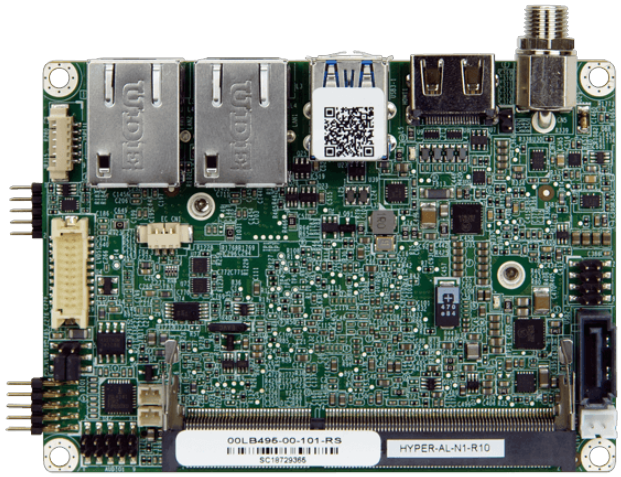
HYPER-AL

PICO-ITX SBC supports Intel® 14nm Apollo Lake on-board SoC with DDR3L, HDMI™, LVDS, dual GbE, USB 3.0, SATA, M.2 and RoHS



Features

» Compact 2.5" Pico-ITX from factor (100 x 72 mm)

» Intel® Celeron® N3350 1.1GHz on-board SoC (up to 2.4GHz, dual-core, TDP=6W)

» 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

Specifications

System	
CPU	Intel® Celeron® N3350 on-board SoC (up to 2.4GHz, dual-core, 2M Cache, TDP=6W)
Memory	One 204-pin 1866/1600MHz single-channel DDR3L SDRAM unbuffered SO-DIMM
Memory Max.	8GB
Physical Characteristics	
Dimensions (LxWxH) (mm)	100 X 72
Net Weight	250g
Storage	
Storage	1 x SATA :3Gb/s with 5V power connector
I/O Interface	
Display Output	1 x HDMI™
	1 x LVDS :2x10 pin, single channel, 24bit
Ethernet	2 x LAN :LAN1: Realtek RTL8111H controller
	LAN2: Realtek RTL8111H controller
Audio	1 x HD Audio :2x5 pin, support 7.1 channel HD audiou by AC-KIT-892HD-R10)
I/O Interface	1 x Internal RS-232 :1x9 pin, p=1.25
	2 x External USB 3.2 Gen1x1 :on rear IO
	2 x Internal USB 2.0 :2x4 pin, p=2.0
	1 x DIO :8-bit DIO (2x5 pin, P=2.0)
Expansion	2 x M.2(NGFF) :1 X 2230 A key(PCIe,USB),1 X2242 B Key(USB.SATA)
Power	
Power Consumption	12V@2.36A (Intel® Celeron® N3350 with 8GB 1600MHz DDR3L memory)
Power Supply	12V DC input only (DC jack)
	Support AT/ATX mode
Environment	
Operating Temperature	-20°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Humidity	5% ~ 95%, non-condensing
Certifications	
Safety & EMC	CE/FCC compliant

