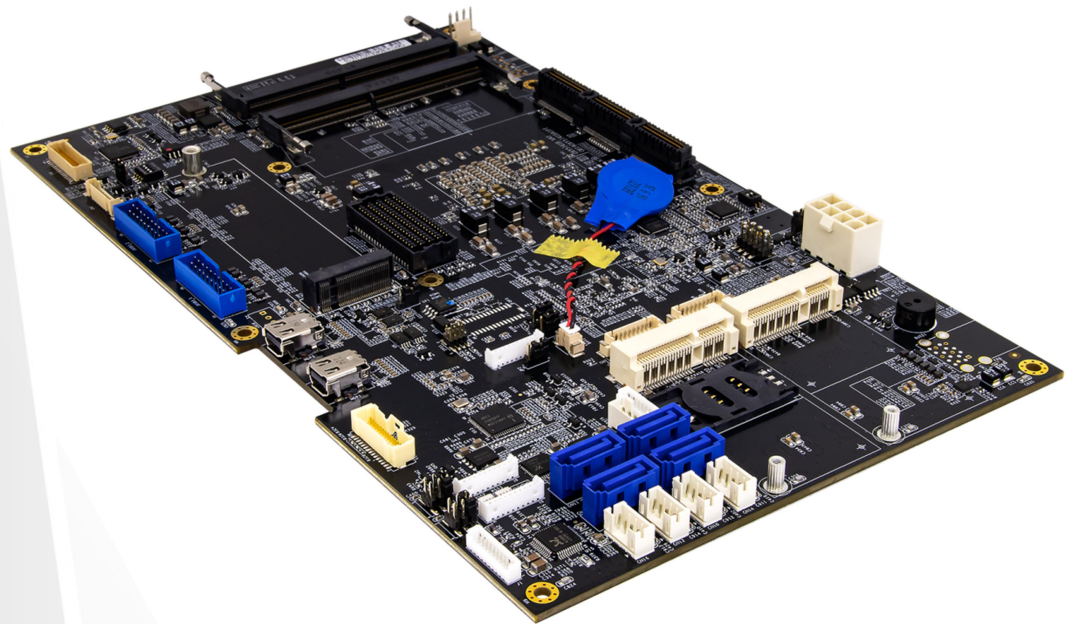




# OXY5741B

**RUGGEDISED OPEN-STANDARD EBX SBC  
EXPANSION, EXTENDED TEMPERATURE -40°C TO  
85°C**



- **Intel® Core™ i7-9850HE Processor**
- **4 x DDR4 2666MHz SO-DIMM up to 128GB**
- **2 x Mini PCIe**
- **Multi Display: 2 x mini-Display Port, 1 x Du  
al Channel 24bit LVD**
- **8 x USB Ports: 4 x USB 3.0, 4 x USB 2.0**
- **Extended temperature -40°C to 85°C**

# Specifications

## SYSTEM

CPU	Intel® Core™ i7-9850HE Processor (6 Cores/12 Threads, 9M Cache, up to 4.40 GHz), 45W Intel® Core i7-9850HL Processor (6 Cores/12 Threads, 9M Cache, up to 4.10 GHz), 25W XEON E-2276ME Processor (6 Cores/12 Threads, 12M Cache, up to 4.50 GHz), 45W XEON E-2276ML Processor (6 Cores/12 Threads, 12M Cache, up to 4.20 GHz), 25W Intel® Core™ i5-8400H Processor (6 Cores/12 Threads, 8M Cache, up to 4.20 GHz) TDP: 45W
Memory type	4 x 260 Pin DDR4 2666MHz SO-DIMM (up to 128GB, 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

## DISPLAY

Display Port	Resolution up to 4096 x 2304 @ 60Hz
Chipset	Intel® UHD Graphics 630
Multi-Display	Triple simultaneous display with LVDS + 2 x Mini-DP
LVDS	1* Dual Channel 24bit LVDS (w/auto-dimming support)

## AUDIO

Codec	ALC888S
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## EXPANSION SLOT

M.2	1 x M.2 (M-key, type:2280, SATA/PCIe 3.0 x4 NVMe)
miniPCle	2 x Full size (USB/PCIe and 1 x Micro SIM Card)

PCIe/104	TYPE 2
FPE	1 x FPE slot.

