QCT Rackgo X
OCP AVA-4

Overview & Agenda

- QCT Rackgo X OCP AVA-4 is with Full Height Half length(FHHL) form factor, that supports up to four M.2 form factor solid-state drives (SSDs). The card shall support 110mm (Type 22110) or 80mm (Type 22080) dual sided M.2 modules.

- OCP contribution by Quanta:
  - Design files of M.2 Carrier Card

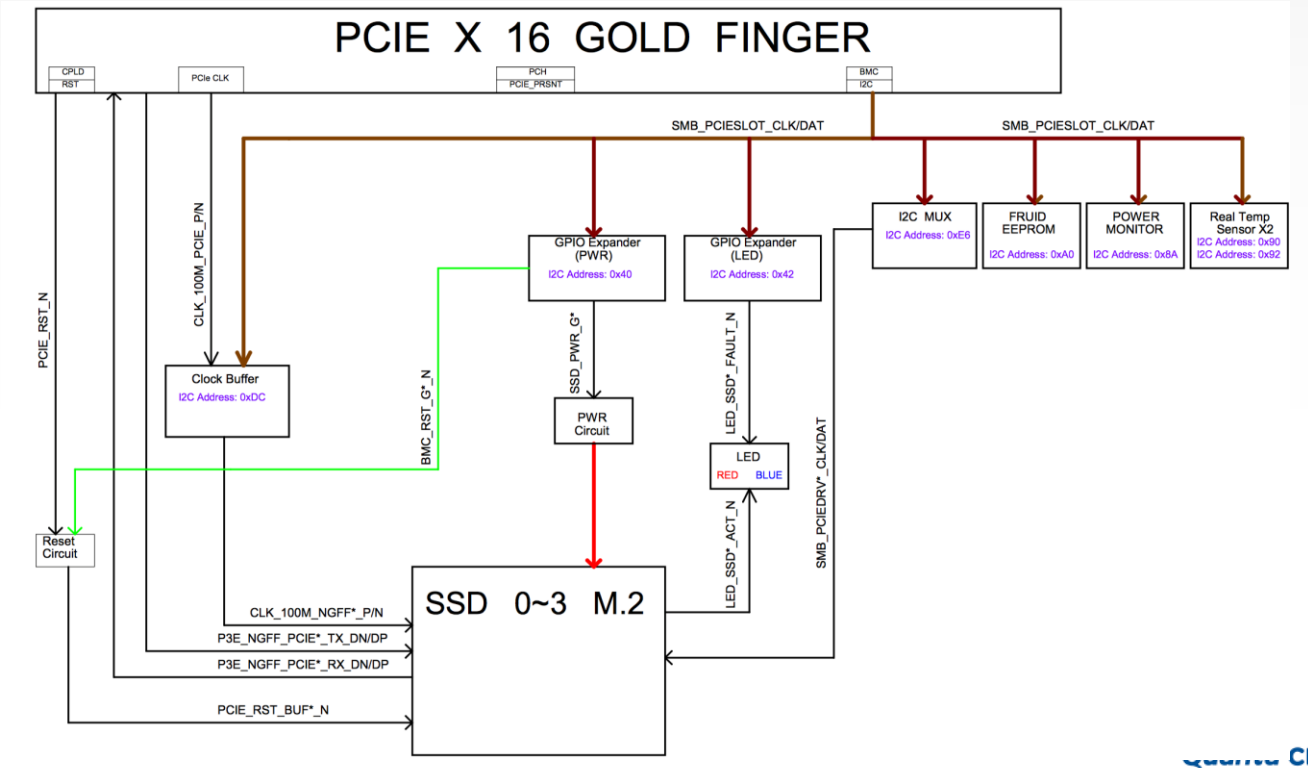
- Reference:
  - Facebook M.2 Carrier card v1.0 spec

High Level Features

Description	
Description	QCT Rackgo X OCP AVA-4
Form Factor	
Form Factor	Full Height Half Length (FHHL)Form Factor
Interface	
Interface	PCIe 3.0 x16
SSD Support Type	
SSD Support Type	Up to 4x110mm (Type 22110) or 80mm (Type 22080) dual sided M.2 modules
Environmental Requirements	
Environmental Requirements	• Gaseous contamination: Severity Level G1 per ANSI/ISA 71.04-1985 • Ambient operating temperature range: -5°C to +45°C • Storage temperature range: -40°C to +70°C (long-term storage) • Transportation temperature range: -55°C to +85°C (short-term storage) • Operating and storage relative humidity: 10% to 90% (non-condensing) • Operating altitude with no de-rating to 2,000m (6,600 feet)