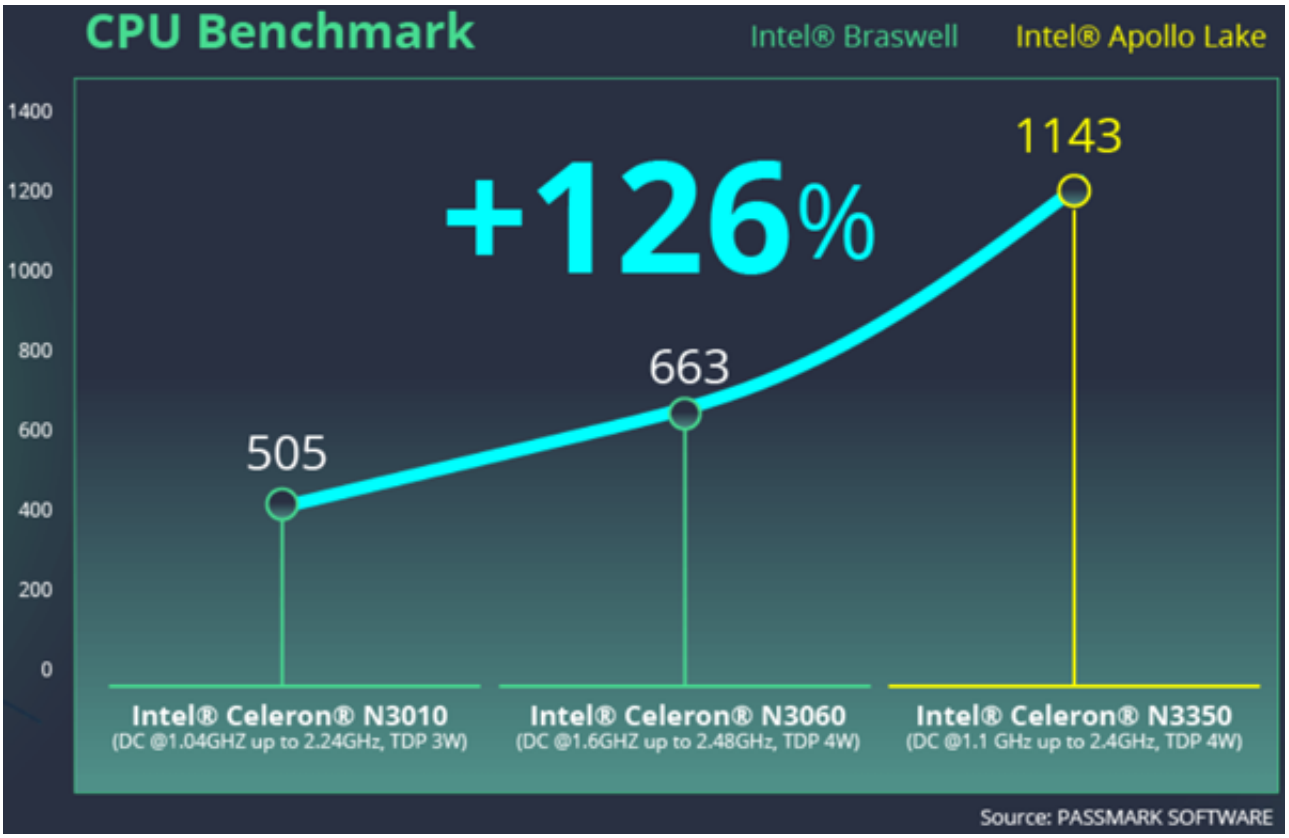
Ordering Information

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, USB3.0, SATA 3Gb/s, COM and RoHS

Packing List

1 x HYPER-AL single board computer(heat spreader by default)	1 x COM port cable(32005-003500-200-RS)
1 x SATA cable kit(32801-000201-300-RS)	1 x QIG (Quick Installation Guide)

1.2X Improved CPU Performance on Quad-core Intel® Celeron® N3350 Processor



IEI's HYPER-AL is equipped with a high-performance Intel® Celeron® N3350 processor (codenamed Apollo Lake), which is the successor to the Braswell family and based on 1.1GHz typical frequency and rising to a 2.4GHz in bust mode. By leveraging IEI's expertise and the cutting-edge technologies, the HYPER-AL delivers performance and flexibility to power the next generation of edge computing applications, and usable even in confined spaces.

14 nm Technology Process

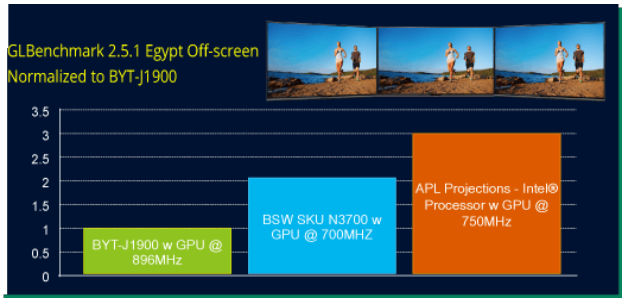
Intel® Celeron® N3350 CPU performance than the previous generation, Intel® Celeron® N3010

Improved memory performance

DDR3L up to 1866 MHz compared to 1600 MHz of Braswell

Three Times Graphics Performance

Intel® Apollo Lake built with Intel® Gen9 graphics engine same as Skylake integrated on the SoC provides up to 18 execution units and supports up to 4K decode and encode capabilities for HEVC4, H.264, VP8, SVC and MVC. The Graphics performance is estimated to be three times higher in contrast to the Bay Trail.



