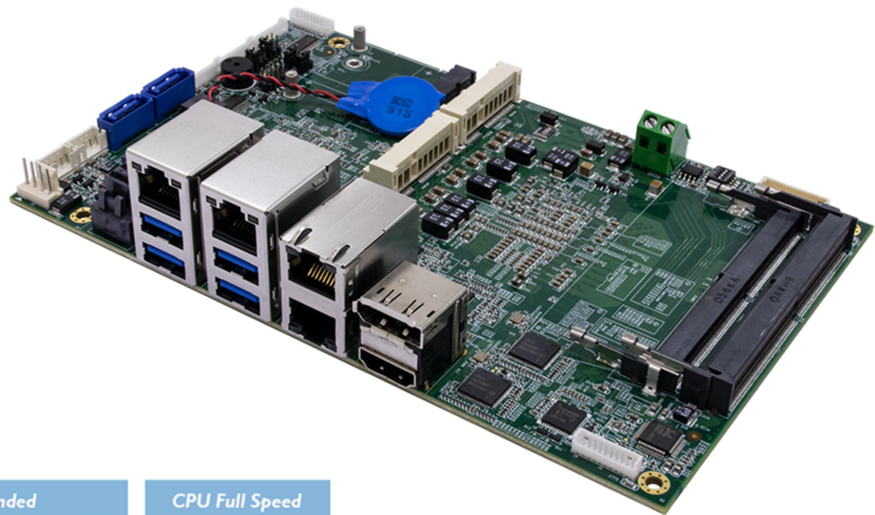




# OXY5641A

Ruggedised open-standard EPIC SBC expansion,  
Extended temperature -40 to 85°C



Extended  
Temperature  
+85°C  
-40°C

CPU Full Speed



- 9th / 8th Gen Intel® Xeon® / Core™ processor with up to 6 cores and 45W/25W
- Mini SAS Expansions Support PCIe Gen3 x 4 signal
- Dual channel DDR4-2666 with up to 64GB, ECC for Xeon SKU
- Multi display" Triple simultaneous displays with 48-bit LVDS+DP+HDMI
- 4 x USB 3.0 , 2 x USB 2.0, 1 x TPM 2.0 , 2 x COM (1 x support RS-232/422/485)
- 4 x GbE LAN , 2 x SATA III (RAID 0 , 1)
- M.2 E-key 2230 (Wifi & Bluetooth)
- 2 x Full size mPCIe(1 x support SIM card)
- Extended Temp. -40 to 85°C

# Specifications

## System

CPU	Intel® Core™ i7-9850HE Processor (6 Cores/12 Threads, 9M Cache, up to 4.40GHz), 45W Intel® Core™ i7-9850HL Processor (6 Cores/12 Threads, 9M Cache, up to 4.10GHz),25W Intel® XEON® E-2276ME Processor (6 Core/12 Threads ,12M Cache, up to 4.50GHz),45W Intel® XEON® E-2276ML Processor (6 Core/12 Threads ,12M Cache, up to 4.20GHz),25W Intel® Core™ i5-8400H Processor (6 Cores/12 Threads, 8M Cache, up to 4.20GHz),45W
Memory type	2 x 260 Pin DDR4 2666MHz SO-DIMM (up to 64GB, XEON SKU support ECC)
Chipset	CM246
BIOS Core	AMI® UEFI BIOS
BIOS Flash	SPI Flash
Super I/O	ITE 8786
TPM	TPM 2.0(SLB9665)
iAMT	iAMT 12.0
Watchdog	1-255 sec. or 1-255 min. software programmable and can be generate system reset.

## Expansion Slot

M.2	1 x M.2 2230 E-key ( Wifi & BT)
Mini PCIe	2 x Full size (USB / PCIe and 1 x micro SIM card)
Mini SAS	1

## Display

Chipset	Intel® UHD Graphics 630
LVDS	Dual channel 24-bit LVDS, max resolution up to 1920 x 1200 @ 60Hz
Display Port	Up to 4096 x 2304 @ 60Hz
HDMI	Up to 4096 x 2160 @ 30Hz
Multi-Display	Triple simultaneous displays with 48-bit LVDS +DP+HDMI

## Ethernet

Chipset	Intel® I210 & I219LM GbE LAN (10/100/1000 Mbps supported )
WOL	Yes
Boot from LAN	Yes for PXE

