

3.5" SBC Form Factor Intel® Apollo Lake Processor



- **Intel® Apollo Lake Atom / Celeron /Pentium BGA processor**
- **1 x DDR3L SO-DIMM and support 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 and 4 x COM**
- **8V~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 Option: E3940 / E3950
Memory type	DDR3L 1867, 1 x 204-pin 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	1~255 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 10-bit 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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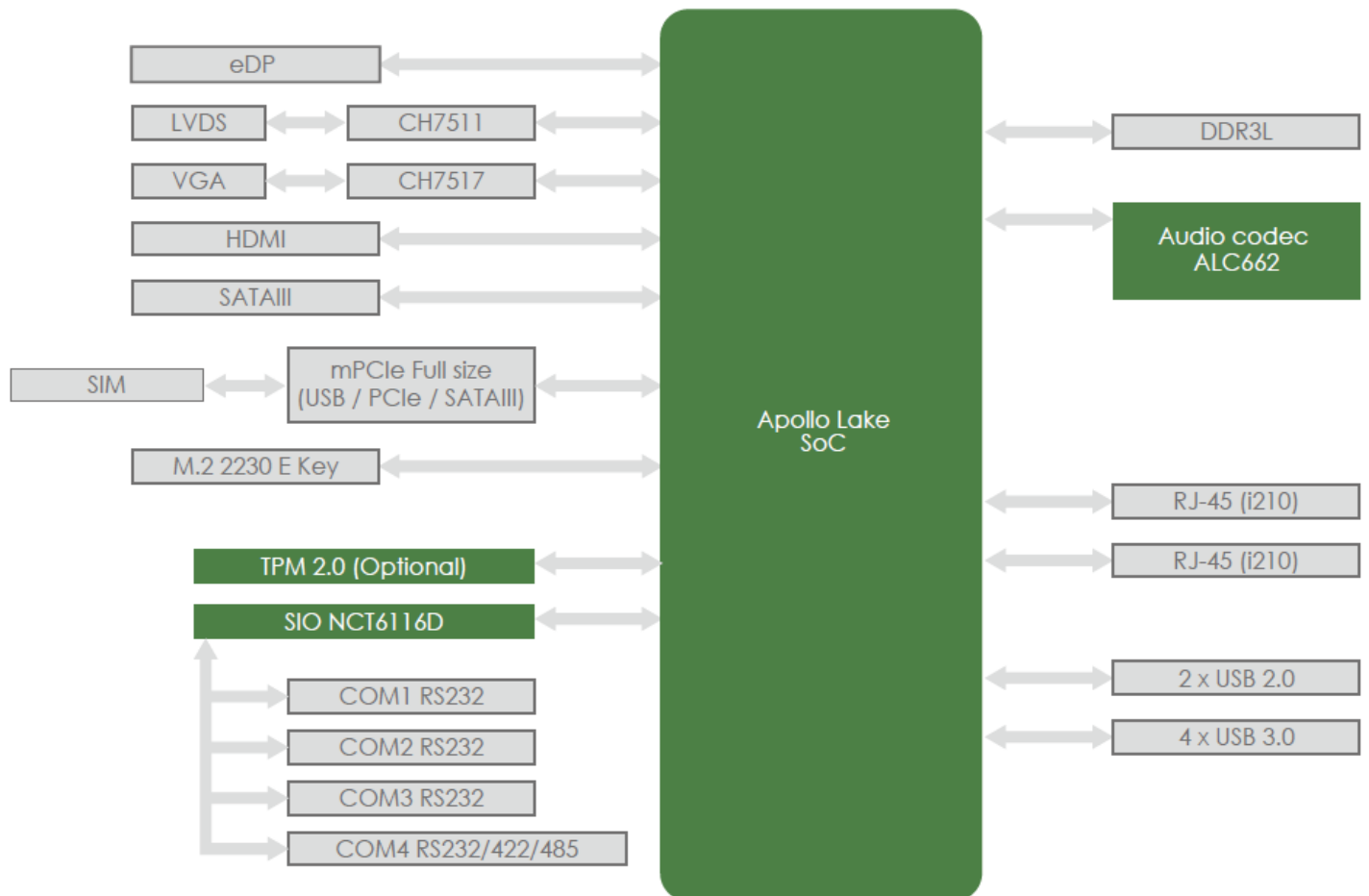
ENVIRONMENTAL

Operating Temperature	Normal Temperature: 0 ~ 70°C (32 ~ 158°F) Wide Temperature (Optional*) : -40 ~ 85°C (-40 ~ 185°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	10% ~ 95% R/H, non-condensing

