

iTXL-N150B (MTWN1AT-SI)

Thin Mini-ITX Embedded Motherboard with Intel® Processor N150, Single Channel DDR5 memory, 4 x COM, 1 x SATA 6Gb/s, 10 x USB



Features

- Thin Mini-ITX form factor
- Intel® Processors N150
- Single Channel DDR5, 1 x SO-DIMM
- 2 x GbE LAN Ports
- 1 x SATA 6Gb/s Port
- HDMI, eDP, LVDS ports for Multiple Display
- 4 x COM Ports (RS-232/422/485 & RI/5V/12V)

Specifications

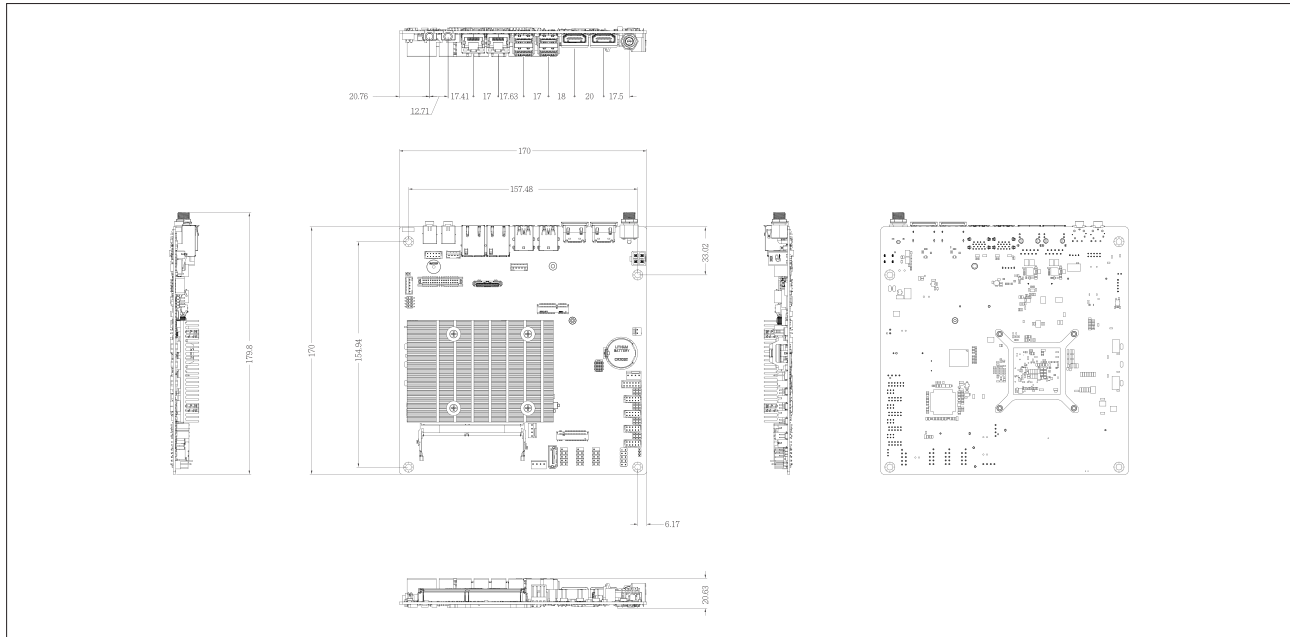
Form Factor	Thin Mini-ITX 170W x 170D (mm)
CPU	Intel® Processor N150 Intel 7, 4 cores, up to 3.60 GHz TDP 6W
Socket	1 x FCBGA1264
Memory	1 x DDR5 SO-DIMM socket, Max. Capacity 16 GB Support Single channel DDR5 4800 MHz memory modules
Ethernet	2 x GbE LAN Ports (Realtek® RTL8111H)
Video	Integrated Graphics Processor - Intel® Graphics support: 2 x HDMI 2.0 port, supporting a maximum resolution of 4096x2160 @60Hz 1 x eDP port, supporting a maximum resolution of 3840x2160 @60Hz 1 x LVDS port, supporting a maximum resolution of 1920x1200 @60Hz (3 independent display outputs)
Audio	Realtek® ALC269
Storage	1 x SATA 6Gb/s Port
Expansion Slots	1 x 2280 M.2 M-Key (PCIe Gen 3x1, SATA 6Gb/s) 1 x 2230 M.2 E-Key