## Audio

Codec	ALC888S
-------	---------

## External I/O

Display Port	1
HDMI	1
USB3.0	4
LAN	4

## Internal I/O

USB2.0	2(Bottom side)
GPIO	1(4in/4out)
SATAIII	2(0,1 RAID)
SATA Power	2
Audio	1 (Mic-in / Line-out)
Serial	2 (1 x RS-232/422/485 autoflow control)
LVDS connector	1
LVDS inverter	1(Bottom side)
LPC	1
CPU Fan	1
SIM card	1(Push-Push Micro SIM) (Bottom side)
Front Panel Control	1(Power LED, HD LED, Reset, Power Switch, Buzzer)
Power connector	1(2-pin terminal block)

## Mechanical and Environmental

Form Factor	EPIC
Power Type	DC-IN 9~36V

Power Consumption	120W
Dimension	180mm x 115mm
Operating Temperature	-40 to 85°C
Storage Temperature	-40 to 85°C
Relative humidity	10% to 90%, non-condensing

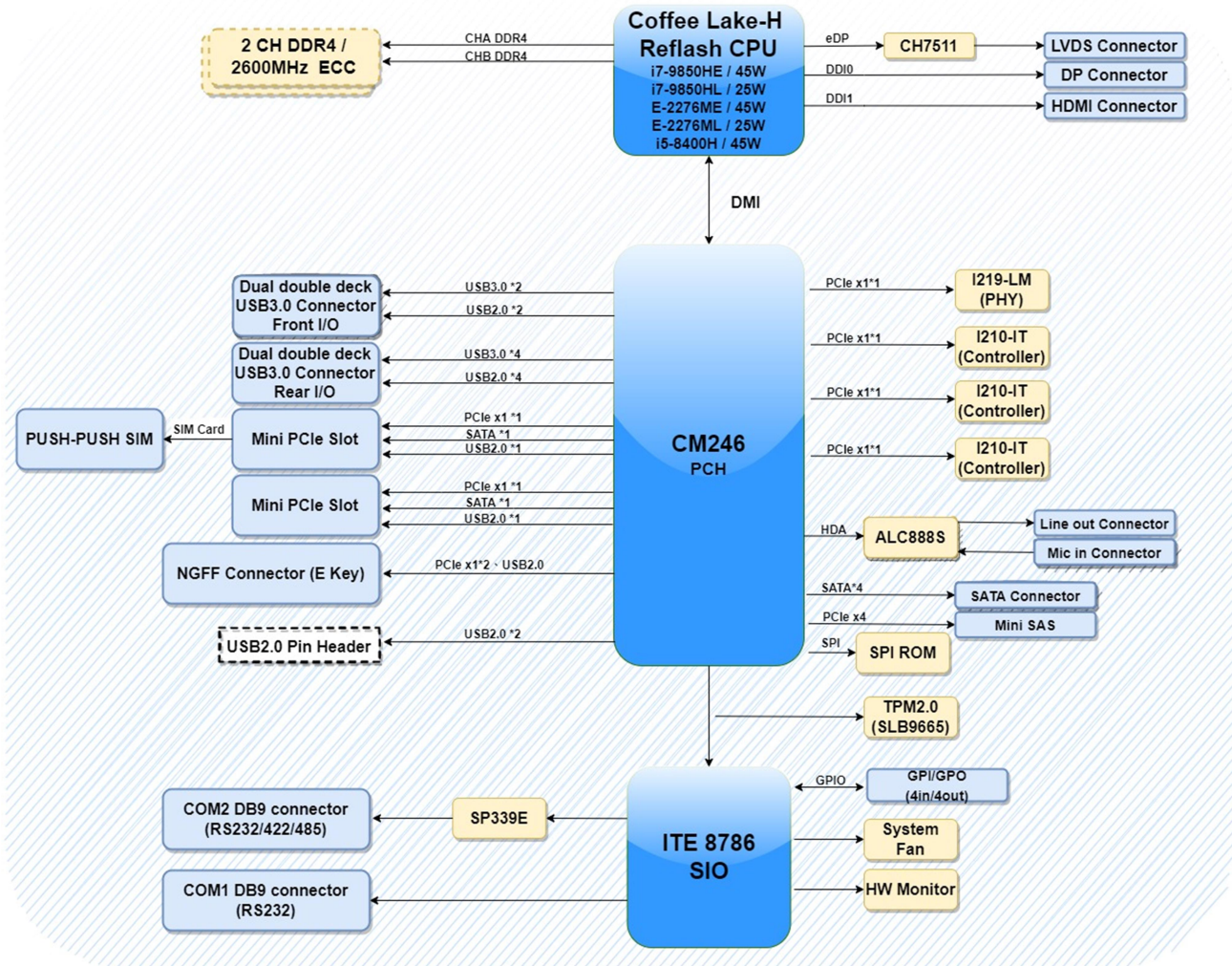
### **Standard Compliance**

Standard Compliance	CE/FCC
---------------------	--------

### **OS**

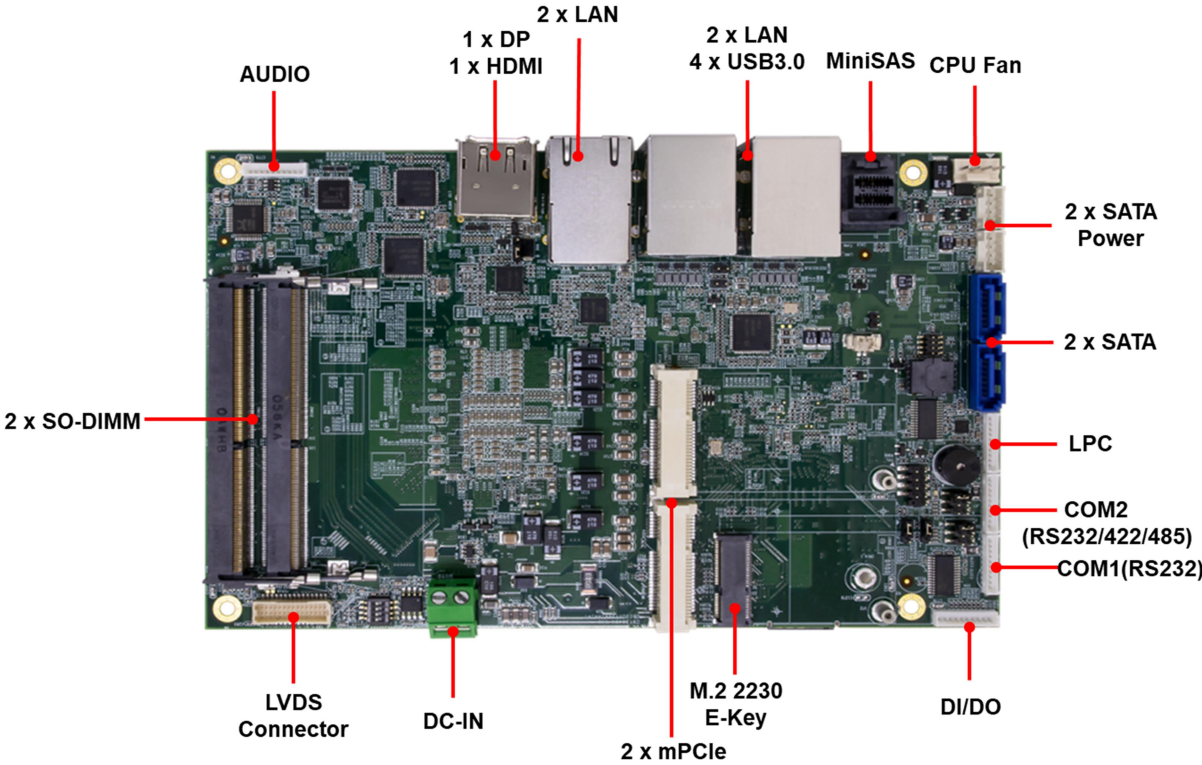
OS Support	Windows®10 64-bit Linux(Support by request)
------------	--

