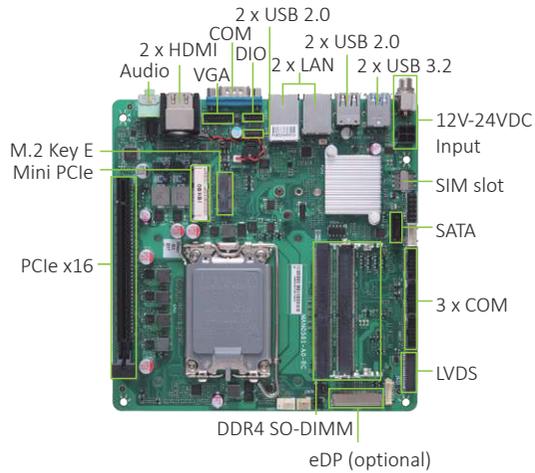# MANO561

Thin Mini-ITX SBC with LGA1700 14th/13th/12th gen Intel® Core™ i9/i7/i5/i3, Pentium® or Celeron® processor HDMI, VGA, LVDS, USB 3.2, M.2, and Dual GbE LAN

Labels (top board image):
- 2 x USB 2.0
- COM
- 2 x HDMI
- DIO
- 2 x USB 2.0
- Audio
- VGA
- 2 x LAN
- 2 x USB 3.2
- M.2 Key E
- Mini PCIe
- 12V-24VDC Input
- SIM slot
- SATA
- PCIe x16
- 3 x COM
- LVDS
- DDR4 SO-DIMM
- eDP (optional)

- M.2 Key B (2242/3042/3052)

▲ Rear view

▲ Side view

▲ ECM550

Features

- LGA1700 14th/13th/12th gen Intel® Core™ i9/i7/i5/i3, Pentium® or Celeron® processor
- Intel® H610 chipset
- 2 DDR4 SO-DIMM for up to 64GB memory
- 2 USB 3.2 Gen1 and 5 USB 2.0
- 2.5GbE LAN and 4 COM ports
- 1 PCIe x16, 1 M.2 Key E, and 1 M.2 Key B
- 1 full-size PCI Express Mini Card slot
- 1 SATA-600
- 12 to 24 VDC power in

Quad-View DDR4 M.2 PCIe Mini 12 to 24 VDC Thin

Specifications

Core System

CPU	LGA1700 14th/13th/12th gen Intel® Core™ i9/i7/i5/i3, Pentium® or Celeron® processor (up to 65W)
System Memory	2 x 260-pin DDR4-3200/2666/2400 SO-DIMM, up to 64GB
Chipset	Intel® H610
BIOS	AMI
Watchdog Timer	255 levels, 1 to 255 sec.
Expansion Interface	1 x PCIe x16 1 x M.2 Key B 2242/3042/3052 (with support for SATA & USB 3.2 Gen1) 1 x M.2 Key E 2230 1 x PCIe Mini Card slot (with support for PCIe x1 & USB 2.0) 1 x SIM slot for M.2 Key B
Battery Lithium	Lithium 3V/220mAH
Power Input	1 x 12 to 24V DC Jack 1 x 12 to 24V 4-pin ATX connector

Display

Chipset	Intel® UHD Graphics
Memory Size	Share system memory
Display Interface	2 x HDMI 1 x LVDS (eDP BOM optional) 1 x VGA

I/O

SATA	1 x SATA-600
Hardware Monitoring	Detect CPU/system temperature, voltage and fan speed
Ethernet	1 x 2500/1000/100/10 Mbps Gigabit/Fast Ethernet with support for Wake-on-LAN and PXE using Intel® I225-V 1 x 1000/100/10 Mbps Gigabit/Fast Ethernet with support for Wake-on-LAN and PXE using Intel® I219-V
Audio	HD Codec audio as MIC-in/Line-in/Line-out with Realtek ALC897
USB	2 x USB 3.2 Gen1 5 x USB 2.0
Serial	1 x RS-232/422/485 (with +5V/+12V power) 3 x RS-232
TPM	Onboard TPM 2.0 (TPM IC: SLB9670)
Digital I/O	8-channel in/out programmed

Mechanical and Environmental

Size	170 x 170 mm
Board Thickness	1.6 mm
Operating Temperature	0°C to +60°C (+32°F to +140°F)
Relative Humidity	10% to 95% relative humidity, non-condensing

ECM550, Embedded Chassis

Construction	Heavy-duty cold-rolled steel
Indicator	1 x Blue LED for system power-on 1 x Amber LED HDD Active
Panel I/O	**Front** 4 x D-Sub connector 1 x Power button 2 x USB 2.0 1 x Reset button **Rear** 1 x Standard Thin Mini-ITX I/O bracket space
ECM550 (P/N:E272550101)	Embedded Thin MicroBox for Low Power Mini-ITX SBC

Packing List

I/O bracket 2pcs (Thin and Standard)

Ordering Information

Standard

MANO561-H-B (P/N: E38M561100)	Mini-ITX SBC with LGA1700 14th/13th/12th gen Intel® Core™ processor, HDMI, VGA, LVDS, USB 3.2, M.2, dual GbE LAN, HD audio, and bulk packing
MANO561-H-S (P/N: E38M561101)	Mini-ITX SBC with LGA1700 14th/13th/12th gen Intel® Core™ processor, HDMI, VGA, LVDS, USB 3.2, M.2, dual GbE LAN, HD audio, and single box packing

Optional

505000001000	LGA1700 Cooler 1U 4500RPM
505000001100	LGA1700 Cooler 1.5U 5500RPM
594P8802810E	USB Cable 150mm with screwUSB Type-A Female x1 /HS P1.25-4P Internal
590000039200	COM Cable D-SUB9P to DuPont 2x5 P2.0 L=300 mm
59386831010E	SATA2 Signal Cable 180D, L=350 mm (RC)
590000054400	CBL HS4P_to_SATA15P 300mm HS(XH 2.5 1x4)4P Pitch=2.5 /SATA 15P F 180D Internal
5095AD24000E	ADAPTER 19V 120W with screw
590000064100	VGA cable D-SUB15P_to_HS16P 250mm D-SUB 15PIN(F) /HS(DP 2032H-2x8P)16P2.0 Internal
591000006000	USB cable L=250mm with SCREWUSB USB Type-A Female x 2 /HS (DP 2032H-2x5P)10P2.0 Internal