

# 3.5" SBC Form Factor Intel® Apollo Lake Processor



- Intel® Apollo Lake Atom/Celeron/Pentium BGA Processor
- 1 x DDR3L SO-DIMM and supports up to 8GB
- Support triple display for HDMI, VGA and LVDS/eDP
- 1 x Mini PCIe + 1 x M.2 slot
- 2 x SATAIII (1 x SATA is multiplexed with 1 x mSATA port)
- 2 x Intel® Gigabit Ethernet
- 2 x USB 2.0, 4 x USB 3.0, 4 x COM
- 8~24V wide voltage power input
- mPCIe with SIM card holder

## Specifications

### System

CPU	Intel® Apollo Lake-M N3350 / N4200 Processor Intel® Apollo Lake-I E3930 Processor
Memory type	DDR3L 1866MHz, 1 x 204pin SO-DIMM, Max. 8GB (Non-ECC)
Chipset	Intel® SoC Integrated
Graphics	Intel® HD Graphics
Ethernet	2 x Intel® I210-IT Giga LAN
Audio	Realtek® ALC662
I/O Chipset	Nuvoton NCT6116D
TPM	Nuvoton NPCT650ABCYX TPM2.0 (Optional)
Expansion Slot	Storage: Mini PCIe Full size (USB / PCIe / SATA), w/ SIM Card Holder Wireless: M.2 2230 E-key (PCIe / USB)
BIOS	AMI BIOS
H / W Monitor	Temperature Monitor, Voltage Monitor
Watchdog Timer	1 to 255 Steps by Software Program
Smart Fan Control	CPU Fan

### Graphics

VGA	Up to 1920 x 1200 @60 Hz
HDMI	Up to 4K (3840 x 2160) @30 Hz
LVDS	Up to 1920 x 1200 @60 Hz
eDP (Option)	Up to 4K (3840 x 2160) @60 Hz

### Rear I/O

USB	4 x USB 3.0
Display I/O	1 x HDMI 1.4, 1 x VGA
LAN I/O	2 x RJ-45

### Internal Connectors

Storage	2 x SATAIII(1 x SATA is multiplexed with 1 x mSATA port)
USB	2 x USB 2.0
Display I/O	1 x LVDS, 1 x eDP 1 x Backlight Connector
Audio I/O	1 x Audio Header (Front Panel Mic-in & Line-out)
Serial Port	4 x RS232 (One Supports RS232/422/485)
GPIO	1 x MiAPI Header (Programmable. Support 10bit GPIO)
Fan	1 x 4-pin CPU Fan Header
Power	1 x 8~24V ATX Power Connector, 1 x AT/ATX Mode Select Jumper
Others	1 x CMOS Jumper

### Power Requirement

Power Input	8~24V Wide Range DC Input w/ 4-pin ATX connector (Pitch: 4.2mm)
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### Environmental

Operating Temperature	-20 to 70°C (Optional -40 to 85°C)
Storage Temperature	-40 to 85°C
Operating Humidity	10% ~ 95% R/H, non-condensing

### Standard Compliance

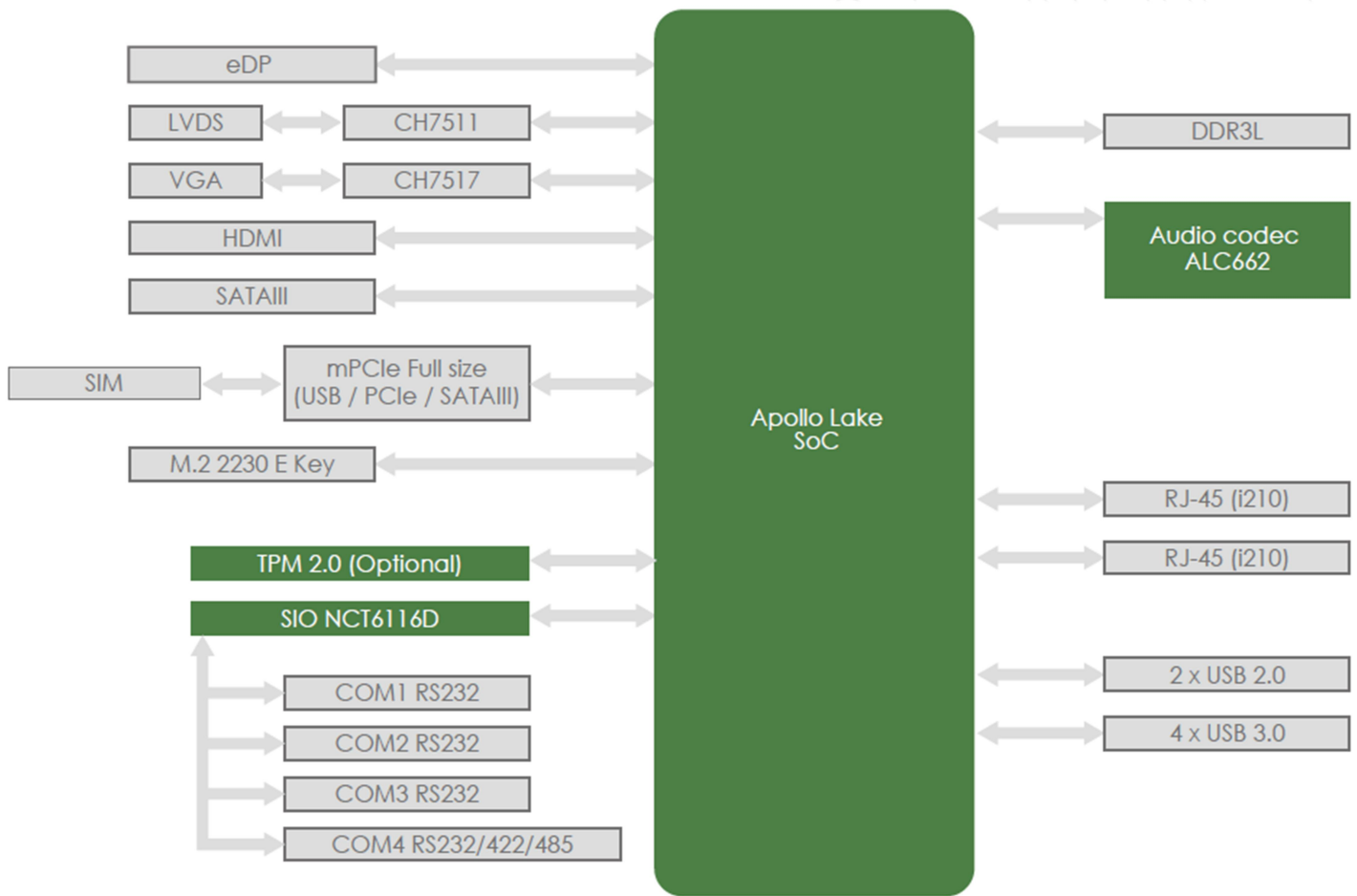
Standard Compliance	CE/FCC
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### OS