Internal I/O	1 x 4-pin ATX main power connector 1 x SATA Power connector 1 x CPU fan header 1 x System fan header 1 x Front panel header 1 x Front panel audio header 1 x 2W Speaker out header 6 x USB 2.0 headers 4 x COM headers (RS-232/422/485 & RI/5V/12V) 1 x GPIO (8 bits) & SMBus header 1 x Backlight Control header for eDP 1 x Backlight Control header for LVDS 1 x AT/ATX mode select jumper 1 x ATX control header
Rear I/O	2 x Audio Jacks (Headphone out, Mic in) 2 x HDMI 2 x RJ45 LAN Ports 4 x USB 3.2 Gen 1 1 x DC Jack (+12V~24VDC)
TPM	Onboard TPM 2.0 security chip INFINEON SLB9672VU2.0
OS Compatibility	Windows 11 IoT Enterprise 24H2 (x64) Windows 11 IoT Enterprise LTSC 2024 (x64) Windows 11 Enterprise LTSC 2024 (x64)
Operating Properties	Operating temperature: 0°C to 60°C Operating humidity: 60°C @ 20-95% (non-condensing) Non-operating temperature: -40°C to 85°C Non-operating humidity: 85°C @ 95% (non-condensing)
Packing Content	Carton size: 465 x 351 x 217 (mm) Packing Capacity: 10pcs Single Box size: 221 x 178 x 65 (mm) Including: Standard IO Shield x 1 (P/N: 12AIO-MEHLJA-00R) Low-Profile IO Shield x 1 (P/N: 12AIO-MJPLNO-00R) SATA Power Cable x 1 (P/N: 25CRI-200B02-K1R)
Order Information	9MTWN1ATMR-SI (Box Packing)

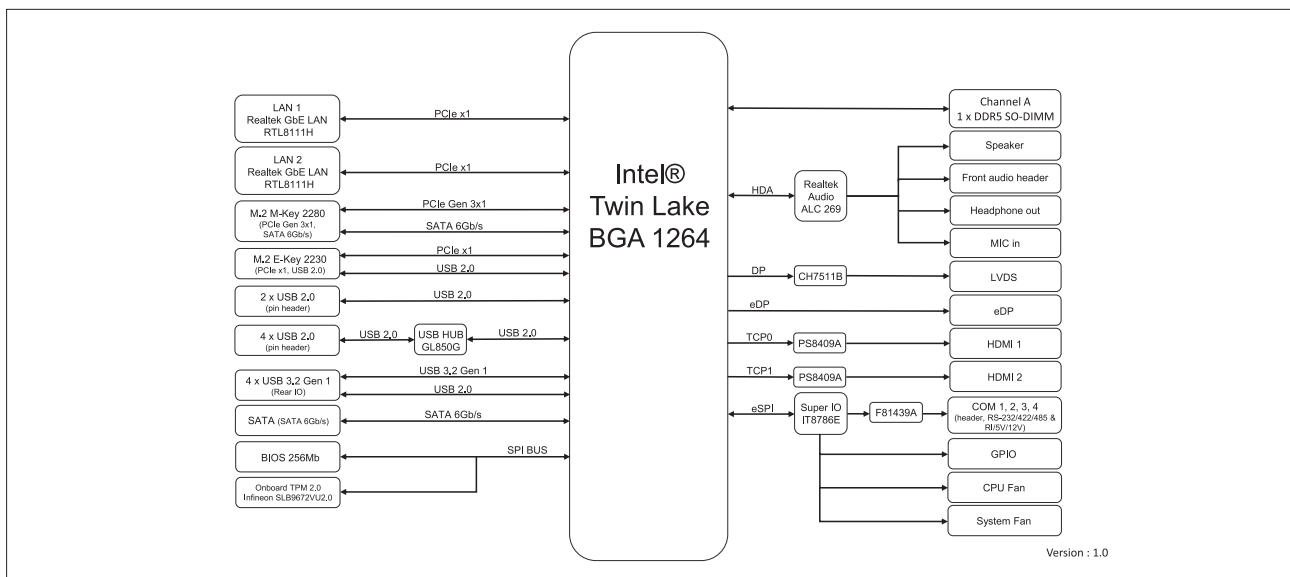
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Dimension (Unit: mm)

2026/01/21



Block Diagram



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