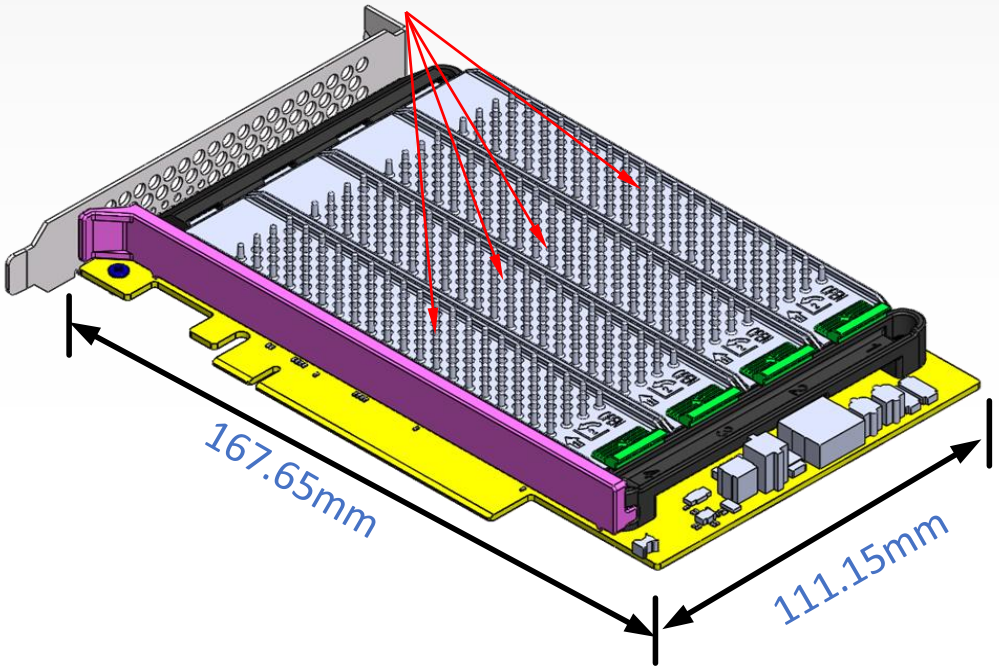
Block Diagram

- The block diagram describes the high level functional block diagram of QCT Rackgo X OCP AVA-4



