OCP NIC3.0 ACTIVITIES & NEXT-GEN UPDATES

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## NIC Sub-group activities

### TSFF Thermal Fixture
- Taller Faceplate, Increased Cooling Solutions
- Re-Use of Existing Thermal Test Fixture. 3 Different components for Conversion to TSFF.
- Mechanical design files posted in wiki
- PCIe Gen5 Enabling

### PCIe Gen 5.0 SI Fixture
- System & OCP NIC 3.0 Compatibility
- Compliance Load Board (CLB)
  - In Lab
- Compliance Base Board (CBB)
  - Design soon

### Thermal Modelling
- Common reference model
- Active cable modelling
  - QSFP, QSFP-DD
  - OSFP-RHS
- Validate Cable Models

### Next-Gen
- Speed Bump
- PCIe Gen6
- RMII based Transport (RBT)
  - >100 Mbps

PCIe® 5.0 Thermal Test Fixture (TTF)

• The TTF was designed to support speeds up to PCIe® 5.0 32GT/s
  - Uses very low-loss material

• Cable assembly must be updated for 32GT/s signaling transmission
  - Working with two vendors to source
  - Lab experimentation required

Example cable assembly from Samtec

OCP NIC 3.0 TTF in use
PCle® 5.0 SI Test Fixtures

• CLB 5.0 32GT/s status:
  - Based on 4.0 design
  - Gerbered in January; PCB arrived March
  - Assembled protos readied March 30
  - Testing underway

• CBB 5.0 32GT/s status:
  - Based on 4.0 design
  - Updates to align with PCI-SIG®
  - Routing starts once CLB verified
Next-Gen Speed Bump
Trending Speed Upgrade with backward compatibility

Support PCIe Gen6 thru SFF-TA-1002

>100Mbps OOB still under investigation

Form factor trending NO CHANGE

Insertion loss & crosstalk of 64G PAM4 yet to be in spec

Backward compatibility is the priority
## Specification & Test Fixture for Tall Small Form Factor

![Side View (TSFF)](image)

### Released Specification Docs

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<th>Name</th>
<th>Format</th>
<th>Version</th>
<th>Date</th>
<th>Contributor</th>
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<td>OCP NIC 3.0 Specification (with change bar)</td>
<td>PDF</td>
<td>1v20 Released</td>
<td>09/13/2021</td>
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### Fixtures Design Files

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