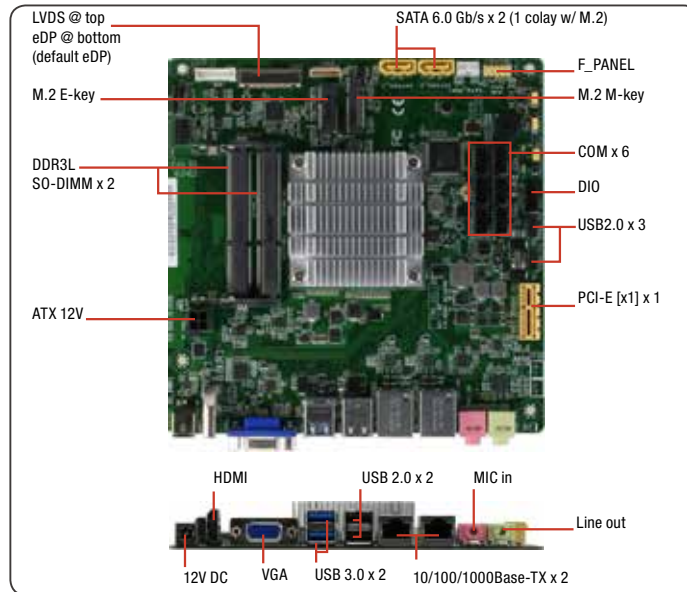


# 10 EMB-APL1

## Mini-ITX Embedded Motherboard with Intel® Atom™ N3350(DC)/N3450(QC) Processor



### Features

- DDR3L 1333/1600/1867 MHz SODIMM x 1, Up to 8 GB
- Three Independent Display: VGA x 1, HDMI x 1, LVDS/eDP x 1
- Realtek 8111G, Gigabit Ethernet x 2
- COM Port x 6 (RS-232 x 5, RS-232/422/485 x 1)
- Onboard TPM2.0 Optional
- 12~24 Wide Rand Voltage Power Input
- Low Profile