### ETHERNET

Chipset	Intel® I210 & I219LM GbE LAN (10/100/1000 Mbps supported ) 2 x 100Base-FX port supported
WOL	Yes
Boot from LAN	Yes for PXE

### REAR I/O

Display Port	2*mini-DIP Display Port Female 20P 90D
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### INTERNAL I/O HEADER (NO EDGE I/O NEEDED)

SATA	4x SATAIII (RAID 0,1,5) , from 2 up to 4 ports
SATA power	4
LVDS	1 (1 x 30 pins) or equal ---> W/Auto-dimming supports), Bright light control
Inverter connector	1 x (10 pins) box header
8 bit GPIO	1 x (10 pins) box header
COM	2 x RS232/422/485 (2 x 10 pins) box header
SIM card holder	1 (Micro SIM) in mini-PCIe slot
LAN	2 x 10/100/1000 Base (20 x 1.0 wire to Board connector)
USB 3.0	4 x USB3.0 (2 x 20GU 2.0 x 2.0mm box header)
USB2.0	4 x USB2.0(2x5 Pins) box header
LPC	1 x LPC (10 pins ) box header
Front Panel	1 (2 x 5 pins) Power BTN/HDD LED/Reset BTN/PWR LED
Smart Fan	1 x CPU Fan ---> 1 x 4 pins for CPU(PWM mode)
Audio	1 x MIC-IN / LINE OUT (10 pins) box header
Battery	1---> 1 x RTC battery holder
Power Connector	1 (4 x 2pin) horizontal type

### MECHANICAL AND ENVIRONMENTAL

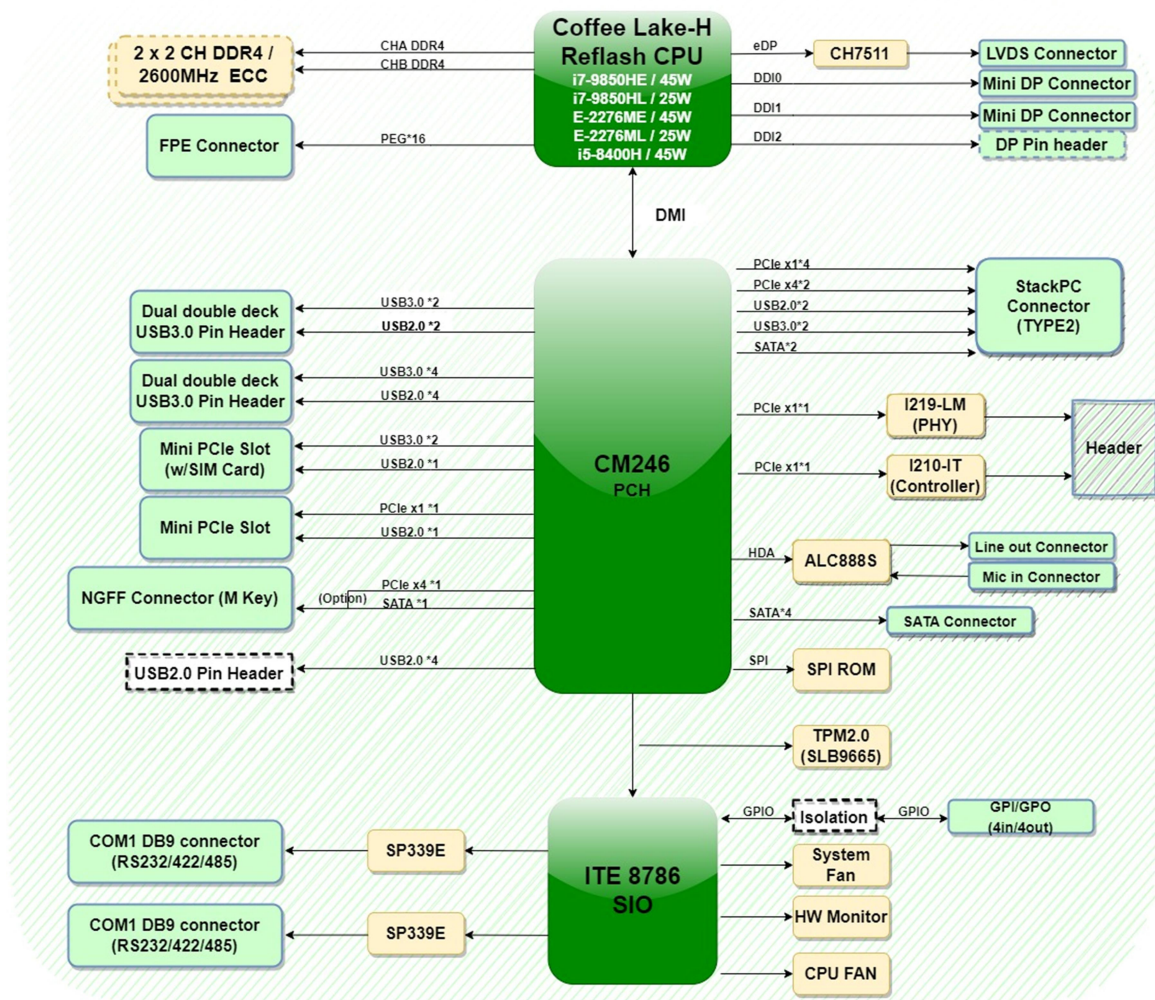
Form Factor	EBX
Dimension	146 mmX 243mm
Power Type	DC-12V