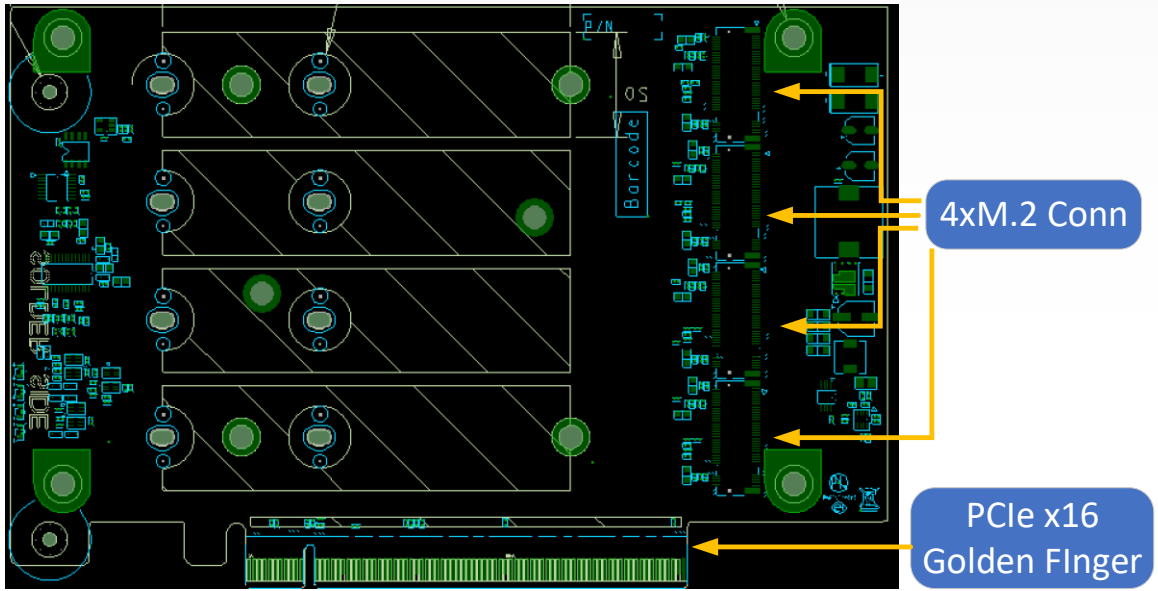
Mechanical View and Dimension

Separate the HS to four parts

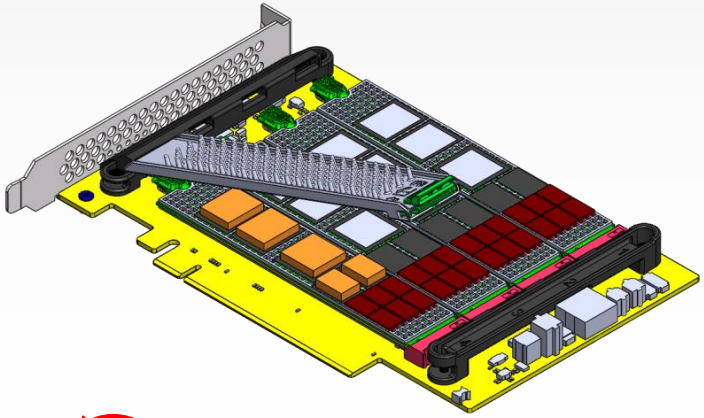


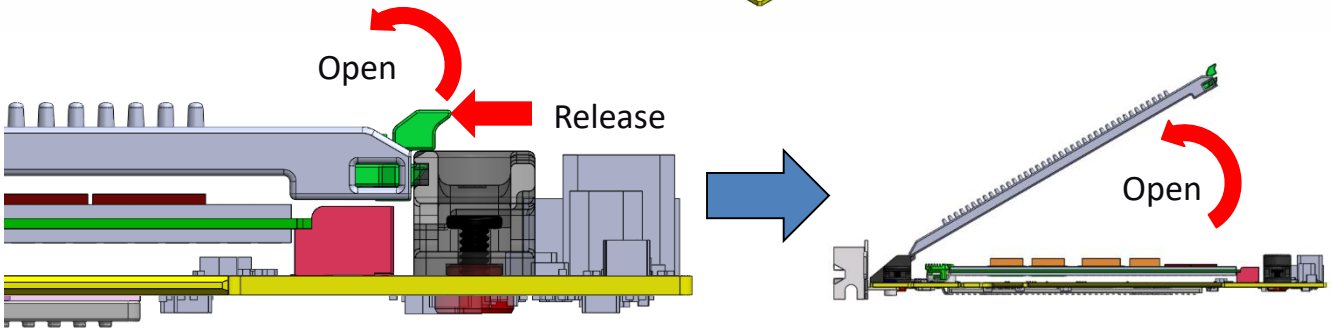
Key Part Placement

- The key part placement of QCT Rackgo X OCP AVA-4 is as below:



