

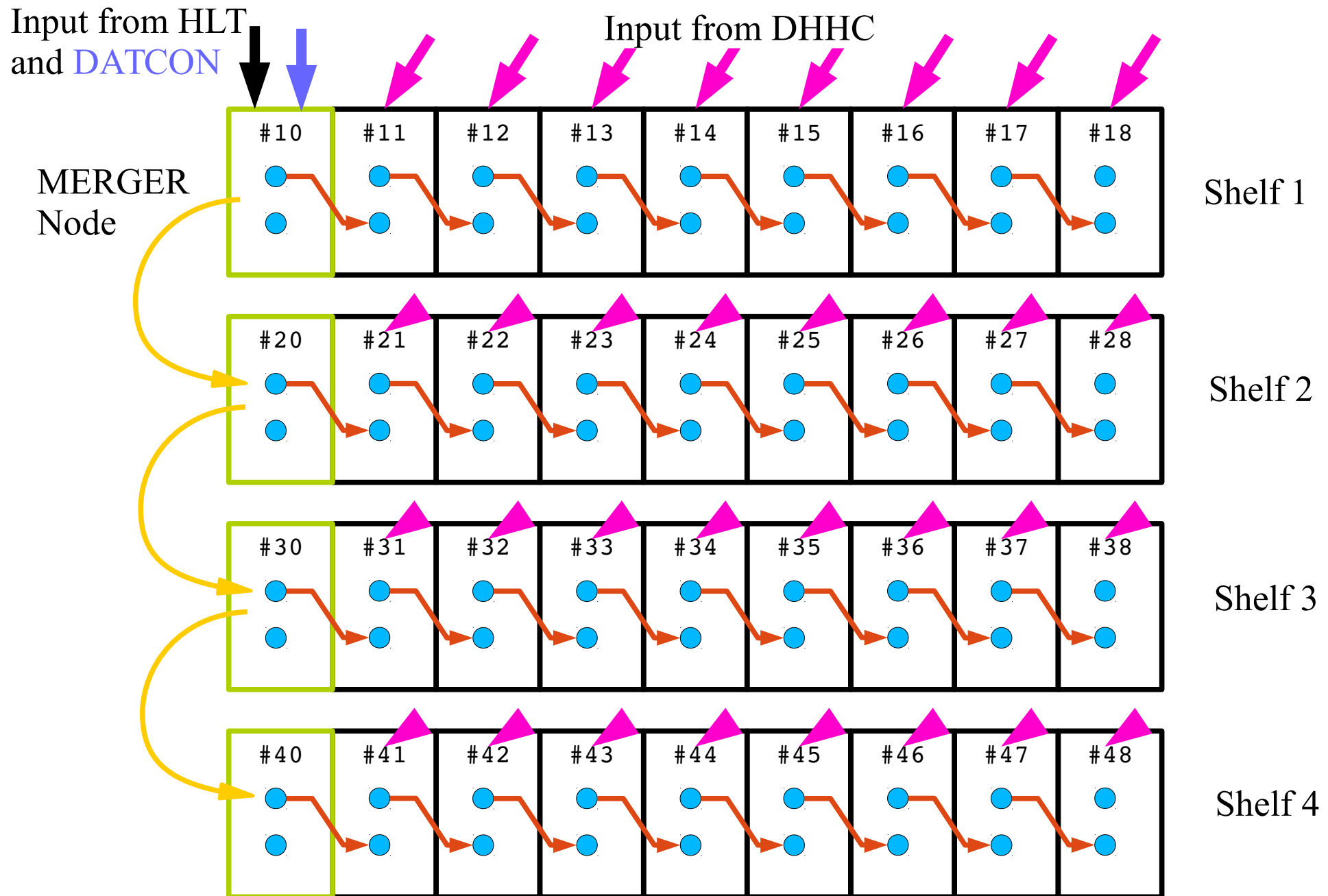
ONSEN - Backup Solution (w/o Carrier Board)