Improved 3D & Full-HD Media Performance:
» Fast HD video acceleration over previous generation
» Up to 15 simultaneous 1080p30 decode streams
» Fast graphics and media performance @ ISO power over previous generation

Dual Independent Display for Multi-task 24-bit LVDS + 4K UHD HDMI™

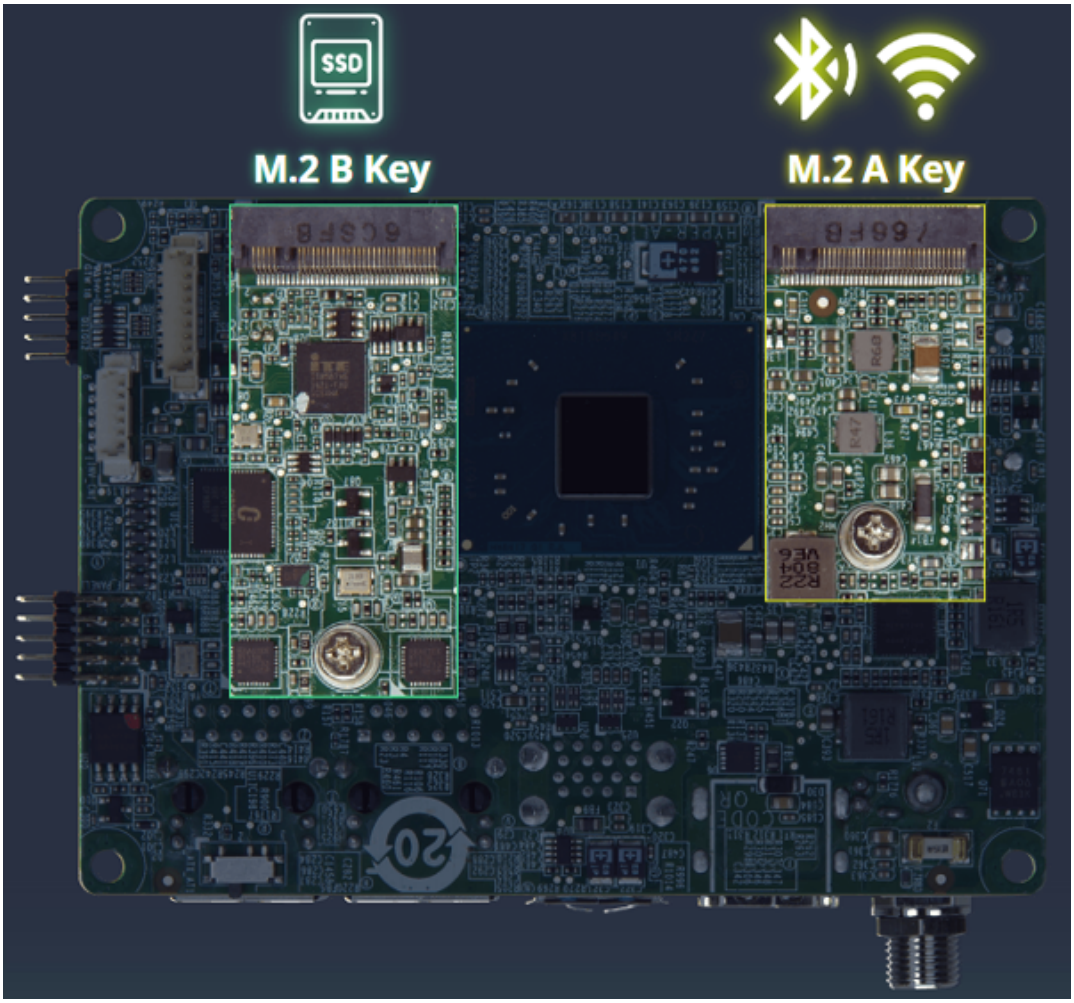
The HYPER-AL includes LVDS and HDMI™ 1.4b delivering brilliant 4K2K 30Hz resolution, increasing productivity and giving you enhanced multitasking capabilities.

