Uber - Legoland 2.0 (Defender) 
Next gen Rack Architecture

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Rack Overview

~151 cables reduction

Legoland1
48RU 1+1
CRPS PSU

Simplified Cabling

Legoland2
2RU N+1
Power Shelf
Defender Rack

- 48V busbar-rack
- 30kW power shelf
- 3kW 48V ATS-PSU
- SMC (Shelf Management Controller)
- 48V CDU
1. **Busbar components**

- OCP 48V V2 / V3 server clip compatible
- 620A current rating
- Silver / nickel plating

![Diagram showing busbar components: Housing, Lead in insulator, Horizontal bar, Power Shelf output.](image_url)
2. CDU

- For Power Shelf:
  60A IEC60309 input plug
  2x 32A 7pin Positronic connector

- For Switches:
  3x C13 outlets
  3x 20A CBs
Defender 48V Power Shelf Spec

- Shelf depth (excludes output busbars): 2 RU EIA 19” x approx. 850 mm
- 30KW max 12 PSUs (11+1, 8+1, 5+1 and 2+1)
- Dual AC input, Wye or Delta
- 2x2 32A Positronics AC input connector
- Output busbars fastened with flange nuts to rack busbar
Defender Power Supply Spec

- 200-240V dual AC input
- Output: 3kW/48V (48.8V to 49.8V)
- Built-in auto transfer switch
- Efficiency >97% peak
- > 25mS ride-through time
- < 150% inrush current during transfer
SMC (Shelf Management Controller)

- RJ45 10/100/1000 Mbps
- Redfish API
  - Metering
  - Status monitoring and event logging
  - Control
  - FW Upgrade
  - Proposed to DMTF as industry standard
- Debug port
  - Serial port
  - SSH
  - Default Static IP
- I2C to PSU
- Hot-pluggable
Thank You!