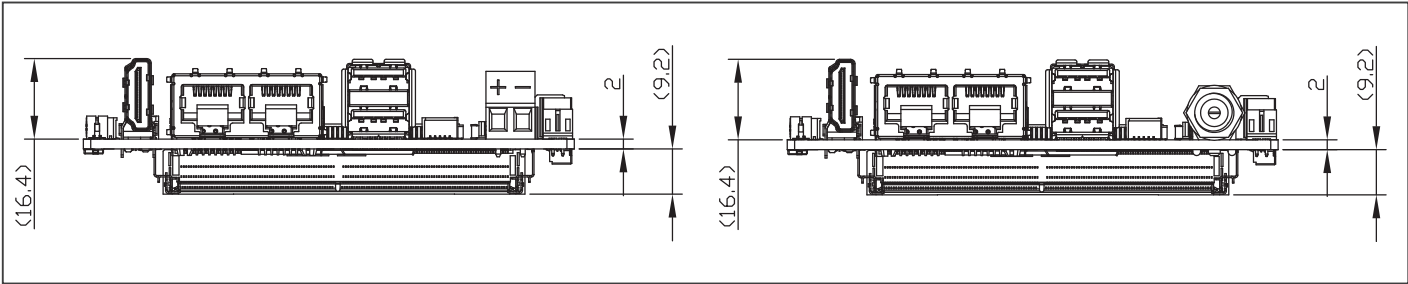
Part Number	Description	Qty.
170X000287	Front Panel cable.10cm	1
170X000317	Quad COM cable.15cm	1
170010010D	USB2.0 cable.10cm	2
1709070500	SATA CABLE.50cm	1
1702150155	SATA power cable.15cm	1
170X000779	Audio cable.25cm	1
1702030200	Power cable (Phoenix type to DC Jack).20cm	1
PICO-ASL4-FAN01	Cooler.100*72*25.5mm.for PICO-ASL4 Rev.B/PICO-ADN4 Rev.B	1
PICO-ASL4-HSK01	Heat Sink.100*72*25.5mm (Heat spreader-less, all in one HSK).for PICO-ASL4 Rev.B/PICO-ADN4 Rev.B	1
PICO-ASL4-HSP01	Heat Spreader.AL.100*72*12mm.for PICO-ASL4 Rev.B/PICO-ADN4 Rev.B	1
PER-P30D-A11-0001	120W, DC-DC Converter, 9~36V input, 12V output, Rev A1.1, 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-TWL4-B10-0001	Intel® Processor N150	SD-DIMM	HDMI x 1 LVDS x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2	RS232/422/485 x 2 RS232 x 2	M.2 2230 E-key x 1 miniCard (Full) x 1	+12V (Terminal block)	0°C ~ 60°C	—	SMBus x 1, TPM2.0, GPIO
PICO-TWL4-B10-0002	Intel® Core™ 3 Processor N355	SD-DIMM	HDMI x 1 LVDS x 1	SATAIII x 1	GbE x 1 2.5GbE x 1	USB 2.0 x 4 USB3.2 Gen 2 x 2	RS232/422/485 x 2 RS232 x 2	M.2 2230 E-key x 1 miniCard (Full) x 1	+12V (Terminal block)	0°C ~ 60°C	—	SMBus x 1, TPM2.0, GPIO

Note: All specifications are subject to change without notice.