

OCP equipment for everyone

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COMMUNITY®





ITRENEW

- Leading provider of circular data center solutions to the hyperscale cloud market: technology, logistics, monetization
- Leading global provider of technology -enabled data center decommissioning services, including data sanitization software and IT asset remarketing
- Manufacturer of Sesame open compute and storage solutions, 1st of its kind suite of recertified and warrantied solutions for global use cases

SPLITTED DESKTOP

• Delivering TCO value recovery > \$1Billion to date

Redefining and powering LTV (a.k.a. not your grandfather's ITAD)





Clients We Partner With

--- Microsoft

amazon

ORACLE

UBER



Project goal and genesis

- which could ease access to OCP technology principles.



• OCP adoption could be accelerated by offering a lab chassis format

• Lot of initial **PoC** demands couldn't be addressed with OpenRack, not because of the technology but because of the size, and cost to test.



Targeted end -users

- datacenter environment
- growth
- Budget constraint users



• **University** labs willing to contribute to enhance OCP technologies **Hackers** seeking for an easy to deploy platform compliant with non-

Edge computing end user with office space air quality constraints **SMB** seeking for an innovative IT solution which can scale with there



Design tool: Freecad

- It couldn't be for everyone if the design was not open
- FreeCAD 0.18 with SheetMetal and assembly module
- Calculix for mechanical structural deformation









Design tool: Kicad



Discovery chassis

- Suitable to office use
- Powered by 110/220 Vdc
- Design close as OCP originalrack
- Fully closed chassis
- 35 Kg
- 240 x680 x 993 mm (WxHxD)

System architecture

- Building block approach
- OCP v1 server tray
- Up to 5 servers per chassis
- Optional 1 U network support
- Up to 12 chassis could be interconnected in a 4x3 grid configuration
- Support, recertified and new OCP gears
- 1 bus bar per chassis, up to 1600W

CP gears 00W

Power distribution

Issues met

- Some OCP specifications are too relaxed and prohibits an easy integration of existing parts into a new design (ex: bus bar locking mechanism)
- FreeCAD still needs additional works on the design workflow but this is the first chassis fully designed with it
- Weight of the chassis
- Noise might be slowing the adoption
- OCP form factors
- High power through PCB

Potential enhancements

- PCIe expander to support GPU card and build a workstation chassis
- Multiple video card support to build a multi-seats configuration using virtualization
- Storage box expander
- Cubby based chassis support
- 48Vbus bar

Call to Action

- Join ITRenew Open Hardware lab in the bay area (upcoming meetups) Contribute to Open Source Firmware initiative
- Provide hardware for testing and build early prototype
- Contact us if you are willing to build adapted designs!

Open. Together.

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