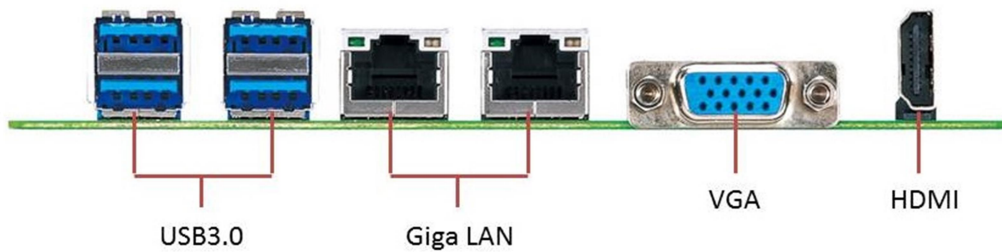
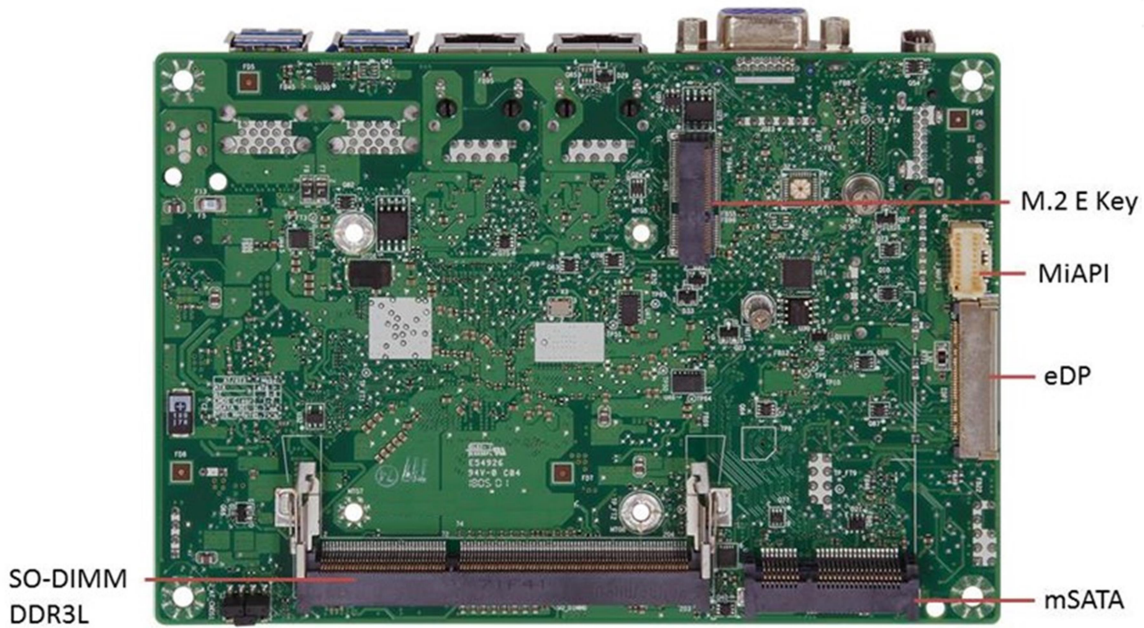
OS Support	Windows® 10 64bit Linux (support by request)
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OXY5323A

Block Diagram



# Board Placement



## Ordering Information

Model	Description
OXY5323A-01ET	Intel®Apollo Lake-I E3930,DDR3L 1867 MHz, 1 x 204-pin SO-DIMM, Max. 8GB (Non-ECC),2 x Intel® I210-IT Giga LAN,4 x USB 3.0, 1 x HDMI 1.4, 1 x VGA,2 x RJ-45,Normal Temperature: -20 to 70°C
OXY5323A-02ET	Intel®Apollo Lake-M N3350,DDR3L 1867 MHz, 1 x 204-pin SO-DIMM, Max. 8GB (Non-ECC),2 x Intel® I210- IT Giga LAN,4 x USB 3.0, 1 x HDMI 1.4, 1 x VGA,2 x RJ-45,Normal Temperature:-20 to 70°C
OXY5323A-03ET	Intel®Apollo Lake-M N4200,DDR3L 1867 MHz, 1 x 204-pin SO-DIMM, Max. 8GB (Non-ECC),2 x Intel® I210- IT Giga LAN,4 x USB 3.0, 1 x HDMI 1.4, 1 x VGA,2 x RJ-45,Normal Temperature:-20 to 70°C