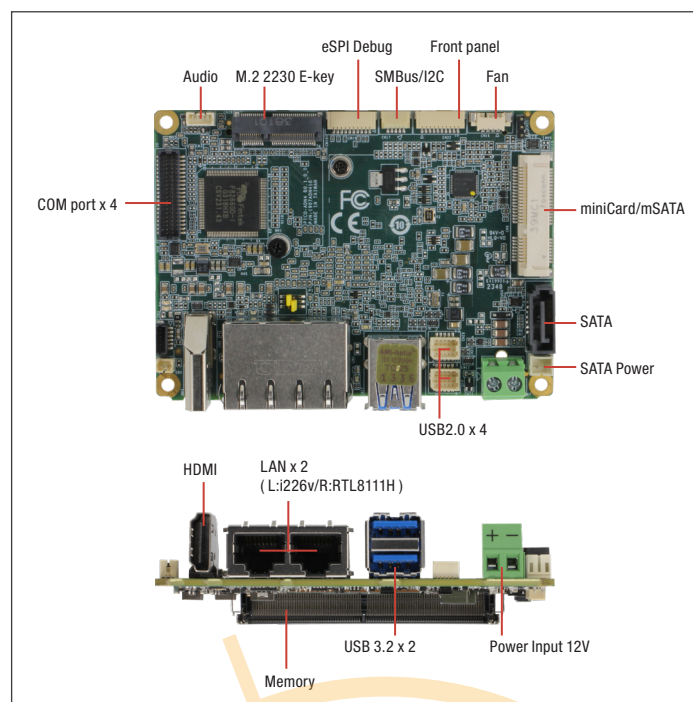


PICO-TWL4 Rev.B

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 lbs (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)
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

