DC-SCM 2.0

Datacenter Secure Control Module

OCP Tech Talk

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What is DC-SCM 2.0

A collaboration to expand upon the DC-SCM 1.0 specification to allow for future scalability and longevity across multiple generations of enterprise platforms. To support evolving manageability interfaces, range of entities being securely managed and forthcoming use cases such as multi-node server designs.
Where we are

DC-SCM 2.0 version 0.9 collaterals are posted on the Wiki for public review.

OCP Incubation Committee Meeting
Rev 2.0, Ver 1.0 Acceptance Evaluation

12 Apr. 2022

30 Apr. 2022

5 May 2022

Public Review Deadline

<table>
<thead>
<tr>
<th>DC-SCM 2.0 Document</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Specification</td>
<td>0.9</td>
</tr>
<tr>
<td>LTPI Specification</td>
<td>0.9</td>
</tr>
<tr>
<td>DC-SCI Pinout Spreadsheet</td>
<td>0.98</td>
</tr>
<tr>
<td>HFF 3D STEP files</td>
<td>0.9</td>
</tr>
<tr>
<td>HFF 2D Drawings</td>
<td>0.9</td>
</tr>
</tbody>
</table>

Where to find us

• This is a Hardware Management Module sub-project under Hardware Management:
  https://www.opencompute.org/projects/hardware-management-module-module-incubation

• For the latest documentation:
  https://www.opencompute.org/wiki/Hardware_Management/Hardware_Management_Module
DC-SCM 2.0 / OCP NIC & DC-MHS

Non-standardized / Custom HPMs

Today

DC-MHS R1.0

M-PIC

M-XIO

Cooling

Storage

I/O

Accelerator

Compute

Networking

Storage

Custom

Standardized HPMs (M-FLW/DNO)

DC-SCM 2

DC-MHS components

DC-SMC 2 components

DC-SCM 2.0 – One Arch. Specification for Multiple Platform Design Types

- DC-SCM 2.0 as a toolbox:
  - Multiple Alternative Interfaces:
    - NCSI x 2
    - OpenFSI
    - UART
    - SGPIO
    - SGMII
    - Display Port
  - Multiple topologies support on:
    - USB
    - PCIe
  - Single & Dual Node Options
  - Multiple LTPI tunneling capabilities
DC-SCM 2.0 – Multi-Function Pins

The base spec offers a wide menu of mutually exclusive interface options that implies HW co-design for electrical interoperability.
What’s Next – Standardize Platform Types

Objective:

Minimize DC-SCM SKUs & maximize HPM leverage/re-use

Proposal:

Define DC-SCI Design Specs above the Base Spec:

- Type 1 = 1S-4S Single Node servers (AMD, Arm, Intel, Power, etc.)
- Each pin gets 1 function, power domain, direction
- Connectivity block diagrams and usage descriptions
- Electrical guidance for HPM & DC-SCM to maximize HW interoperability
- Still assumes "Plug-n-Recode"
- Excludes HW that does not traverse the DC-SCI

DC-SCI Type 1 Pinout Proposal