



OPEN
Compute Project

Server Committee Charter



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Version: 1.0

1 Revision History

Date	Name	Description
06-03-2012	Harry Li	Original draft based on Work Shop in San Antonio OCP Summit
07-11-2012	Pete Bratach	Reformatting and rewrites of most of the draft.
3/24/2014	Mark Shaw	Re-minted for the new Server Committee updated according to the changes in scope from motherboard to server as well as new chassis submissions.
12/10/2014	Mark Shaw John Stuewe	V1.0 Scope of charter finalized.

2 Contents

1	Revision History.....	2
2	Contents.....	3
3	Overview.....	4
4	Scope.....	4
4.1	Open Rack Compatible.....	4
4.2	Open CloudServer Compatible.....	5
4.3	Micro Servers, Chassis and Carriers.....	5
4.4	Components and Peripherals.....	5
5	Specification Standards.....	5
5.1	Electrical Interfaces.....	5
5.2	Mechanical Interfaces.....	6
5.3	Manageability.....	6
5.4	Debug.....	6
5.5	Test Framework.....	6
6	Specification Submission and Acceptance.....	6
7	Community Organization and Meeting Cadence.....	7
7.1	Organization.....	7
8	Legal and Patent Policy.....	8



3 Overview

The OCP Server Committee provides standardized server system specifications for scale computing. Standardization is key to ensure that OCP specification pool does not get fragmented by point solutions that plague the industry today.

The Server Committee collaborates with the other OCP disciplines to ensure broad adoption and achieve optimizations throughout all aspects from validation, to manufacturing, deployments, data center operations, and de-commissioning.

4 Scope

The server committee will further the goals of standardization and modularization by channeling investigations. Primary areas of investigations

- Open Rack Compatible Chassis and Sleds
- Open CloudServer Compatible Chassis and Blades
- Micro-servers, Chassis and carriers
- EIA 310-D/E 19" Rack Derivative Chassis and Sleds using Open Rack Motherboards
- Components and Peripherals

Older offerings, specifications that were not utilized, and specifications that are not of high caliber will be retired over time.

4.1 Open Rack Compatible

Chassis compatible with new standards (v1.8+) with 12V busbars in the rear. Server sleds that interoperate with these chassis.

4.1.1 Open Rack 19" Compatible Derivative Systems

There has been demonstrated demand for systems that can be installed in traditional EIA-310D/E racks typically from smaller customers. Different chassis have been proposed to meet this demand utilizing OCP servers. Priority will be given to systems that can accept Open Rack sleds without modification. An example is one

chassis that accepts the original 1.5U Decathlete sled and is being upgraded to accept Winterfell motherboards.

4.2 Open CloudServer Compatible

Self-contained high-density chassis compatible with EIA-310D rack, submitted by Microsoft.

4.3 Micro Servers, Chassis and Carriers

This design focuses on the low power, low cost and distributed computing use case. Servers are small form factor optimized for high density clusters or installation into other devices such as storage.

Potential projects involve these types of processors:

- ARM-based CPU
- x86-based CPU

Because the micro-server is not stand-alone within a chassis, additional specifications will need to be written for base-boards used as carriers for the micro-servers.

4.4 Components and Peripherals

A healthy eco-system includes many different vendor components. Specifications will include: riser cards, mezzanine I/O, accelerators, networking.

5 Specification Standards

Specifications that are high quality and prescriptive are a prerequisite to standardization. The baseline for acceptance will be whether or not the committee believes that two different vendors can build compatible and fully interoperable servers and systems.

The Server Committee will provide a starter template for use as submission.

5.1 Electrical Interfaces

All interfaces must be fully documented. Voltages, power, frequencies, standards are all required. Networking and other high-speed interfaces such as PCI-Express must



be outlined. Extra consideration is to be provided for submissions that include schematics, board and layout files, and manufacturing files.

5.2 Mechanical Interfaces

Specifications must include all critical mechanical dimensions. Form factors, xyz heights, keep-in and keep-outs. Extra consideration is to be provided for submissions that include mechanical CAD and manufacturing files. Submitter will also provide 3-D CAD model in PDF format to allow the broader audience to review.

5.3 Manageability

Dealing at scale requires rock-solid management solutions. Interfaces, protocols, commands must all be documented.

5.4 Debug

Systems will not be successful if they cannot be debugged. Hooks for troubleshooting and repair must be included.

5.5 Test Framework

Open Compute has a strong certification strategy through the C&I committee. Each specification will require working with the C&I committee to identify test and certification strategy.

6 Specification Submission and Acceptance

The goal for all OCP hardware submissions is acceptance with eventual OCP certified hardware. The broader OCP specification submission process is documented here:

<http://www.opencompute.org/community/get-involved/spec-submission-process/>

The Server Committee covers all hardware within scope and is the first place where specifications are reviewed. After review within the committee, the specification is forwarded to the Incubations Committee for vote on adoption. Within the committee, the basic rules for votes are as follows:

- 1) Majority vote to move specification from committee review to the Incubations Committee.
- 2) An extreme situation is the case of a confidential submission, in which no vote will be taken. The committee chair and the Incubations Committee liaison will provide feedback on the specifications. Upon agreement between the chair and the liaison, the specification will move to the Incubations Committee. It is the submitter's responsibility to ensure that appropriate legal procedures for handling confidential information is met.
- 3) If the Incubations Committee rejects a specification, the Incubations Committee will provide directions on whether the specification needs to go back into the review stage or is to be outright rejected.

During this process, the specification will be posted to the wiki.

http://www.opencompute.org/wiki/Server/SpecsAndDesigns#Specifications_under_review

Once accepted, the committee chair shall post the specification on the team's wiki website.

Revisions and addendums to existing specifications are typical for hardware projects with ongoing corrections and improvements. These will be treated formally as addendums to the existing specification. The chair and the IC liaison determine whether the changes are minor enough to approve directly or whether the changes should be sent through the full committee voting process.

7 Community Organization and Meeting Cadence

7.1 Organization

The organization structure and members are a work in progress. To be a member of the server committee, you must be a member of Open Compute Project and agree to the license agreement.

In the meantime, you can participate and contribute using the mailing list:

<http://lists.opencompute.org/mailman/listinfo/opencompute-server> .

Positions:



- **Chair** – who will facilitate the flow of information, determine consensus and commit documents.
- **Incubations Committee Liaison** – When specifications are ready for adoption, the IC liaison represents the server committee for approval.
- **Working Group** – server committee members who are committed moving the project forward between meetings. Members must provide contributions and attend meetings. Examples of contributions can be advice, specification and code.
- **General Assembly** - who are people are following the topic and want to be part of the decision process.

8 Legal and Patent Policy

All specifications and work in the server committee is covered under the OCP license and legal agreements.