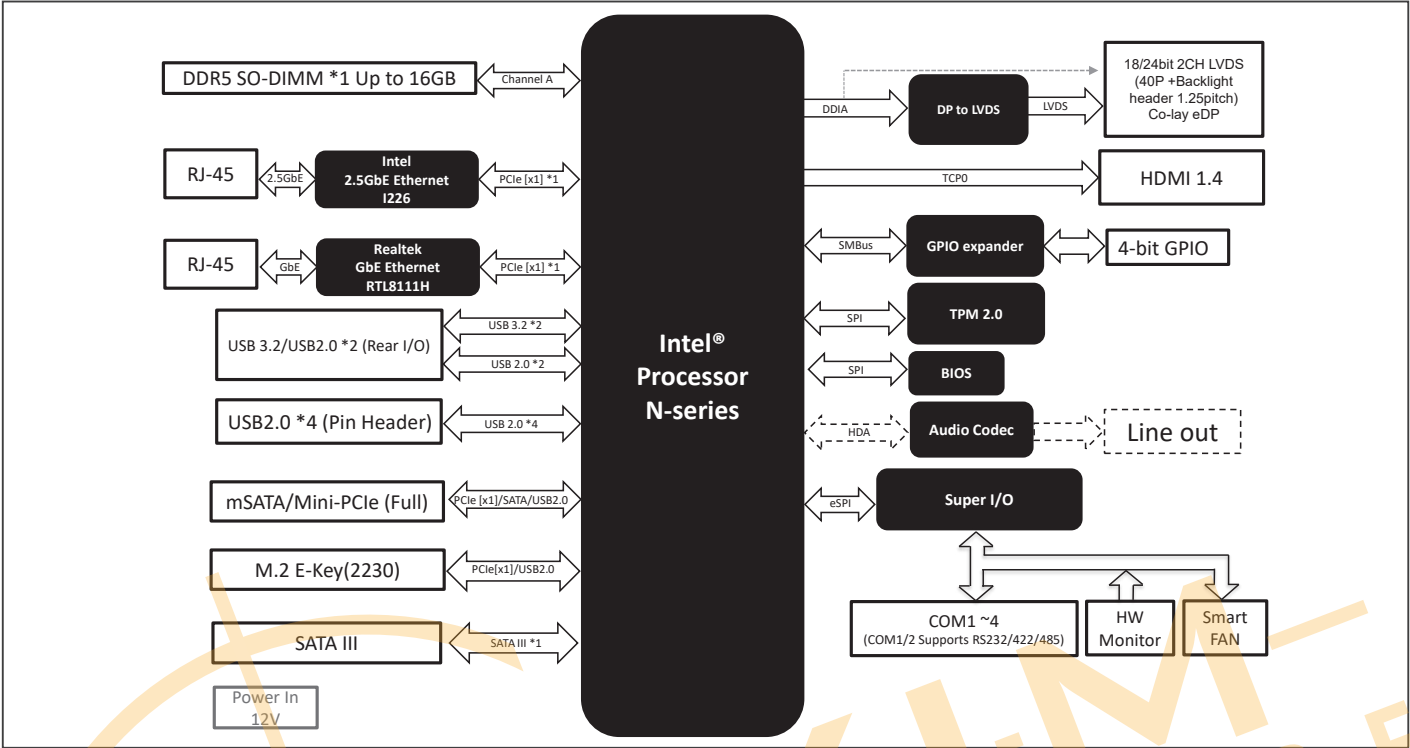
- PICO-TWL4 Rev.B

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

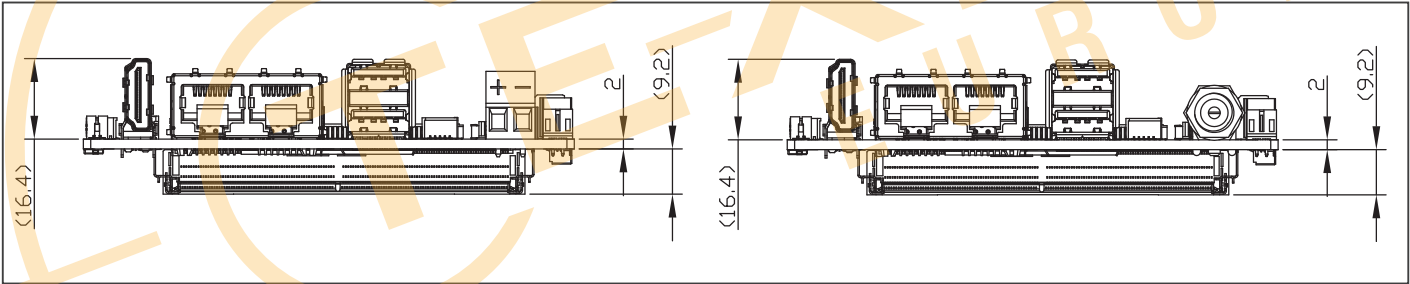


Block Diagram



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

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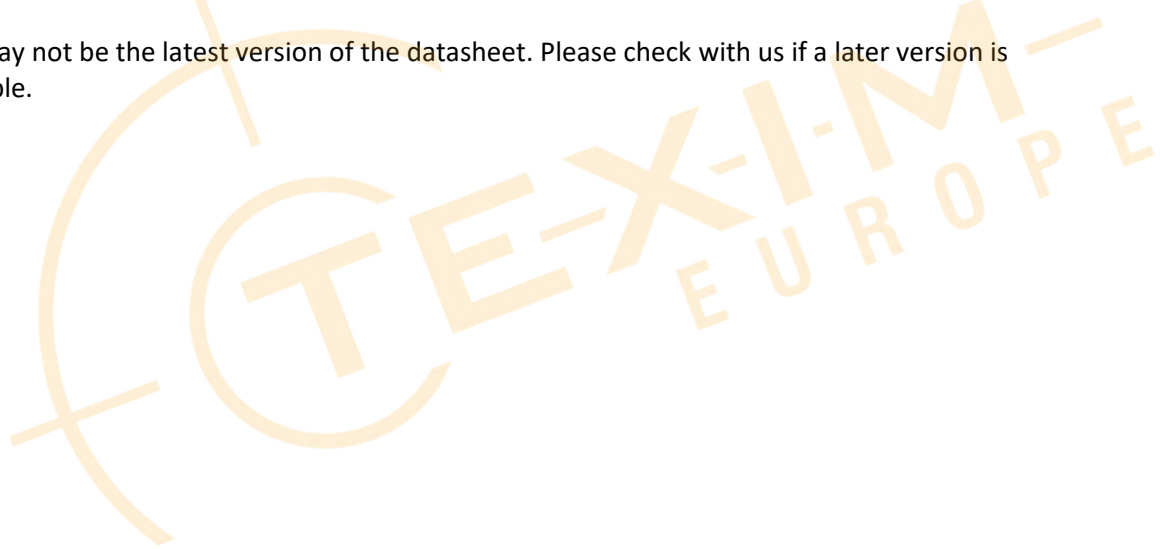
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Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

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