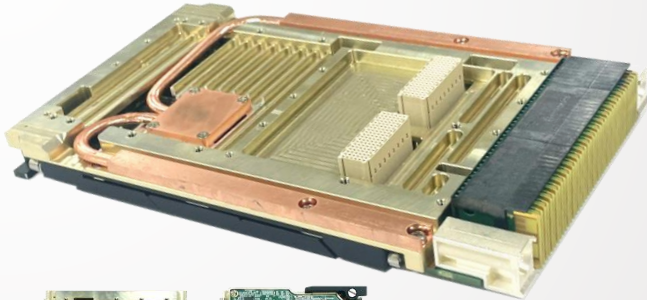


# VPX Processor Board

## 3U VPX Module



- 3U Open VPX single board Computer based on the 8<sup>th</sup> Intel Processor
- Up to -40 to 85°C extended operation range
- Support Microsoft Windows 10, WINDRIVER HVP(Helix Virtualization Platform)
- Conduction-Cooled

## Features

- Rugged 3U VPX Single-Slot SBC
- 9th Intel® Core™ i7-9850HL CPU
- Intel QM370 PCH chipset
- Onboard 16GB DDR4-2666
- Onboard 500GB SSD
- Backplane I/O includes:
  - PEG x4(PCIe Gen3)
  - PCIe x4, x4, x1, x1(PCIe Gen3)
  - XMC Slot w/PCIe x8 Gen3
  - GbE 2CH
  - RS-222/422/485 ports
  - USB 3.1 1CH
  - USB 2.0 4CH
  - PS/2 ports 2CH
  - GPIO (3 input, 3 output)
  - LVDS 1CH, VGA 1CH, DP/DVI 1CH

# VPX Processor Board

## Specifications

### Processor

- Intel® Core™ 8<sup>th</sup> i7-9850HL
- 6 Cores/12Threads @ 1.9 GHz
- Turbo Boost @ 4.1GHz
- Intel UHD Graphics 630

### Chipset

- Intel QM370 PCH Chipset

### Memory

- Onboard 16GB DDR4-2666

### Storage

- Onboard SLC 400GB SSD

### XMC Interface

- PCIe x8 Gen3
- One XMC mezzanine

### Audio

- High Definition Audio Codec

### Front panel I/O

- Serial Port x 1

### P1 I/O Interface

- 4Lane x2 , 1Lane x2 PCIe Gen3
- GbE x2
- SATA3.0 x1
- USB3.1 x1
- Audio/MIC x1

### P2 I/O Interface

- 1 x 4Lane PCIe Gen3
- USB2.0 x4
- RS232/RS422 x1
- PS/2 x2
- LVDS x1
- VGA x1
- DP(DVI) x1

### Power Requirement

- 12V : 3.5A(idle), 6.5A(typical), 10A(Maximum)

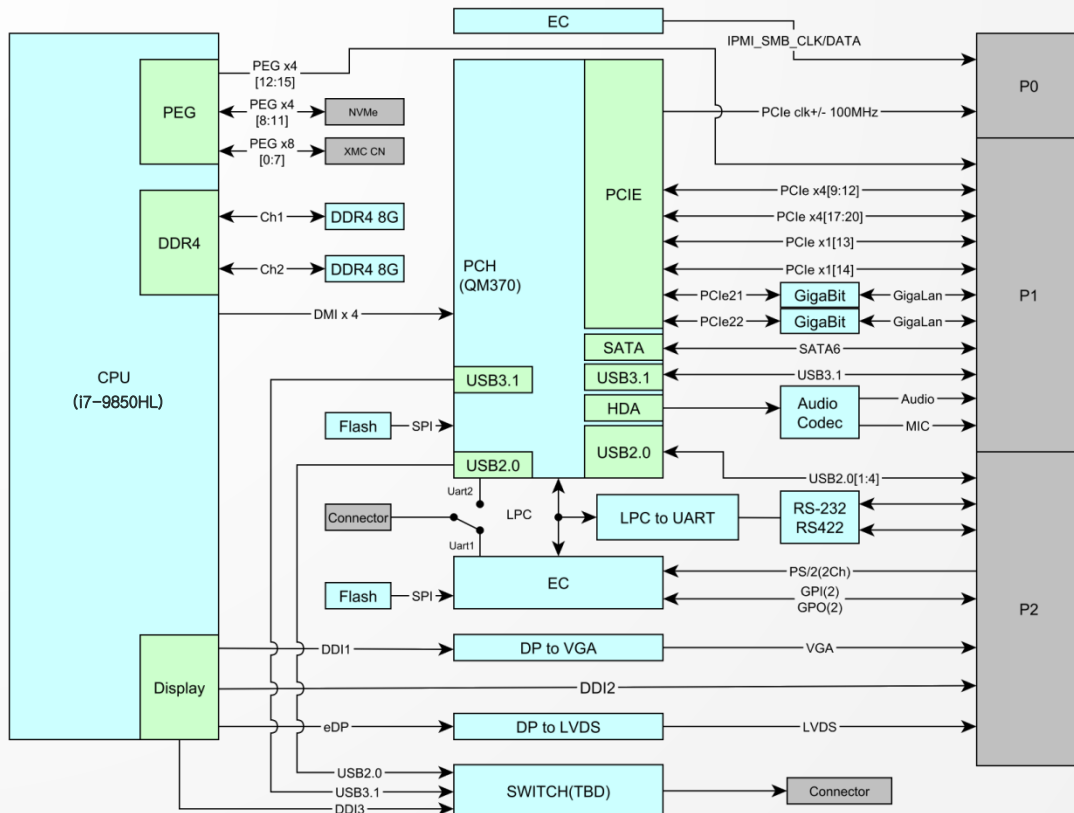
### Environment

- Operating Temp Range 40~85°C
- Relative Humidity 5~90% non-condensing
- Shock 30G, 11ms half sine
- Vibration : 10-500Hz, 5G-rms, 2 Hours/axis

### Software Support

- OS Windows10, Vxworks HVP, Linux
- BIOS AMI Aptio UEFI BIOS

## Block Diagram



# VPX Processor Board

## Helix Virtualization Platform 기반한 엣지컴퓨팅

- Intel® Core™ 9th i7-9850에 WINDRIVER HVP 적용
- WINDRIVER HVP는 WINDRIVER 고유의 가상화 기술을 기반으로 실시간 운영체제(RTOS)인 VxWorks, 임베디드 리눅스 배포판인 윈드리버 리눅스 등을 한데 통합하고, 윈도우, 맥, 안드로이드, 기타 RTOS 등을 지원해 하나의 아키텍처에서 다중 애플리케이션을 운영할 수 있는 점이 특징
- 과거 하드웨어 박스 형태로 여러 곳에서 각각 분산 운영되어온 시스템을 소프트웨어 기반 가상화 환경 구축으로 여러 애플리케이션을 동일한 플랫폼에서 통합 운영

## WIND RIVER Helix Virtualization Platform 구성도