Power Consumption	250W
Operation	-20°C ~ 60°C (ambient with air flow)
Temperature	
Storage Temperature	-40°C ~ 85°C
Relative humidity	10% to 90%, non-condensing

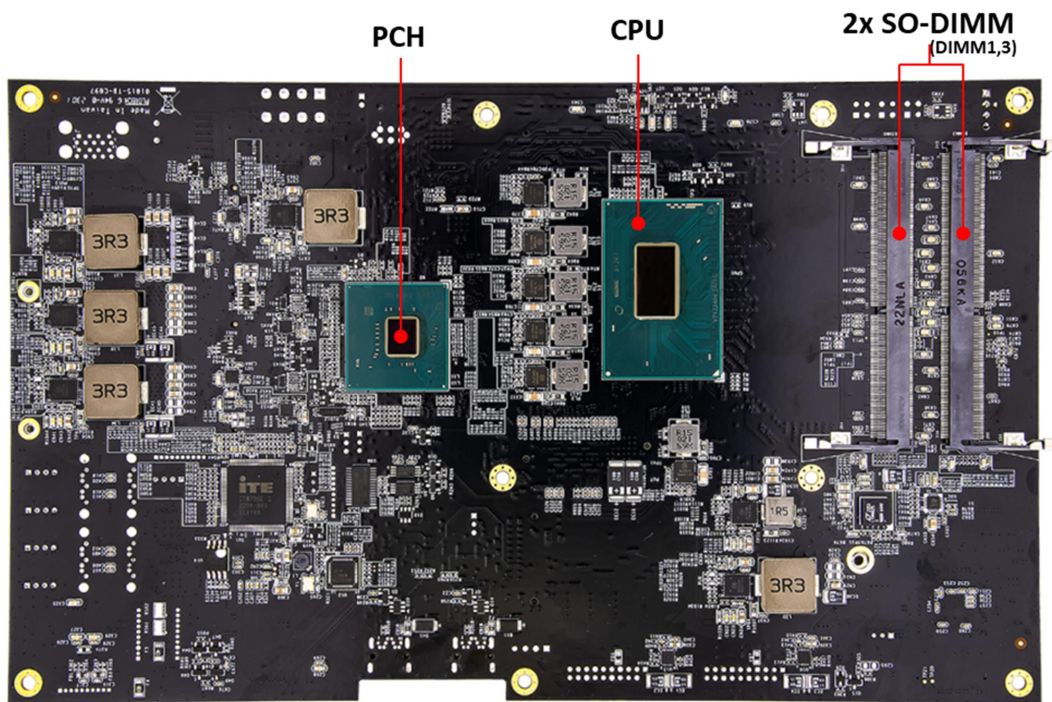
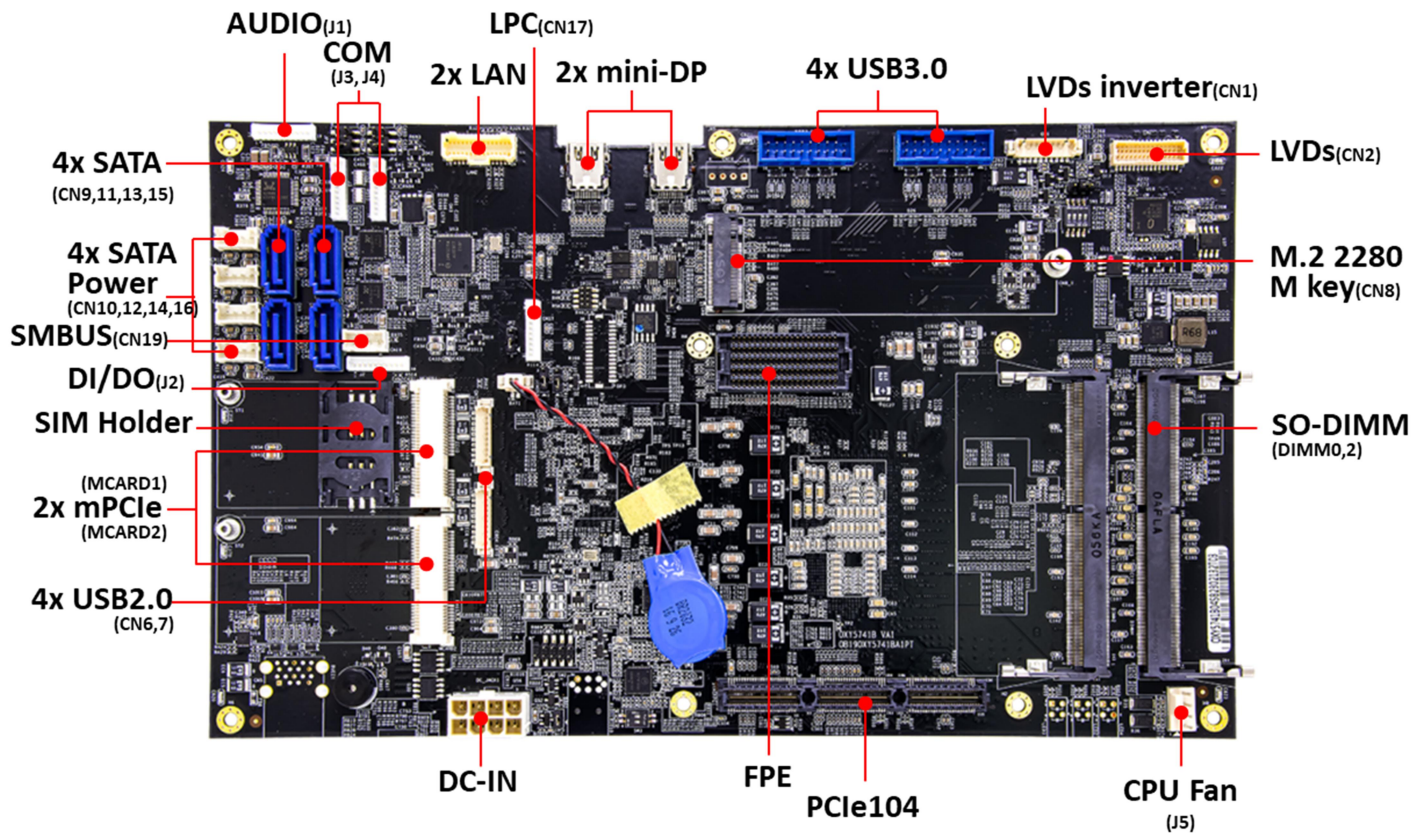
### STANDARD COMPLIANCE

