



LAND



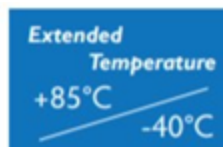
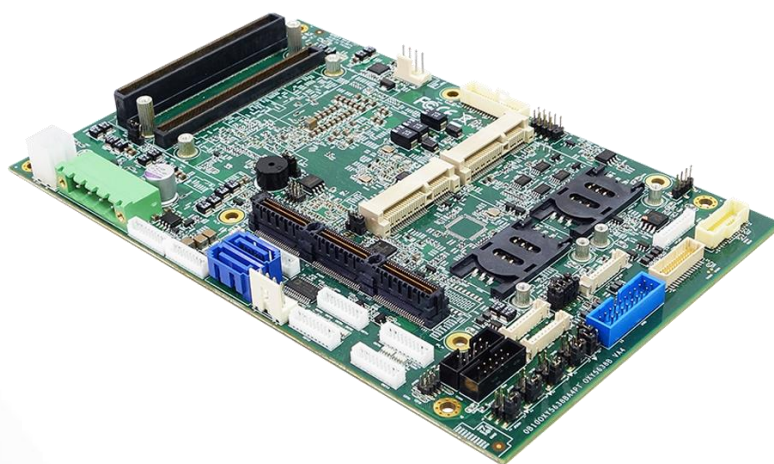
SEA



AIR

ON Y56380

INTEL® 5TH GEN. BROADWELL® CORE™
I7-5650U PROCESSORS



- Intel® Core™ i7-5650U Processor (4M Cache, up to 3.20 GHz)
- uSSD 64GB (SATA III)
- 2 x XR-DIMM up to DDR3L -1600 16GB
- Expansion: 1x PCIe/104 (1 x PCIe_4, 4 x PCIe_1)
- 2 x Mini PCIe with SIM Card Holder
- Multi display: 2 x DisplayPort ; Dual Channel 24 Bit LVDS
- Dual LAN Ports (1 x Intel I210-IT & 1 x I218-LM GbE)
- 4 x COM ports: 3 x RS-232 (pin-header) with 5V/12V selection
1 x RS232/422/485 with 5V/12V selection
- 6 x USB ports: 2 x USB 3.0, 4 x USB 2.0
- Extended operating temp. -40°C to 85°C



Specifications

SYSTEM

CPU	Intel® Core™ i3-5010U Processor (3M Cache, 2.10 GHz) (Optional) Intel® Core™ i5-5350U Processor (3M Cache, up to 2.90 GHz) (Optional) Intel® Core™ i7-5650U Processor (4M Cache, up to 3.20 GHz)
Memory type	2 x XR-DIMM up to 16 GB
NAND Flash	64 GB SATA NAND drive on board
BIOS	AMI®UEFI BIOS
Watchdog	1-255 sec. or 1-255 min. software programmable, can generate system reset
Expansion Slot	1 x PCIe_4, 4 x PCIe_1 1 x mPCIe/mSATA, 1 x mPCIe

DISPLAY

Chipset	Intel® Gen8 Graphic
LVDS	Dual channel 24bit LVDS (eDP LVDS CH7511B)
Display Type	LVDS, DP

ETHERNET

Chipset	1 x Intel I210-IT & 1 x I218-LM GbE
WOL	YES
Boot from LAN	Yes for PXE

INTERNAL I/O

SATA	2 x SATAIII (6Gb/s, RAID 0/1)
COM	3 x RS-232 (pin-header) with 5V/12V selection 1 x RS232/422/485 with 5V/12V selection
Serial Signals	RS232: DCD-, RXD, TXD, DTR-, GND, DSR-, RTS-, CTS RS422: TX-, RX+, TX+, RX-, GND RS485: DATA-, DATA+, GND
Ethernet	2 (pin header)
USB 3.0	2 (pin header)
USB1.1/2.0	4 (pin header)
Audio	Pin-header for Line-out, Mic-In, Linein *optional 2 Mic-in

SIM card holder	2
DIO	2 (2x5-pin), 8 in / 8 out
LPC	Pin-header
LVDS	1 (2 x 15-pin)
DP	2 (2 x 20-pin)

REAR I/O

PowerConnector	1 (Terminal Block co-lay 4-pin connector with lock)
----------------	---

AUDIO

Codec	Realtek ALC888S
-------	-----------------

POWER REQUIREMENTS

PowerType	12V DC-IN (1 (Terminal Block co-lay 4-pin connector with lock)
-----------	---

