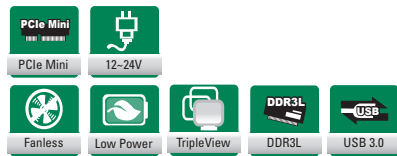
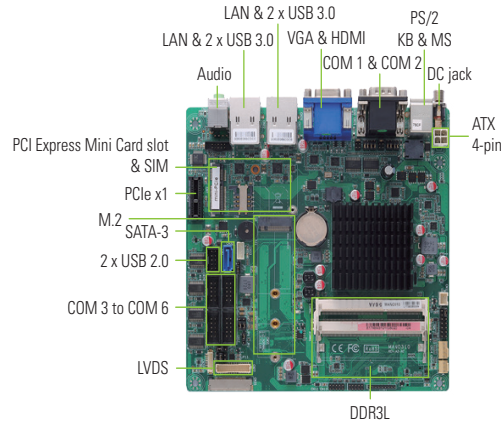


# MANO310

Mini-ITX SBC with Intel® Celeron® Processor N3350 & Pentium® Processor N4200, VGA, HDMI, LVDS, USB 3.0, PCI Express Mini Card Slot, M.2, and HD Audio

## Features

- Intel® Celeron® N3350 & Pentium® N4200 (optional)
- 2 DDR3L SO-DIMM for up to 8GB of memory
- 1 PCI Express Mini Card slot and PCIe x1
- 4 USB 3.0 and 2 USB 2.0
- 1 SATA-600, 1 M.2 and 1 SDXC slot
- 6 COM supported
- 12 to 24 VDC
- VGA, HDMI and LVDS with triple-view supported



### Core System

CPU	Intel® Celeron® N3350 & Pentium® N4200 (optional)
System Memory	2 x 204-pin DDR3L-1867 SO-DIMM dual channel, up to 8GB
Chipset	SoC integrated
BIOS	AMI
SSD	1 x M.2 Key B 22 x 42/60/80 1 x SDXC slot
Watchdog Timer	255 levels, 1 to 255 sec.
Expansion Interface	1 x PCIe x1 1 x PCI Express Mini Card slot 1 x SIM card slot
Battery	Lithium 3V/220 mAh
Power Input	12 to 24 VDC
Dimensions	170 x 170 mm
Board Thickness	1.6 mm
Operating Temperature	0°C to +60°C (+32°F to +140°F)
Humidity	10% to 95% relative humidity, non-condensing

### I/O

SATA	1 x SATA-600
Ethernet	2 x 10/100/1000 Mbps Ethernet with Realtek RTL8111F; support Wake-on-LAN, PXE Boot ROM
Audio	HD Codec audio as Mic-in/Line-out with Realtek ALC662
USB	2 x USB 2.0 (internal) 4 x USB 3.0 (rear I/O)
Serial	2 x RS-232/422/485 (Rear I/O) 4 x RS-232 (COM 3 with +5/+12V)
PS/2 Combo Port	1 x PS/2 keyboard and mouse
TPM	N/A
SMBus	N/A
Digital I/O	16-channel in/out programmable

### Display

Chipset	Intel® integrated Gfx graphic engine
Memory Size	Shared memory
Display Interface	1 x VGA 1 x HDMI 1 x LVDS; 18/24-bit dual channel

### Packing List

<b>Standard</b>	User's manual/utility CD and I/O bracket/heatsink
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### Ordering Information

<b>Standard</b>	
MANO310VHGGGA-N3350 (P/N: E38M310104)	Mini-ITX SBC with Intel® Celeron® processor N3350 (1.1 to 2.4 GHz, 2MB cache, 6W), VGA, HDMI, LVDS, 2 GbE LANs, 6 COM, USB 3.0, M.2, PCI Express Mini Card slot and HD audio
<b>Optional</b>	
MANO310VHGGGA-N4200	Mini-ITX SBC with Intel® Pentium® processor N4200 (1.1 to 2.5 GHz, 2MB cache, 6W), VGA, HDMI, LVDS, 2 GbE LANs, 6 COM, USB 3.0, M.2, PCI Express Mini Card slot and HD audio
594P8800600E	SATA power cable 4-pin to 15-pin, P=2.0 mm, L=200 mm
59386831000E	2 x USB, 2 x 5P 2.54 mm, L=180 mm
59380703000E	2 x COM port with bracket, P=2.54 mm

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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