HDMI™: 1.4b up to 3840x2160 @ 30Hz

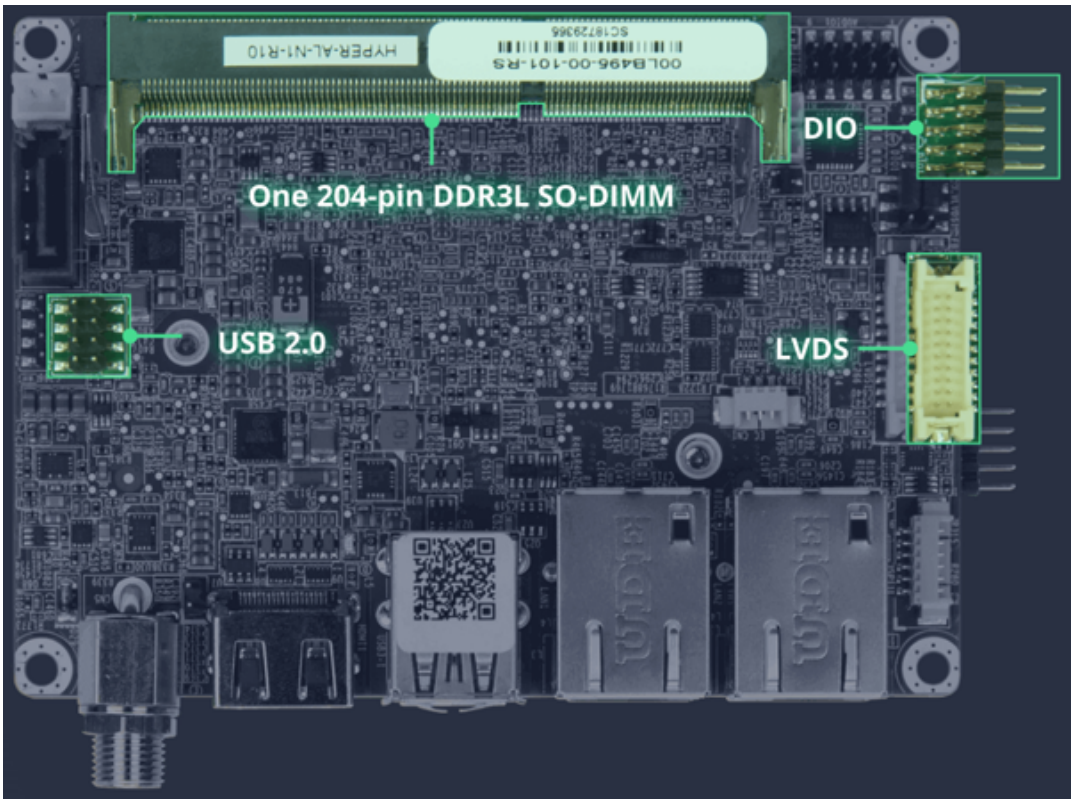
LVDS: 2x10 pin, single channel, 24-bit, up to 1366x768

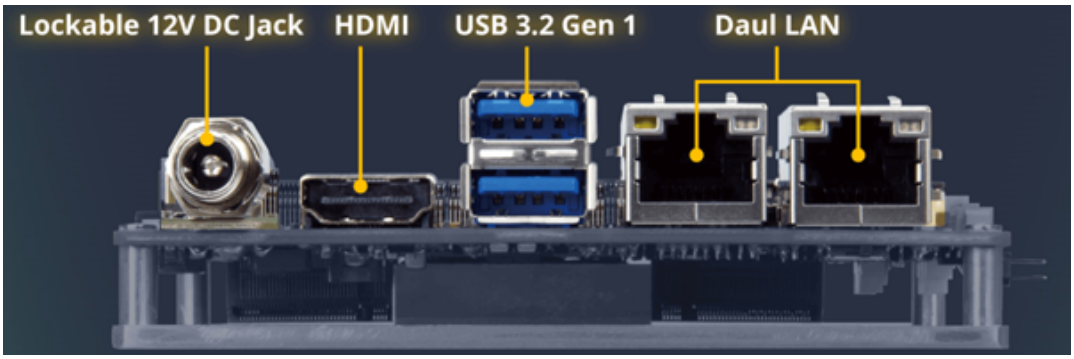
M.2 Expansion for WLAN, Bluetooth and SSD

With M.2 A-key 2230 slot and B-key 2242 slot, the HYPER-AL can support Bluetooth, Wi-Fi and SSD storage.



Product Overview





Applications

Autonomous Robot

Panel PC