### Specifications

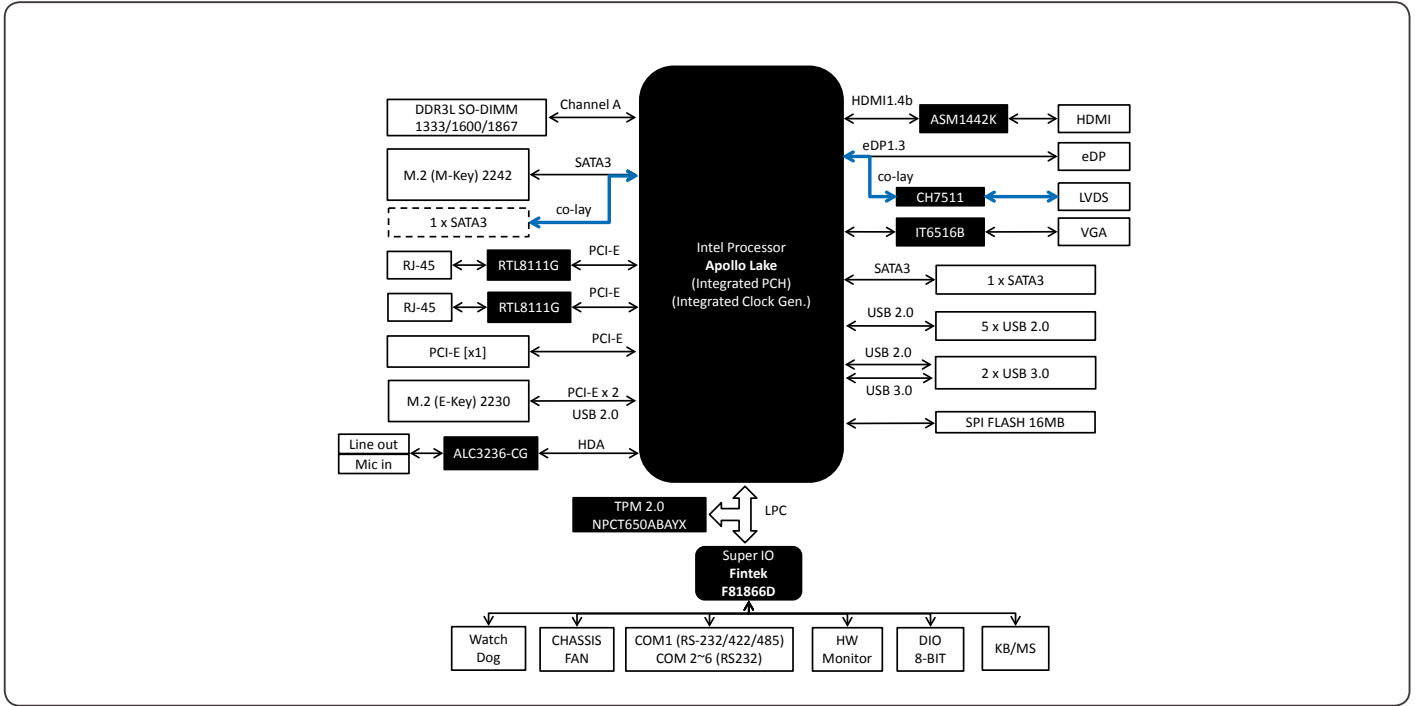
System	
Processor	Quad CoreTDP Targets: 5.5~12Watts, FCBGA1296
Chipset	Intergrate into SoC
Memory	DDR3L 1333/1600/1867MHz SO-DIMM x 1, max. 8GB, non-ECC, un-buffered memory
I/O Chipset	F81866D
Ethernet	Realtek PCIe Gb LAN 8111G x 2
Audio	Realtek® ALC3236-CG
TPM	Nuvoton NPCT650ABAYX TPM2.0 (option)
Expansion Slots	PCIe [x1] x 1 M.2 M key (22 x 42mm) x 1, for SATA 1 x M.2 E Key (22 x 42mm) x, 1 for PCIe
BIOS	128Mbit Flash ROM x 1, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/12V, Fan Monitor on CPU/Chassis
WatchDog Timer	1~255 steps by software program
Smart Fan Control	Chassis Fan x 1 (Fanless)
Wake On LAN/ PXE	Yes (WOL/PXE)
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Intel® HD Graphics
Graphics Multi Display	3 independent display
VGA	Up to 1920 x 1200 @60Hz
DVI	—
HDMI	Up to 3840 x 2160 @ 30Hz
Display Port	—
LVDS	Up to 1920 x 1080 @60Hz, Daul Channel 18/24 bit (via CH7511) (colay with eDP)
eDP	Up to 4096 x 2160 @60Hz
Backlight Control	Voltage / PWM, use HW control
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12V~24V wide-range voltage input back panel DC jack x 1; 4-pin ATX 12V Power connector x 1
Operation Temperature	32°F ~ 140°F (0°C ~ 60°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operation Humidity	0% ~ 90% RH, non-condensing
Certificate	CE & FCC Class A
Form Factor	Mini-ITX 6.7" x 6.7"(170mm x 170mm)
Weight	1.1 lb (0.5 Kg)
MTBF (Hours)	—

Rear Panel I/O Ports	
USB	USB 3.0 x 2, USB 2.0 x 2
Display I/O	HDMI x 1, VGA x 1
Audio I/O	Mic-in, Line-out
LAN I/O	RJ-45 x 2
Serial Port	—
PS/2 Port	—
Others	DC power jack x 1
Internal I/O Connectors	
Storage	SATA 6.0Gb/s x 2(1 colay with M.2), M.2 M key (22 x 42mm) x 1
USB	USB 2.0 headers support additional 2 USB ports (2*5PIN, p=2.00mm) x 1, USB 2.0 headers support additional 1 USB ports (1*5PIN, p=2.00mm) x 1
Display I/O	40-pin LVDS/eDP connector x 1(default eDP)
Audio I/O	—
Serial Port	RS-232/422/485 x 1, RS-232 x 5
PS/2 Port	PS/2 header x 1
Parallel Port	—
DIO	8-bit x 1 (In/Out programmable)
FAN	4-pin Chassis Fan x 1
Others	Front panel header x 1, Clear CMOS jumper x 1, AT/ATX mode select jumper (optional) x 1, SATA power connector x 1, M.2 E key (22 x 30mm) for PCIe x 1
OS	
OS Support	Windows 10 64bit, Linux Fedora

### Packing List

- 14001-00630100  
SATA 6G Cable (7P, 180; 90, 500mm 2 in1)
- 14001-00230100  
SATA to power cable(4P, 120MM)
- I/O Shield
- Product CD
- EMB-APL1

## Block Diagram



## Dimension

Unit: mm

