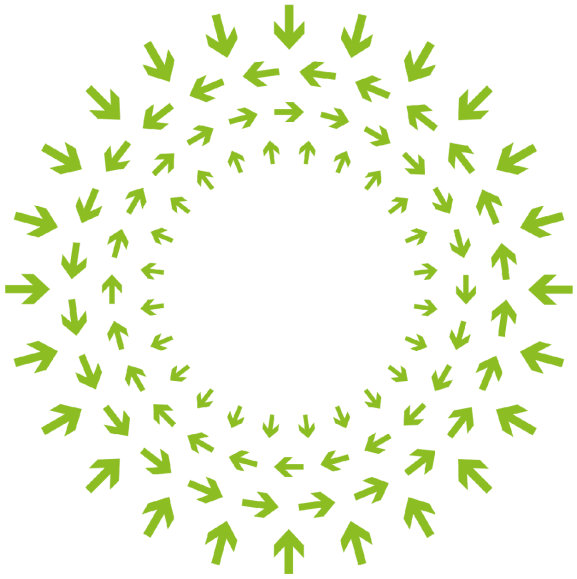

<Title>

<Revision>

Baseline Template 2021

expected to be released on June 1, 2021

Author: <Primary>
Author: <secondary. Delete if unnecessary>

Table of Contents

1. License

PLEASE PICK EITHER THE OCP CLA OPTION OR THE OWF OPTION. ONLY ONE CAN BE USED. DELETE THE ONE NOT USED.

1.1. OPTION A: OCP CLA OR

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You can review the signed copies of the applicable Contributor License(s) for this Specification on the OCP website at https://www.opencompute.org/legal-documents
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NEGLIGENCE), OR OTHERWISE, AND EVEN IF OCP HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

2. OCP Tenets Compliance

Please describe how this contribution addresses compliance with three out of the four OCP Tenets.

Note: The ideals behind open sourcing stipulate that everyone benefits when we share and work together. Any open source project is designed to promote sharing of design elements with peers and to help them understand and adopt those contributions. There is no purpose in sharing if all parties aren't aligned with that philosophy. The IC will look beyond the contribution for evidence that the contributor is aligned with this philosophy. The contributor actions, past and present, are evidence of alignment and conviction to all the tenets.

2.1. Openness

The measure of openness is the ability of a third party to build, modify, or personalize the device or platform from the contribution. OCP strives to achieve completely open platforms, inclusive of all programmable devices, firmware, software, and all mechanical and electrical design elements. Any software utilities necessary to modify or use design contributions should also be open sourced. Barriers to achieving this goal should be constantly addressed and actions taken to remove anything that prevents an open platform. Openness can also be demonstrated through collaboration and willingness to share, seek feedback, and accept changes to design and specification contributions under consideration.

2.2. Efficiency

Continuous improvement has been a fundamental value of the industry. New contributions (and updates to existing contributions) shall be more efficient than existing or prior generation contributions. Efficiency can be measured in many ways - OpEx and CapEx reduction, performance, capacity, power or water consumption, raw materials, utilization, size or floorspace are some examples. The goal is to express efficiency with clear metrics, valued by end-users, when the contribution is proposed.

2.3. Impact

OCP contributions should have a transformative impact on the industry. This impact can come from introducing new technology, time-to-market advantage of technology, and/or enabling technology through supply chains that deliver to many customers in many regions of the world. New technologies are impactful when such technology is enabled through a global supply

channel. One example is the NIC 3.0 specification which achieved global impact by having over 12 companies author, adopt, and supply products that conformed to the specification. Another example is emerging and open security features that establish and verify trust of a product.

