

OCP NIC 3.0

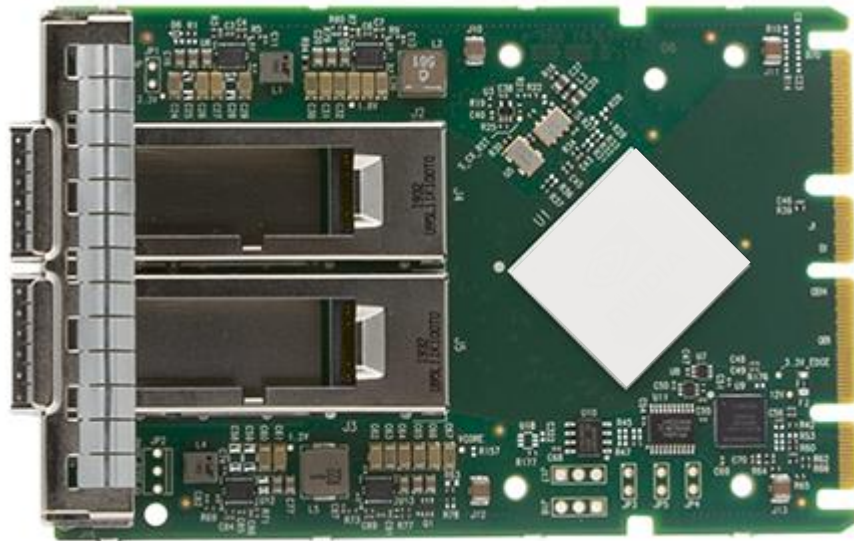
Millions shipped

Server Group > NIC Sub-Project

3.0 Specification v1.2.0

6.5 years in the making

16 contributors



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v1.2.0 Specification

PCIe

- Up to 32x Gen5
- 4 Multi-Host
- Lane Bifurcation

Power

- Power states
- Power down sequence

Security

- Secure boot
- Secure Firmware

Serviceability

Safety

Test Fixtures

Manageability

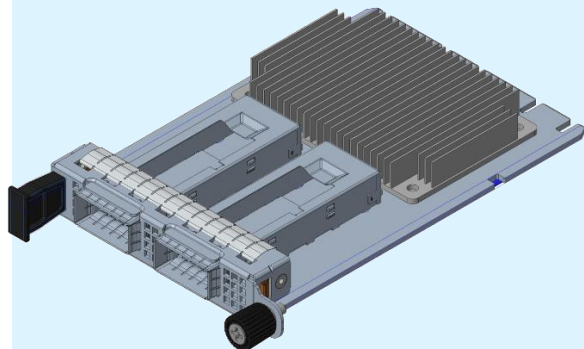
- Sideband: RBT/SMBus
- Transports: RBT & MCTP
- NC-SI PT
- MAC provisioning
- Temp & Power
- Firmware inventory
- FRU EEPROM