# Block Diagram

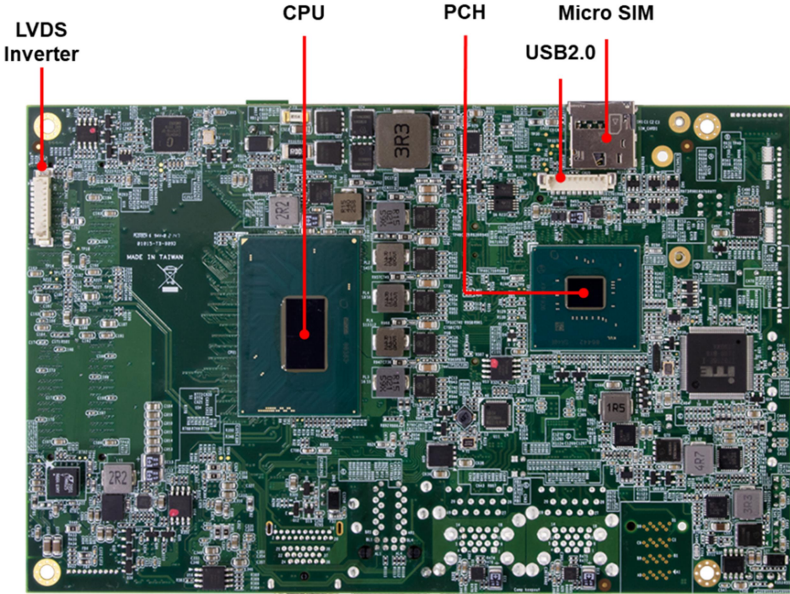


# Board Placement

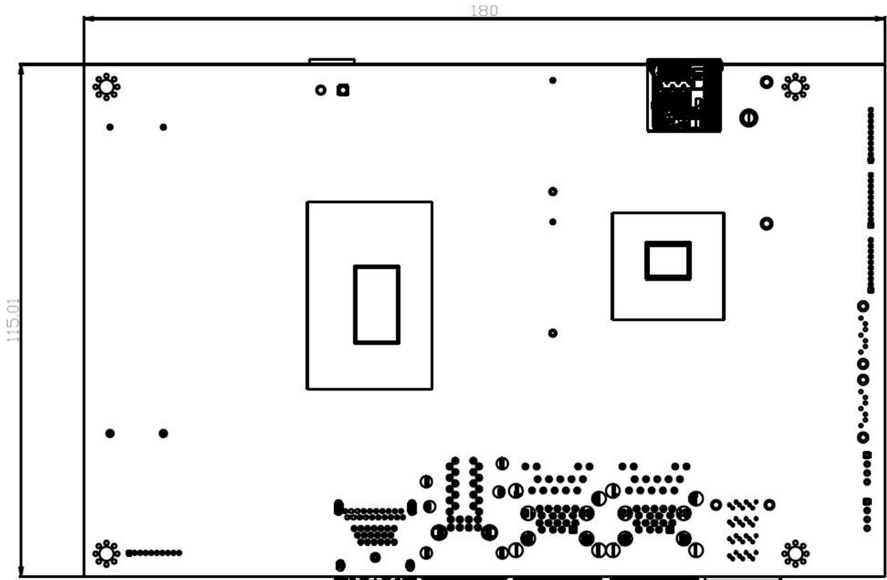
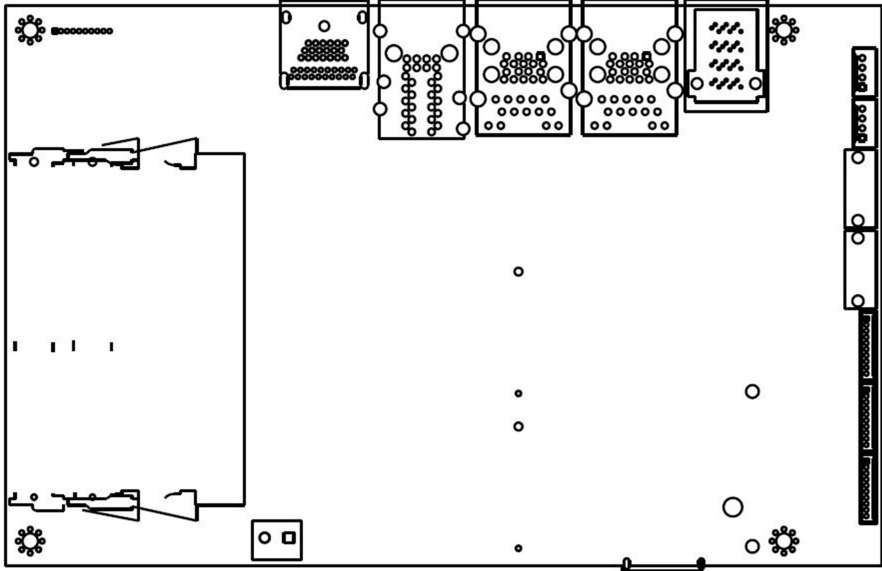
OXY5641A Top Side



OXY5641A Bottom Side



# Mechanical Dimensions



# Ordering Information

Model	Description
OXY5641A-01	Intel® Core™ i7-9850HE Processor, EPIC SBC, W/miniSAS expansion module
OXY5641A-02	Intel® Core™ i7-9850HL Processor, EPIC SBC, W/miniSAS expansion module
OXY5641A-03	Intel® Xeon® E-2276ME Processor, EPIC SBC, W/miniSAS expansion module
OXY5641A-04	Intel® Xeon® E-2276ML Processor, EPIC SBC, W/miniSAS expansion module
OXY5641A-05	Intel® Core™ i5-8400H Processor, EPIC SBC, W/miniSAS expansion module





Authorized Distributor

[wdsystems.com](http://wdsystems.com)

[sales@wdsystems.com](mailto:sales@wdsystems.com)

800-548-2319

919-545-2500

220 Chatham Business Drive  
Pittsboro, NC 27312