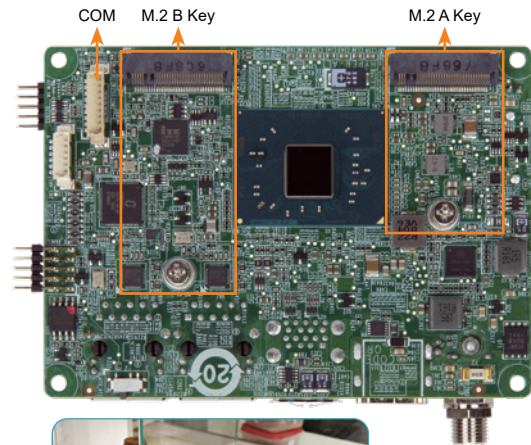
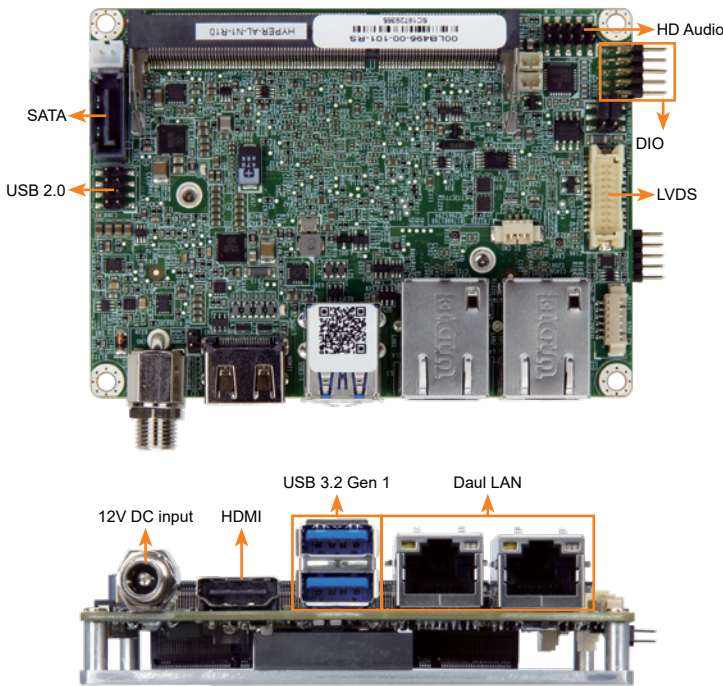


# HYPER-AL

PICO-ITX SBC supports Intel® 14nm Apollo Lake on-board SoC with DDR3L, HDMI, LVDS, dual GbE, USB 3.2 Gen 1 (5Gb/s), SATA, M.2 and RoHS



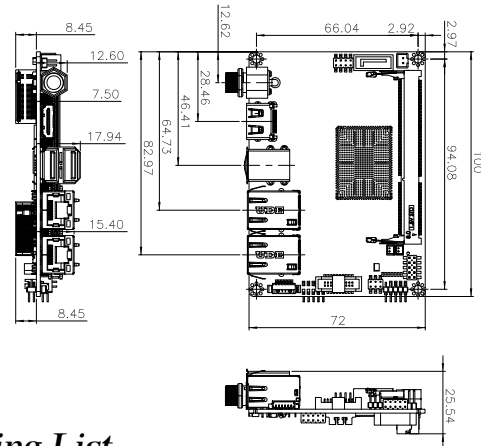
## Specifications

- ◆ SoC  
Intel® Celeron® N3350 on-board SoC (up to 2.4GHz, dual-core, 2M Cache, TDP=6W)
- ◆ BIOS  
AMI UEFI BIOS
- ◆ Memory  
One 204-pin 1866/1600MHz single-channel DDR3L SDRAM unbuffered SO-DIMM slot (system max. 8GB)
- ◆ Graphics Engine  
Intel® HD Graphics Gen9 Low Power, 18 Execution Units  
4K Codec Decode & Encode for HEVC 4, H.264, VP8, SVC, MVC
- ◆ Display Output  
1 x HDMI  
1 x LVDS (2x10 pin, single channel, 24bit)
- ◆ Ethernet  
LAN1: Realtek RTL8111H controller  
LAN2: Realtek RTL8111H controller
- ◆ External I/O interface  
2 x USB 3.2 Gen 1 (5Gb/s) (on rear I/O)
- ◆ Internal I/O interface  
1 x RS-232 (1x9 pin, P=1.25)  
1 x SATA 6Gb/s (w/ 5V SATA PWR)  
2 x USB 2.0 (2 by pin header) (2x4 pin, P=2.0)
- ◆ Audio  
1 x HD audio (2x5 pin, support 7.1 channel HD audio by IEI AC-KIT-888S-R10 kit)
- ◆ Front Panel  
1 x Front panel (1 x 8 pin, power LED, HDD LED, power button, reset button)
- ◆ Expansion  
1 x M.2 A key 2230 (PCIe, USB)  
1 x M.2 B key 2242 (USB, SATA)
- ◆ Digital I/O  
1 x 8-bit DIO (2x5 pin, P=2.0)
- ◆ Watchdog Timer  
Software programmable support 1~255 sec. system reset
- ◆ Power Supply  
12V DC input only (DC jack)  
Support AT/ATX mode
- ◆ Power Consumption  
12V@2.36A (Intel® Celeron® N3350 with 8GB 1600MHz DDR3L memory)
- ◆ Operating Temperature  
-20°C ~ 60°C
- ◆ Storage Temperature  
-30°C ~ 70°C
- ◆ Operating Humidity  
5% ~ 95%, non-condensing
- ◆ Dimensions  
100mm x 72mm
- ◆ Weight  
GW:600g/NW:250g
- ◆ CE/FCC compliant

## Features

- PICO-ITX SBC supports Intel® 14nm Apollo Lake on-board SoC supports Intel® 14nm Apollo Lake on-board SoC
- Dual GbE LAN support
- Flexible expansion with M.2 A key 2230 and M.2 B key 2242 support
- HDMI and internal LVDS for independent display
- 12V only single voltage design for AT/ATX power by DC power jack

## Dimensions (Unit: mm)



## Packing List

1 x HYPER-AL single board computer (heat spreader by default)	
1 x COM port cable	1 x QIG (Quick Installation Guide)
1 x SATA cable kit	

## Ordering Information

Part No.	Description
HYPER-AL-N1-R10	PICO-ITX SBC supports Intel® 14nm dual-core Celeron® N3350 2.4GHz on-board SoC with HDMI, LVDS, dual LAN, M.2, COM, USB 3.2 Gen 1 (5Gb/s), SATA 6Gb/s and RoHS
34000-000706-RS	Optional fanless heatsink module, 100mm x 72mm x 20.5mm
32001-008600-200-RS	Dual port USB cable, 210mm, P=2.0