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OCP NIC 3.0 - Form Factors

SFF



Small Form-Factor

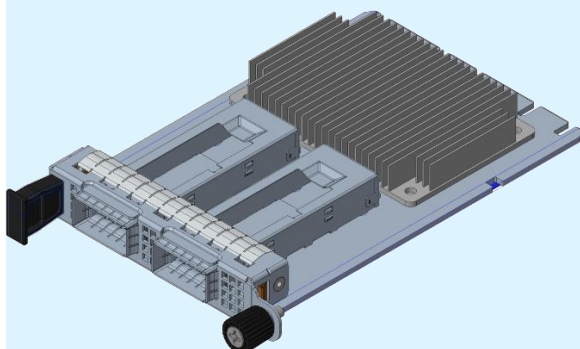
QSFP, SFP, BASE-T, OSFP, QSFP-DD

W 76 mm

D 115 mm

H 11.5 mm

T-SFF



Tall Small Form-Factor

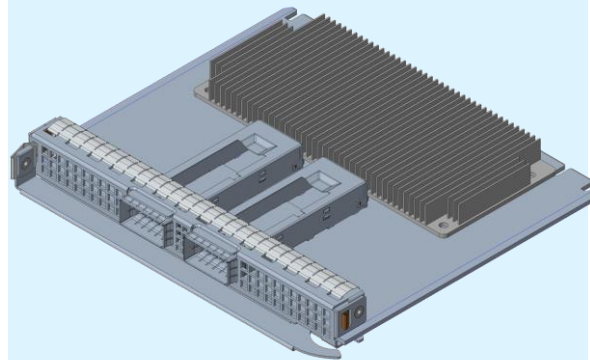
Thermal Performance

W 76 mm

D 115 mm

H 14.2 mm

LFF



Large Form-Factor

Real Estate | Higher Power | x32 PCIe

W 139 mm

D 115 mm

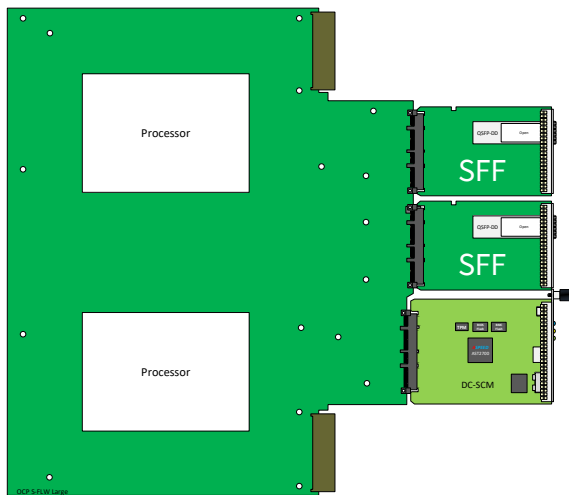
H 11.5 mm



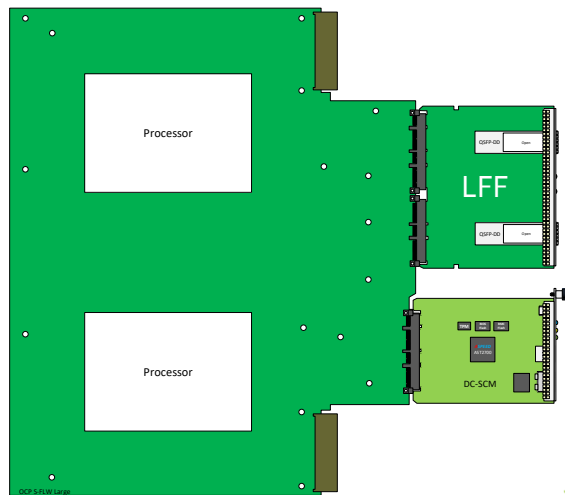
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Smart NICs - LFF vs SFF

- SFF and LFF are not plug-compatible
- Platforms and adapters are commonly SFF today
- Ideas: Double-SFF (D-SFF) which fits into two SFF slots



Motherboard with 2x SFF



Motherboard with 1x LFF

Idea - Double SFF for Smart NICs

Spans over two 4C+ connectors

Spaced per M-FLW HPM specification

Regular and Tall options

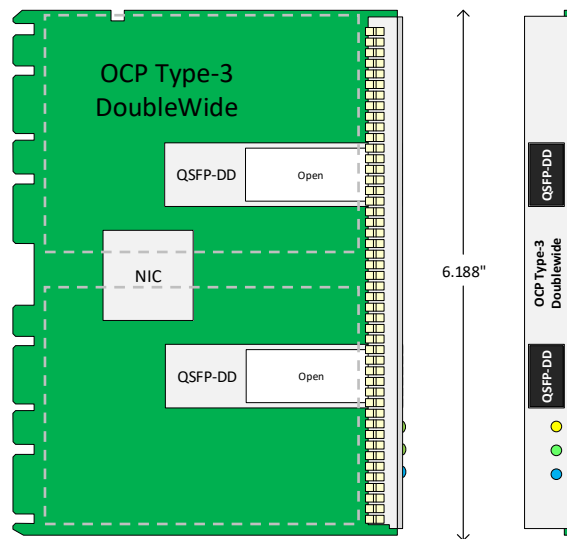
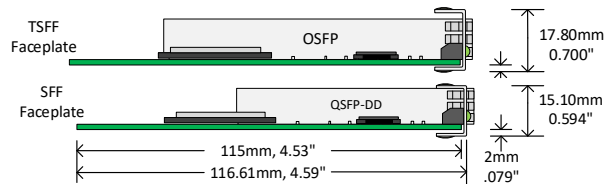
160 Watt

x32 PCIe lanes

13% more board space than LFF

Opens:

- Management scheme
- Latching mechanism
- More



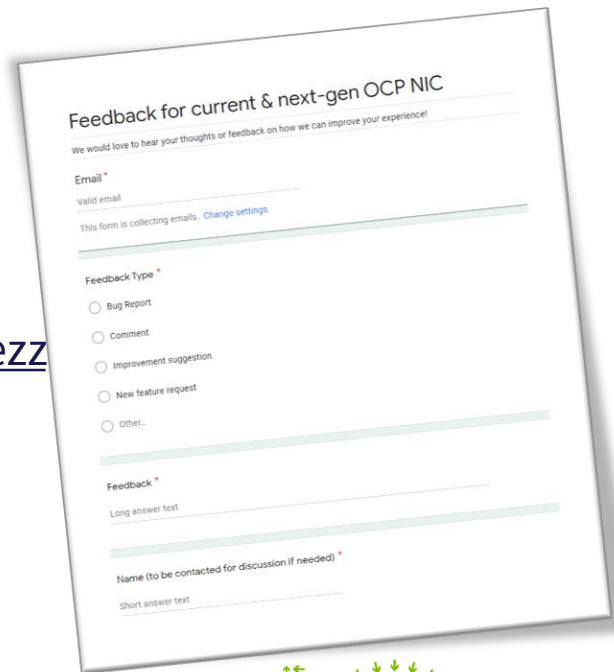
Illustration



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Call to Action

- Adopt and leverage OCP NIC 3.0 Specification
 - Provide Feedback
 - Get Involved
-
- Feedback form: tinyurl.com/feedback2ocpnic
 - Wiki: <https://www.opencompute.org/wiki/Server/Mezz>



Feedback for current & next-gen OCP NIC

We would love to hear your thoughts or feedback on how we can improve your experience!

Email *

Valid email

This form is collecting emails. [Change settings](#)

Feedback Type *

☐ Bug Report

☐ Comment

☐ Improvement suggestion

☐ New feature request

☐ Other...

Feedback *

Long answer text

Name (to be contacted for discussion if needed) *

Short answer text



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