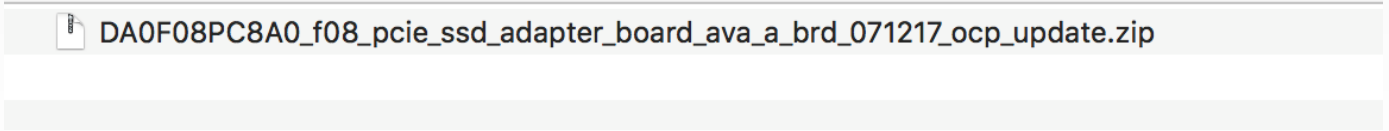
Heatsink Operation





Design Files Contribution- 01_Electricals

- 01_Full System Board Layout

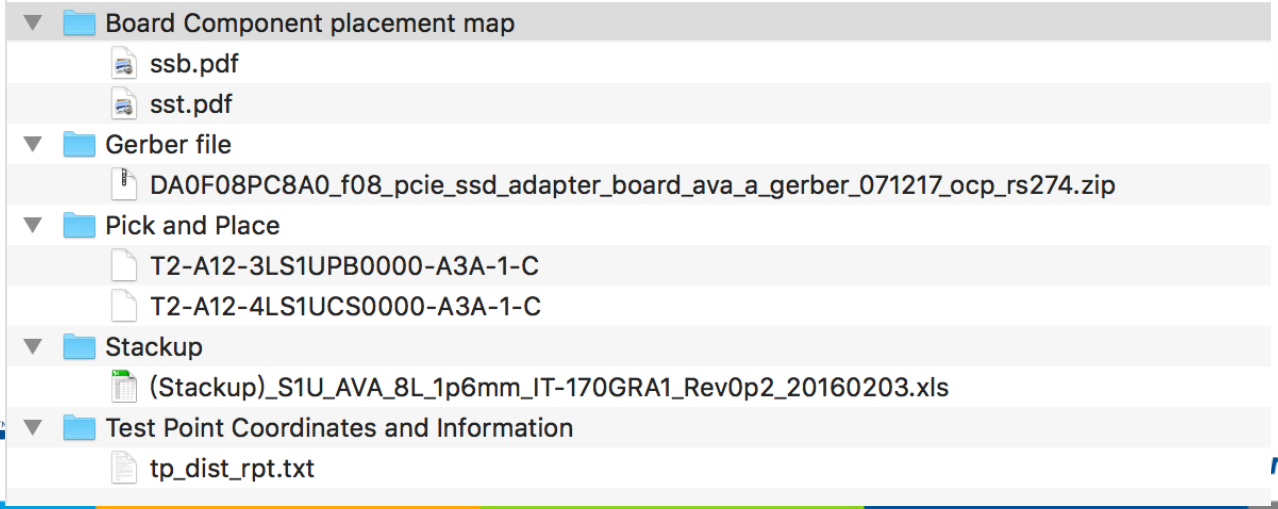


- 02_Full System Schematic CAD

Design Files Contribution- 01_Electricals

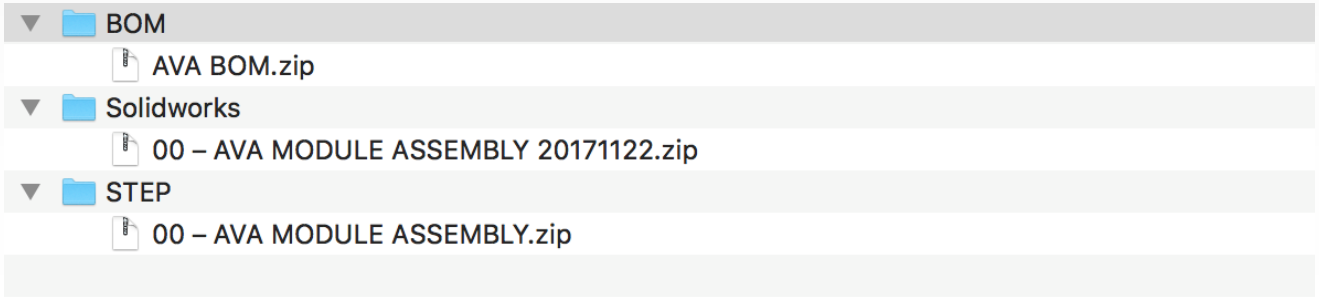
- 03_Full System Component BOM

- 04_Manufacturing Files



Design Files Contribution-02_Mechanicals

- Mechanical files



Design Files Contribution-03_Software

- NA, no FW design

OCP Tenets/Principles

- **Efficiency**
  - Up to scalable 4x 22110 M.2 devices with removable heatsink for M.2 to be used in the environment-friendly data center and cut the TCO(Total Cost of Ownership)
- **Scalability**
  - Comply with PCIe Gen3 standard of PCI SIG to be easily adapted for deployment on compute system with standard FH PCIe slot support
- **Openness**
  - Comply with PCIe Gen3 standard of PCI SIG, no need to extra propriety design on the baseboard
- **Impact**
  - To be easier to expand the storage pool without designing new baseboard
  - Reduce the design effort and reserve more space for baseboard design

Thanks!!!