2.4. Scale

OCP contributions must have sufficient enabling, distribution and sales support (pre and post) to scale to Fortune 100 as well as large hyperscale customers. Demonstration of this tenet can be accomplished by providing sales data or by providing go-to-market plans that involve either platform/component providers or systems integrator/VAR (direct and/or channel). Platform/component providers or systems integrators/VARs that can use this contribution to obtain product recognition (OCP Accepted™ or OCP Inspired™) and create Integrated Solutions which would also demonstrate scale. Software projects can also demonstrate this tenet when software is adopted across business segments or geographies, when software is a key factor in accelerating new technology, or when software provides scale of new hardware which meets OCP tenets.

3. Revision Table

Date	Revision #	Author	Description

4. Scope

This document defines the technical specifications for the <product name> used in Open Compute Project.

5. Overview

Describe your product. Explain its utility within the Open Compute Project ecosystem.

NOTE: Sections 6 – 18 are section details - All are **REQUIRED**, unless otherwise indicated. Where possible, please use the OCP Terminology Guidelines for Inclusion and Openness.

6. Rack Compatibility

Note: To achieve interoperability, new specifications and products seeking recognition shall be compatible with an OCP adopted architecture: ***ORv2, ORv3, or OpenEDGE*** *architectures. This is required for storage enclosures and systems, rack frames, and any enclosure which hold a server sled or edge device sled. Compatibility is also desired of server sleds and edge sleds.* All other devices types not listed are not required to support this. is

7. Physical Specifications

7.1. Block Diagram

7.2. Placement and Form Factor

7.3. CPU and Memory

7.4. Platform Controller Hub (PCH)

7.5. I/O Subsystem

7.5.1. PCI (if applicable)

7.6. PCB Stack-Up (optional)

7.7. Figures & Illustrations

8. Thermal Design Requirements

8.1. Data Center Environmental Conditions

8.2. Server Operational Condition

8.3. Thermal Kit Requirements

8.4. Advanced Cooling Compatibility (if applicable)

Any liquid cooling enabled contributions using cold plate technology shall comply with the ACS Liquid Cooling Cold Plate Requirements document revision 1.0 or later.

Any Immersion Cooling contributions shall comply with the Immersion Requirements document revision 1.0 or later.

9. I/O System

9.1. PCIe x32 Slot/Riser Card

9.2. DIMM Sockets

9.3. NIC Module

[Note: If the product has a mezzanine or pluggable IO interface, that interface must conform to either the OCP Mezzanine 2.0 spec, the OCP NIC 3.0 spec or later.]

9.4. Network

9.5. USB

9.6. SATA

9.7. M.2

9.8. Debug Header

9.9. Switches and LEDs

9.10. Fan connector.

9.11. TPM Connector and Module

9.12. Sideband Connector

9.13. VGA header

10. Rear Side Power, I/O and Midplane

10.1. Overview of Footprint and Population Options

10.2. Rear Side Connectors

10.3. Midplane

11. Rack Implementation (if applicable) - ORV2 used as an example

11.1. Cubby for ORv2

11.2. Power Shelf

All power shelf specification submissions and products seeking recognition shall comply with Open Rack specification revision 2.0 or later.

11.3. Intel Motherboard V4.0-ORv2 Power Delivery

11.4. Intel Motherboard V4.0-ORv2 Single-Side Sled

11.5. Intel Motherboard V4.0-ORv2 Double Side Sled

11.6. Compatibility with Open Rack Standard

All specifications and products seeking product recognition for use in Open Rack shall comply with Open Rack specification revision 2.0

12. Mechanical

12.1. Single Side Sled Mechanical

12.2. Double Side Sled Mechanical

12.3. Fixed Locations

12.4. PCB Thickness

12.5. Heat Sinks and ILM

12.6. Silk Screen

12.7. DIMM Connector Color

12.8. PCB Color

13. Motherboard Power System

13.1. Input Voltage

13.2. Hot-Swap Controller (HSC) Circuit

13.3. CPU VR

13.4. DIMM VR

13.5. MCP (Multi Core Package) VRM

13.6. VRM design guideline

13.7. Hard Drive Power

13.8. System VRM efficiency

13.9. Power On

13.10. High power use case

14. Environmental and Regulations

15. Environmental Requirements

15.1. Vibration & Shock

15.2. Regulations

15.3. Labels and Markings

16. Prescribed Materials

16.1. Disallowed Components

16.2. Capacitors & Inductors

16.3. Component De-rating

17. Software Support (RECOMMENDED)

17.1. Software tools to validate the Hardware design

Please list any software tools used to validate the hardware design. The tools could be related to:

- Test and Validation using virtual simulation
- Design decision based on digital models
- Proof of manufacturability with 3-D tools

18. System Firmware

All Server products, applying for OCP Accepted™ product recognition, must have a completed OSF Tab in the 2021 Supplier Requirements. At this time, this is not required for any other product types. Please check with the OSF leadership for updates.

The completed checklist shall be uploaded and available at:
https://github.com/opencomputeproject/OpenSystemFirmware/[vendor_name]/[product_name]/

19. Hardware Management

19.1 Compliance

All Products shall have a HW XXXXXXXX (Redfish, Swordfish, etc.) Management Profile and provide such evidence by completing the Hardware Management Tab in the 2021 Supplier Requirements.

19.2 BMC Source Availability (if applicable)

All Products shall have a completed BMC Tab in the 2021 Supplier Requirements if applicable.
The BMC management source code shall be available at:
https://github.com/opencomputeproject/OpenSystemFirmware/[vendor_name]/[product_name]/

20. Security

All products shall have a completed Security Tab in the 2021 Supplier Requirements.

21. References (OPTIONAL)

[1] “Title”, publication year, publication journal/conference/standard, volume, pages, link to publication if available
[2] OCP Profiles - https://github.com/opencomputeproject/OCP-Profiles
[3] Redfish Interop Validator - https://github.com/DMTF/Redfish-Interop-Validator
[4] Redfish Service Validator - https://github.com/DMTF/Redfish-Service-Validator
[5] Redfish Service Conformance Check - https://github.com/DMTF/Redfish-Service-Conformance-Check

Appendix A - Requirements for IC Approval

[Note to author: appendix A must be completed by the Contributor of Baseline Specification]

List all the requirements in one summary table with links from the sections.

Requirements	**Details**	**Link to which Section in Spec**
Contribution License Agreement	Which one?	Link to Sec 1
If OWF CLA, please provide link to OWFa 1.0 Final Spec Agreement. If OCP CLA, please provide link to OCP Hardware Licence of choice.		
Tenets	Which ones? Openness Efficiency Impact Scale	Link to Sec 2
Supplier Requirements:		
Supplier must be an OCP Member.		
Supplier must become an OCP Solution Provider.		
Supplier must provide product based on this spec within 120 days		
Supplier must make product available to the PUBLIC		
Name of Supplier(s)		

Appendix B _ - OCP Supplier Information (to be provided by the Supplier of Product within 120 days)

Your product must apply for OCP Product Recognition within 120 days.

Company:
Contact Info:

Product Name:
Product SKU#:

Description:

OCP Product Recognition:
Please have your supplier complete the following 2021 Supplier Requirements before seeking OCP Product Recognition. Insert the completed spreadsheet link in the table below.

For Server Products ONLY:
For OCP Inspired™ Product Recognition, complete the following tabs:

- Supplier Details
- Security - bronze level
- HW Mgmt
- BMC (binary)

For OCP Accepted™ Product Recognition:

- Supplier Details
- Open System Firmware
- Security - silver/gold level
- HW Mgmt
- BMC (source + binary blobs)

For all other Products:

- Supplier Details
- Security (Bronze for OCP Inspired™ or Silver/Gold for OCP Accepted™)
- BMC if applicable

List all the requirements in one summary table with links from the sections.

Requirements	**Details**	**Links**
Which Product recognition?	OCP Accepted™ or OCP Inspired™	
If OCP Accepted™, who provided the Design Package?		Link
2021 Supplier Requirements for your product(s)		Link