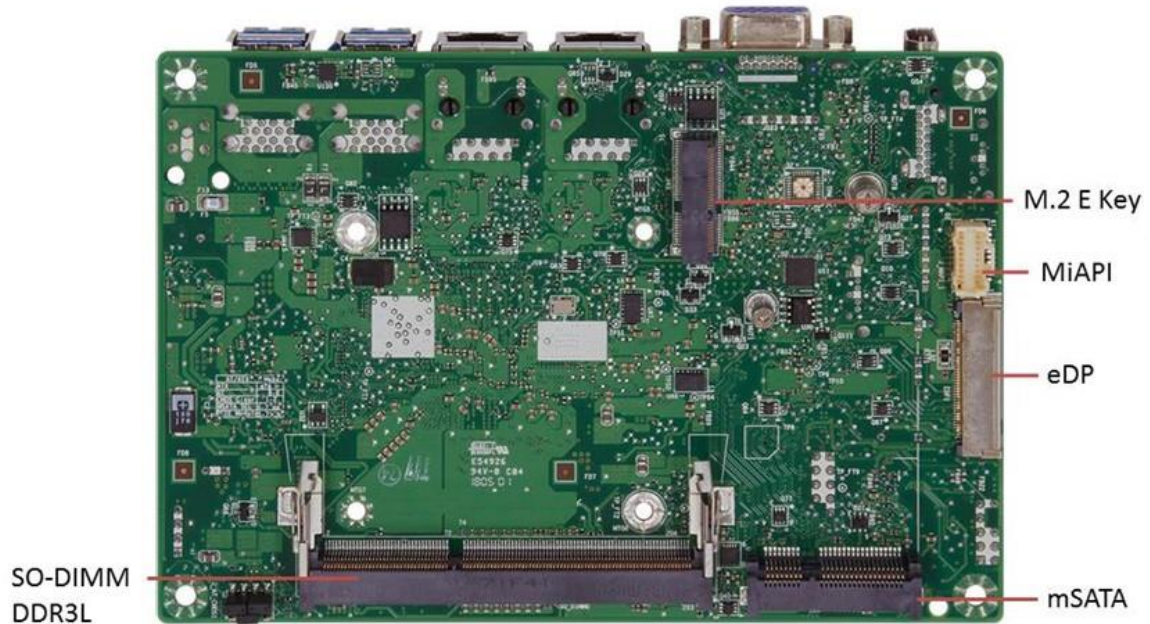
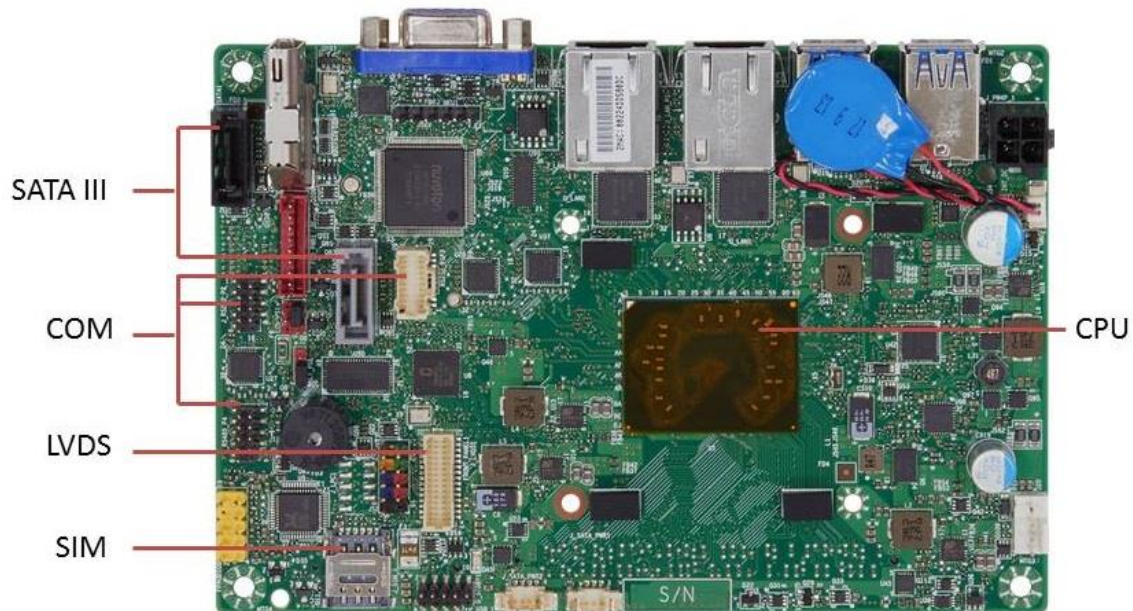
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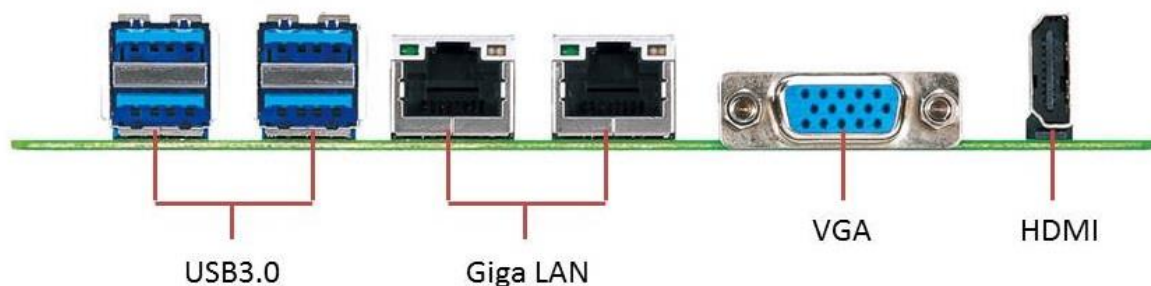
OS Support	Windows® 10 64-bit Linux (support by request)
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Block Diagram



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°C 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°C 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°C to 70°C