MECHANICAL AND ENVIRONMENT

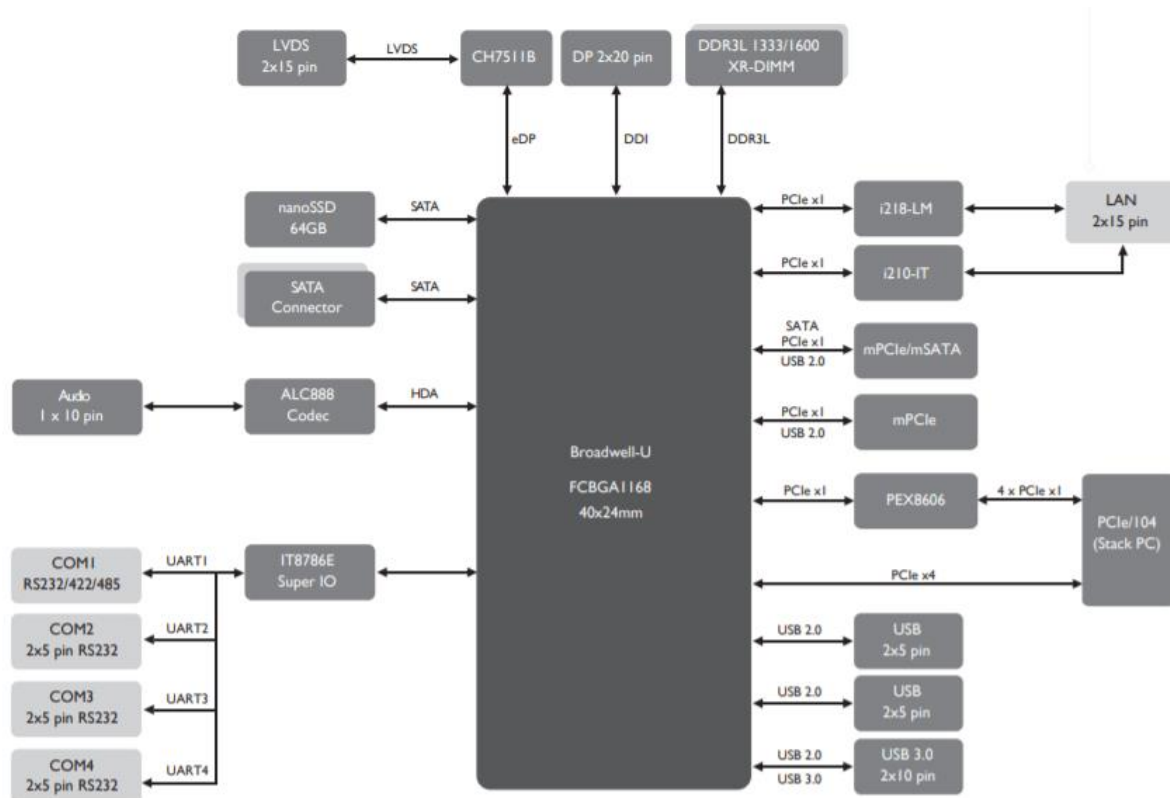
Form Factor	EPIC SBC
Power Type	12V DC-IN
Dimension	180 mm x 115 mm
Operating Temp	-40 to 85°C
Storage Temp.	-40 to 85°C
Relative Humidity	10% to 90%, non-condensing

Thermal Solution

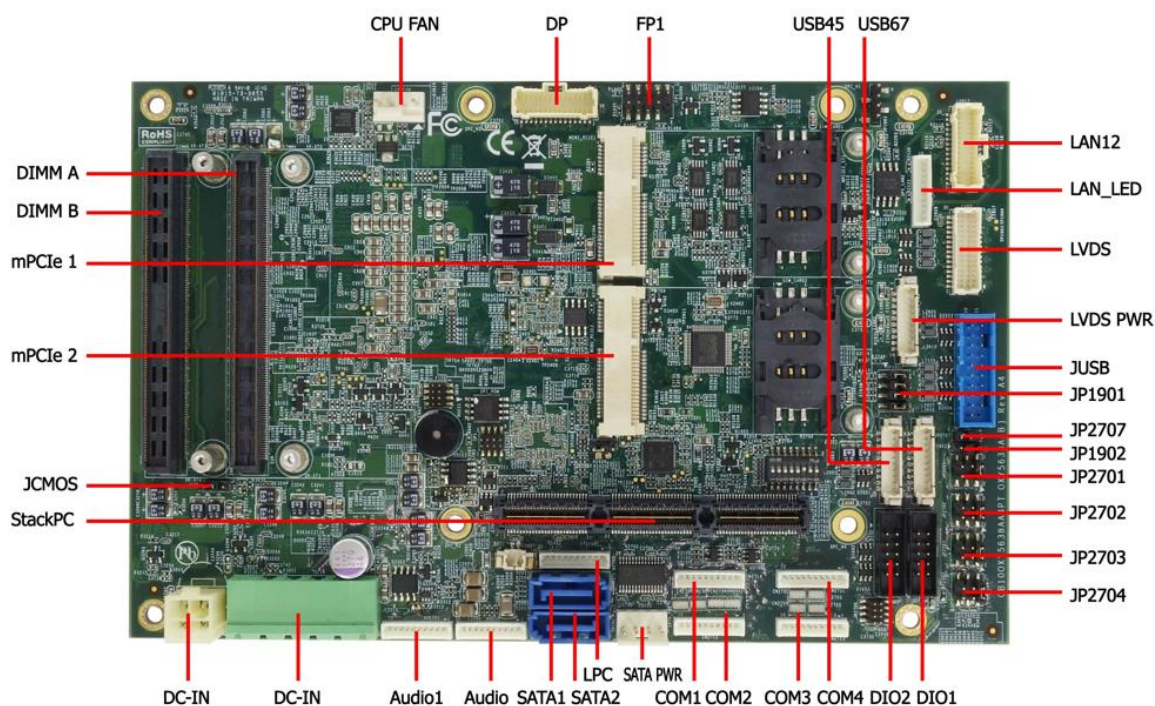
Heat sinks are used to cool down device temperature by dissipating heat into surrounding air. PERFECTRON designs tailor-made heat sink for OXY5638B. Special fin ditch design forms a wind-flow to reduce thermal resistance. Moreover, cross section wave line on the interface increases up to 30-40% air contact area. Combining these two features, thermal performance leverages to utmost that ensures high reliability and stability while working under wide range temperature from -40 up to 85°C.



Block Diagram



Board Placement



Ordering Information

OXY5638B

Intel® Broadwell processor ® Core™ i3-5010U/i5-5350U/i7-5650U processors on board, 2 x XR-DIMM, Onboard uSSD 64GB (SATA III), 12V DC-IN, Extended Temperature -40 to 85°C