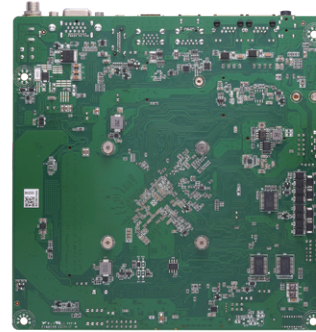
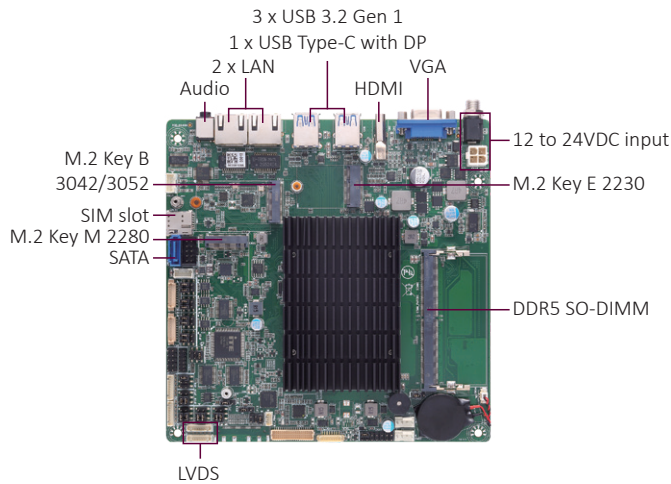
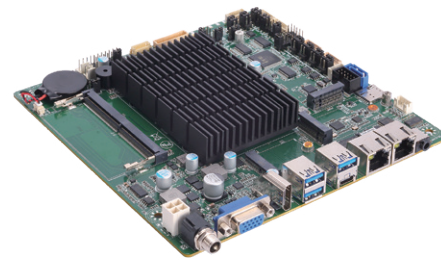


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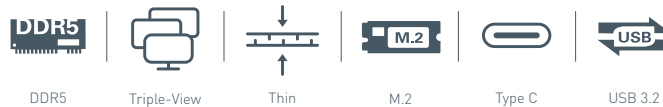
Thin Mini-ITX SBC with Intel® Processor N97/N150, DDR5, Type-C, M.2, HDMI, VGA, LVDS, and Dual LAN



▲ Rear view



▲ Side view



## Features

- Intel® Processor N97/N150
- DDR5-4800 SO-DIMM for up to 32GB
- Dual LAN ports
- M.2 Key B 3042/3052
- M.2 Key E 2230
- M.2 Key M 2280

## Specifications

### Core System

CPU	Intel® Processor N97/N150
System Memory	1 x 262-pin DDR5-4800 SO-DIMM, up to 32GB
Chipset	SoC integrated
BIOS	AMI
Storage	1 x M.2 Key M 2280 (SATA/NVMe auto detect) 1 x SATA 3.0
Watchdog Timer	255 levels, 0 to 255 sec.



## Specifications

Expansion Interface	1 x M.2 Key E 2230 (PCIe 3.0 x1, USB 2.0) 1 x M.2 Key B 3042/3052 (PCIe 3.0 x1 + USB 3.2 Gen 1 + USB 2.0) 1 x Nano SIM
Battery Lithium	Lithium 3V/220mAH
Power Input	12V to 24V DC in, ATX mode (jumper-selectable AT mode) (ATX 2 x 2-pin connector supported by BOM selection)
Power Consumption (Max.)	38.1W

### Display

Chipset	Intel® UHD Graphics
Display Interface	1 x HDMI 1 x VGA 1 x LVDS (co-layout with eDP)

### I/O

External	3 x USB 3.2 Gen 1 (rear, 1 port co-layout with M.2 Key B) 1 x USB Type-C (DisplayPort/USB 5 Gbps support) 1 x 2.5GbE Ethernet (RTL8125BG-CG) 1 x GbE Ethernet (RTL8111H-CG) HD Codec audio as MIC-in/Line-out with Realtek ALC897 (rear: MIC-in and Line-out)
Internal	2 x USB 2.0 2 x RS-232 (wafer) (default: RS-232/jumper-selectable RS-422 or RS-485) 4 x RS-232 (wafer) 1 x SATA 3.0

### Key Benefits

TPM	TPM 2.0 supported by Intel® Platform Trust Technology (PTT)
GPIO	8-bit (2.54 mm pitch)
Hardware Monitoring	Detect CPU/system temperature, voltage, and fan speed

### Mechanical and Environmental

Dimensions	170 x 170 mm
Board Thickness	1.6 mm
Operating Temperature	0°C to +60°C (+32°F to +140°F)
Relative Humidity	5% to 95% relative humidity, non-condensing

## Ordering Information

### Standard

MANO330-N97-S (P/N: S38M330101)	Thin Mini-ITX SBC with Intel® Processor N97, 1 x VGA, 1 x HDMI, LVDS, 5 x USB, 1 x USB Type-C, 2 x LAN, HD Audio, and single-box packing
MANO330-N97-B	Thin Mini-ITX SBC with Intel® Processor N97, 1 x VGA, 1 x HDMI, LVDS, 5 x USB, 1 x USB Type-C, 2 x LAN, HD Audio, and bulk packing
MANO330-N150-S (P/N: S38M330100)	Thin Mini-ITX SBC with Intel® Processor N150, 1 x VGA, 1 x HDMI, LVDS, 5 x USB, 1 x USB Type-C, 2 x LAN, HD Audio, and single-box packing
MANO330-N150-B	Thin Mini-ITX SBC with Intel® Processor N150, 1 x VGA, 1 x HDMI, LVDS, 5 x USB, 1 x USB Type-C, 2 x LAN, HD Audio, and bulk packing

### Optional

59432170600E	SATA power cable, 4-pin to SATA power, 180 mm (RC)
59386831000E	2 x USB, 2 x 5-pin (2.54 mm pitch), L=180 mm
59382620000E	COM port cable with bracket, 2.0 mm pitch, L=300 mm
50956A24070E	Power adapter, 12 VDC, 60W, FSP060-DHAN3, with screw lock
509000003700	24 VDC, 65W power adapter, 100 to 240 VAC input, 1200 mm cable (FSP065M-DAA3)



## Block Diagram

