

Google: 5kW PSU Proposal for ORv3

xiongli@, xinxli@, patrickzhang@

Proposals to Open Rack V3 spec

- **Output Voltage:** adjustable from 42V to 58V with default at 54.5V
 - Consistent with Open Rack V2 spec
 - Better support for rectifier power to battery power transitions
 - Fixed ratio converters to support VR loads and regulated converter to support PCIE loads
- **Communication Protocol:** CAN
 - Consistent with Open Rack V2 spec
 - Better noise immunity
 - More resilient operations (less prone to single point failure)
- **Power Level:** flexible from 3kW to 5kW
 - Flexible power level to support different applications: storage, server, and AI.
- **Form Factor:** 40mm x 68mm x Length
 - 68mm to support use cases in 19" racks
 - Fixed width and height while flexible length to scale with power level
- **Hold-Up Time:** 10ms
 - Bulk capacitance reduction
 - Better thermal design
- **Power shelf:** connector to support higher current