

# Short Reach 100G Optics for Data Center Racks

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# Pod Examples



\* Photos courtesy of Dell.

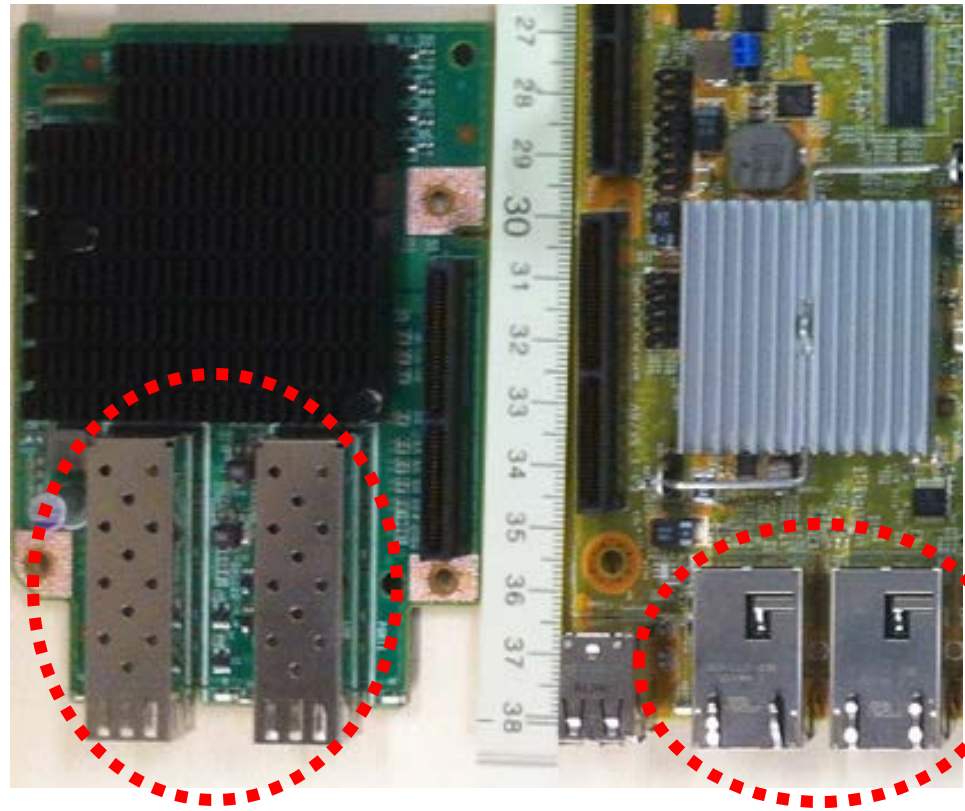
# Open Compute Rack Example



\* Photo courtesy of the Open Compute Project.

# Server Motherboard

- Optics require greater area
  - SFP+ depth is 2x RJ45 MagJack
- Server motherboard is space limited
  - CPU and RAM get priority

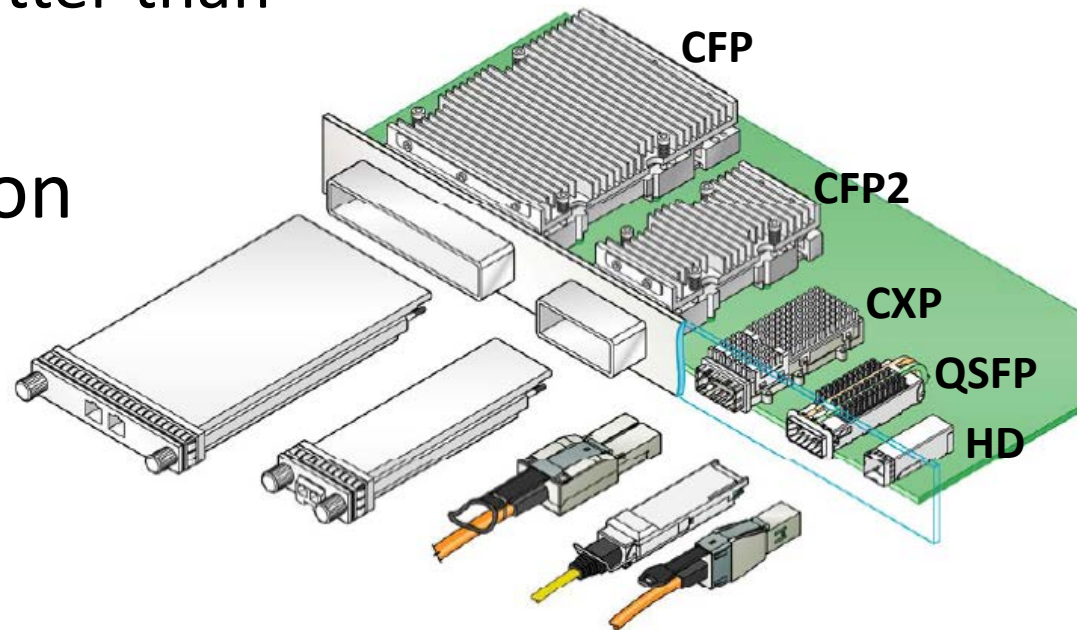


SFP+  
Cage

RJ45  
MagJack

# Optical Form Factors

- No “winner” for server motherboards
- Board area
  - HD significantly better than other options
- Faceplate protrusion
  - CXP and HD far greater



\* Diagram from <http://tinyurl.com/8l8emdj> (10x10msa.org)

# Server Connectivity Trends

- Copper not keeping pace
  - Increasing cable diameter to support higher data rates
  - Shorter reach capabilities
- Optics could be the future
  - Not a simple win
  - Form factors impediment to deployment on server motherboards

# Optics into Data Center Racks

- Standards based commodity
  - Volume drives down price
  - Interoperability fosters competition
- Form factor
  - MSA's typically used
  - Size often dictated by broad module support
  - Compact form factors needed to penetrate volume server market

# Thank You