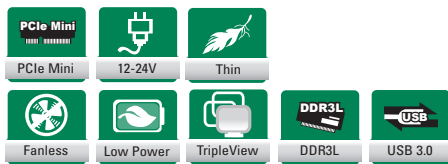


# MANO311

Thin Mini-ITX SBC with Intel® Celeron® Processor N3350, Dual HDMI, LVDS, USB 3.0, PCI Express Mini Card, mSATA and HD Audio

## Features

- Intel® Celeron® processor N3350
- 1 DDR3L SO-DIMM for up to 8GB of memory
- 4GB DDR3L onboard memory (optional)
- 1 PCI Express Mini Card slot and PCIe x1
- 4 USB 3.0 and 2 USB 2.0
- 1 SATA-600, 1 mSATA and 1 SDXC
- 6 COM supported
- Low profile

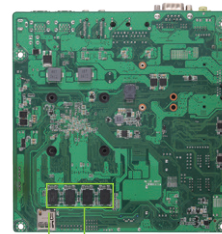
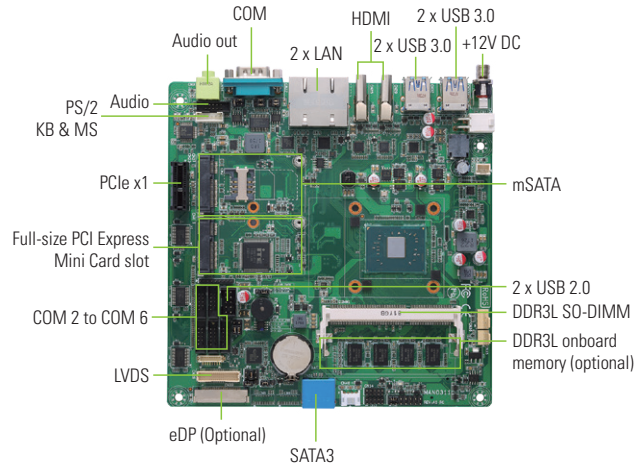


### Core System

CPU	Intel® Celeron® processor N3350
System Memory	1 x 204-pin DDR3L-1866 SO-DIMM, up to 8GB 4GB onboard memory (optional)
Chipset	SoC integrated
BIOS	AMI
SSD	1 x mSATA 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	1 x 12V/5A DC jack power 1 x 12V to 24V 4-pin ATX power
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	1 x RS-232/422/485 (rear I/O) 5 x RS-232 (COM 2 with +5/+12V powered)
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



SDXC slot  
DDR3L memory  
▲ Rear view



▲ Side view

### Display

Chipset	Intel® integrated Gfx graphic engine
Memory Size	Shared memory
Display Interface	2 x HDMI 1 x LVDS; 18/24-bit dual channel 1 x eDP (optional)

### Packing List

<b>Standard</b>	User's manual/utility CD/heatsink
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### Ordering Information

<b>Standard</b>	MANO311HGGA-N3350 (P/N: E38M311100)	Mini-ITX SBC with Intel® Celeron® processor N3350 (1.1 to 2.4 GHz, 2MB cache, 6W), 2 HDMI, LVDS, 2 GbE LANs, 6 COM, USB 3.0, mSATA, PCI Express Mini Card slot and HD audio
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<b>Optional</b>	594P8800600E	SATA power cable, 4-pin to 15-pin, P=2.0 mm, L=200 mm
	59382620000E	COM port cable, P=2.0 mm, L=300 mm
	594M5002A00E	6-pin wafer to PS/2 cable, P=2.0 mm, L=200 mm
	59384500100E	Audio cable with bracket, P=2.0 mm, L=420 mm
	59386831000E	2-port USB cable with bracket, 5-pin header, P=2.54 mm, L=180 mm
	59381560000E	6-pin PS/2 cable adapter