

# MANO540 NEW

Mini-ITX SBC with FCLGA1200 10th Gen Intel® Core™ i9/i7/i5/i3, DisplayPort++, HDMI, VGA, eDP, USB 3.2, M.2, and Dual GbE LAN

## Features

- FCLGA1200 10th gen Intel® Core™ i9/i7/i5/i3 processor
- Intel® H410 chipset
- 2 DDR4 SO-DIMM for up to 64GB memory
- 2 USB 3.2 Gen1 and 5 USB 2.0
- 6 COM port
- 1 PCIe x16 and 1 M.2 Key E slot
- 1 Full-size mini-PCIe slot
- 2 SATA-600
- 1 M.2 Key B for USB 3.2 interface 5G module



## Core System

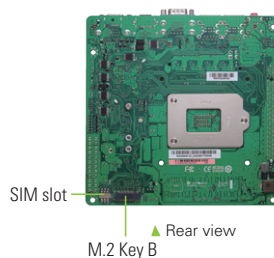
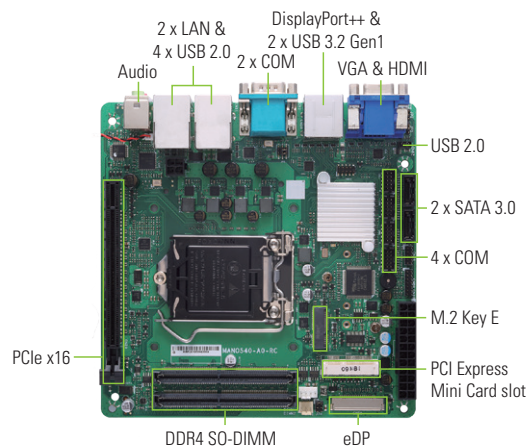
|                                     |                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------|
| CPU                                 | FCLGA1200 10th gen Intel® Core™ i9/i7/i5/i3, Intel® Pentium® processors Gold/Celeron® processors (up to 65W) |
| System Memory                       | 2 x 260-pin DDR4-2933/2666/2400 SO-DIMM, up to 64GB                                                          |
| Chipset                             | Intel® H410                                                                                                  |
| BIOS                                | AMI                                                                                                          |
| Watchdog Timer                      | 255 levels, 1 to 255 sec.                                                                                    |
| Expansion Interface                 | 1 x PCIe x16<br>1 x M.2 Key B<br>1 x M.2 Key E 2230<br>1 x mini-PCIe                                         |
| M.2 Key B Expansion Function Option | USB 3.2 Gen1 for 3042/3052 5G module or SATA interface for 2242/2280 SSD                                     |
| Battery Lithium                     | Lithium 3V/220mAH                                                                                            |
| Power Input                         | Standard 12V ATX power<br>24+4 pin ATX connector<br>AT mode auto power function supported                    |
| 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% - 95% relative humidity, non-condensing                                                                  |

## I/O

|                     |                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SATA                | 2 x SATA-600                                                                                                                                                                   |
| Hardware Monitoring | Detect CPU/system temperature, voltage and fan speed                                                                                                                           |
| Ethernet            | 1 x 10/100/1000 Mbps Ethernet with Intel® i211-AT; supports Wake-on-LAN, PXE Boot ROM<br>1 x 10/100/1000 Mbps Ethernet with Intel® i219-LM; supports Wake-on-LAN, PXE Boot ROM |
| Audio               | HD Codec audio as MIC-in/Line-in/Line-out with Realtek ALC897/888S                                                                                                             |
| USB                 | 2 x USB 3.2 Gen1<br>5 x USB 2.0                                                                                                                                                |
| Serial              | 1 x RS-232/422/485 (with +5V/+12V power)<br>5 x RS-232                                                                                                                         |
| PS/2 Combo Port     | N/A                                                                                                                                                                            |
| TPM                 | Onboard TPM 2.0 (optional)                                                                                                                                                     |
| SMBus               | N/A                                                                                                                                                                            |
| Digital I/O         | 8-channel in/out programmed                                                                                                                                                    |

## Display

|                   |                                                         |
|-------------------|---------------------------------------------------------|
| Chipset           | Intel® integrated Gfx graphic engine                    |
| Memory Size       | Share system memory                                     |
| Display Interface | 1 x DisplayPort++<br>1 x HDMI 2.0<br>1 x eDP<br>1 x VGA |



## ECM500, Embedded Chassis

|                          |                                                                                                                 |
|--------------------------|-----------------------------------------------------------------------------------------------------------------|
| Construction             | Heavy-duty cold-rolled steel                                                                                    |
| I/O                      | 1 x Power button<br>1 x Standard Mini-ITX I/O bracket space<br>3 x D-Sub connector<br>1 x PCI Express card slot |
| Dimensions               | 217.2 mm (8.55") (D) x 300 mm (11.81") (W) x 74 mm (2.91") (H)                                                  |
| ECM500 (P/N: E272500101) | Embedded MicroBox for low power Mini-ITX SBC                                                                    |

## Packing List

|                 |
|-----------------|
| <b>Standard</b> |
| I/O bracket     |

## Ordering Information

|                                 |                                                                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Standard</b>                 |                                                                                                                                                                     |
| MANO540-H-B (P/N: E38M540100)   | Mini-ITX SBC with FCLGA1200 10th gen Intel® Core processor, DP++, HDMI, VGA, eDP, USB 3.2, M.2 for USB 3.2 interface, dual GbE LAN, HD audio, and bulk packing      |
| MANO540-H-S (P/N: E38M540101)   | Mini-ITX SBC with FCLGA1200 10th gen Intel® Core processor, DP++, HDMI, VGA, eDP, USB 3.2, M.2 for USB3.2 interface, dual GbE LAN, HD audio, and single box packing |
| MANO540-H-B-A (P/N: E38M540102) | Mini-ITX SBC with FCLGA1200 10th gen Intel® Core processor, DP++, HDMI, VGA, eDP, USB 3.2, M.2 for SATA interface, dual GbE LAN, HD audio, and bulk packing         |
| MANO540-H-S-A (P/N: E38M540103) | Mini-ITX SBC with FCLGA1200 10th gen Intel® Core processor, DP++, HDMI, VGA, eDP, USB 3.2, M.2 for SATA interface, dual GbE LAN, HD audio, and single box packing   |

|                 |                                                      |
|-----------------|------------------------------------------------------|
| <b>optional</b> |                                                      |
| 594M5402100E    | COM cable DB9/DUPONT 2x5 P2.0, L=20 cm               |
| 594P8802810E    | USB to 1.25 4pin housing, L:150 mm                   |
| 71377AGC000E    | FCLGA1200 1.5U Cooler                                |
| E272500101      | ECM500, Embedded MicroBox for low power Mini-ITX SBC |
| 5078M873010E    | LGA1156 1.5U cooler<br>JYC8L05AGCCOOLER JYC8L05AGC   |