Standard Compliance	CE/FCC
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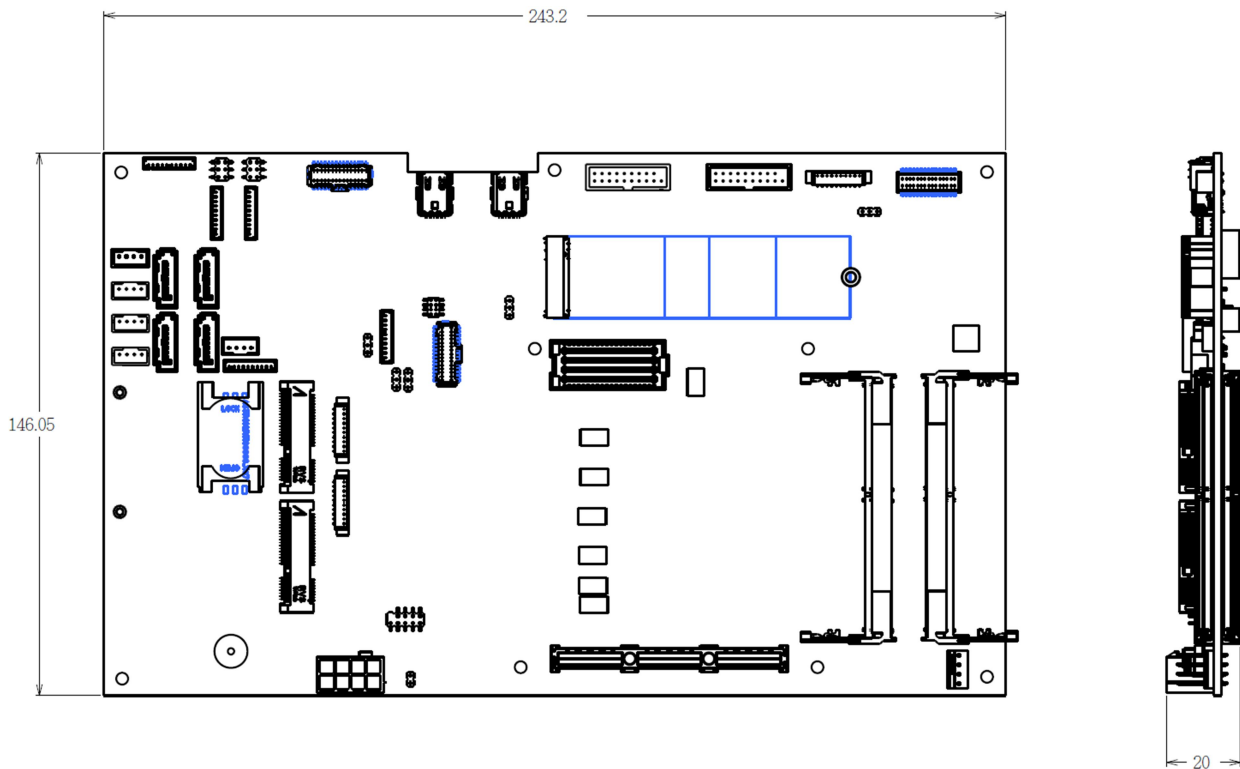
## Block Diagram



# Board Placement



# Mechanical Dimensions



## Ordering Information

Model	Description
OXY5741B-01ET	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor I7-9850HE(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-20°C ~ 70°C)
OXY5741B-02ET	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor I7-9850HL(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-20°C ~ 70°C)
OXY5741B-03ET	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor E-2276ME(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-20°C ~ 70°C)
OXY5741B-04ET	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor E-2276ML(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-20°C ~ 70°C)
OXY5741B-05ET	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor I5-8400H(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-20°C ~ 70°C)

OXY5741B-01UT	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor 7 I7-9850HE(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-40°C ~ 85°C)
OXY5741B-02UT	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor I7-9850HL(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-40°C ~ 85°C)
OXY5741B-03UT	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor E-2276ME(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-40°C ~ 85°C)
OXY5741B-04UT	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor E-2276ML(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-40°C ~ 85°C)
OXY5741B-05UT	EBX Industrial Motherboard Intel Intel® 14nm Coffee Lake-H Processor I5-8400H(Embedded) BGA(FCBGA1440) with 4 x DDR4 SO-DIMM, Dual Intel® GbE LAN, PCIe/104 Type2 & FPE, 12V (-40°C ~ 85°C)