Björn Spruck

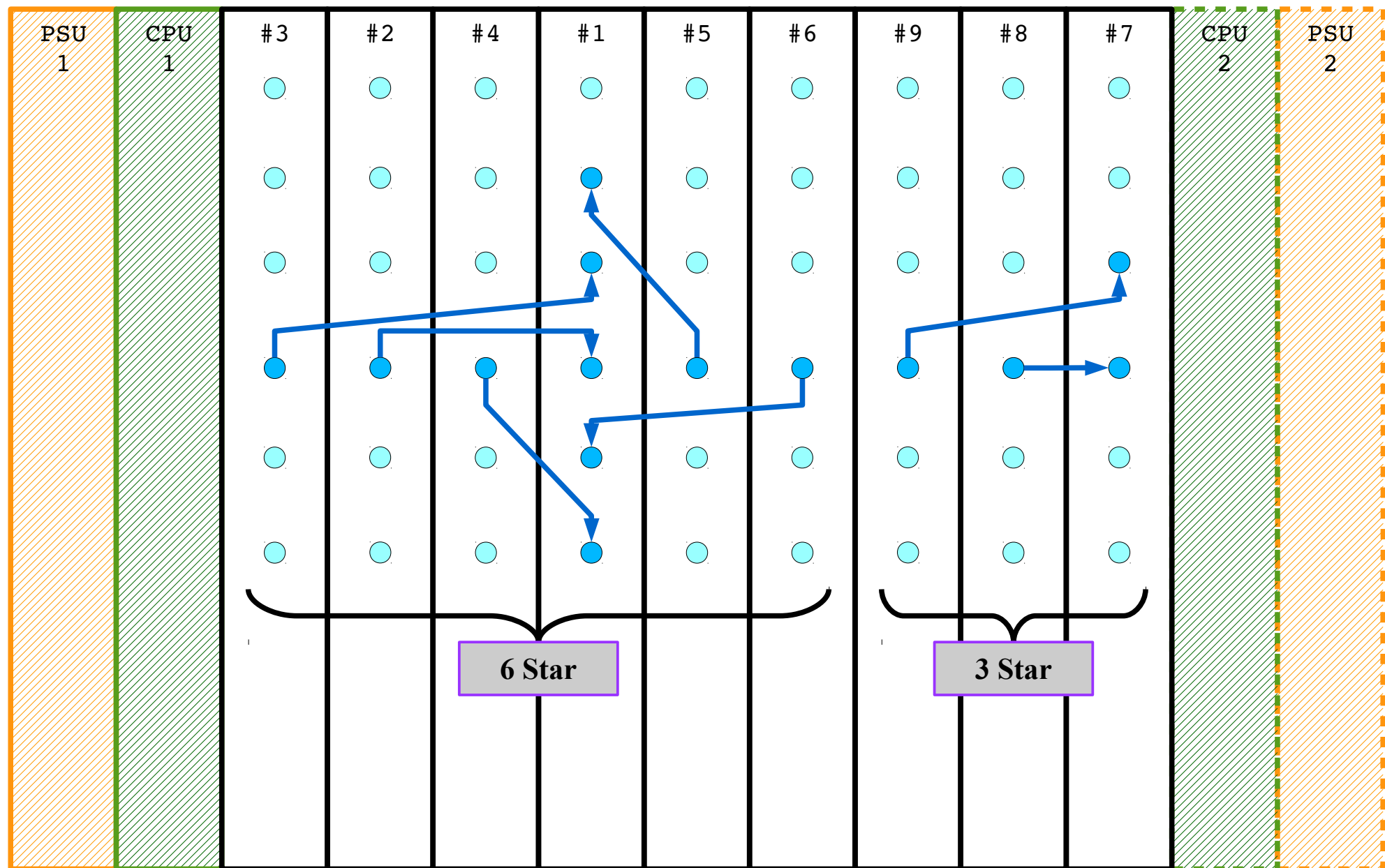
Seon
28.5.2014

- Carrier board still not finished, only prototype exists.
 - F.e. connection Carrier FPGA \leftrightarrow AMC not tested in final configuration
 - Backup solution would be nice.
 - Until carriers are available, tests are limited to O(1) selection nodes
 - Carriers used mainly for trigger data distribution
- But AMC boards can be used in MTCA shelves
 - This is what DATCON wants to do!
 - Problem: Custom backplane! Expensive (if done by company).
- \rightarrow If Bonn builds a custom backplane, maybe it can be build such, that it we can use it, too.
- For us: Trade 1 ATCA shelf with 9 carrier cards and 32+1 AMCs by 4 MTCA shelves with 36 AMCs.

ONSEN Setup Scheme with MTCA Shelves



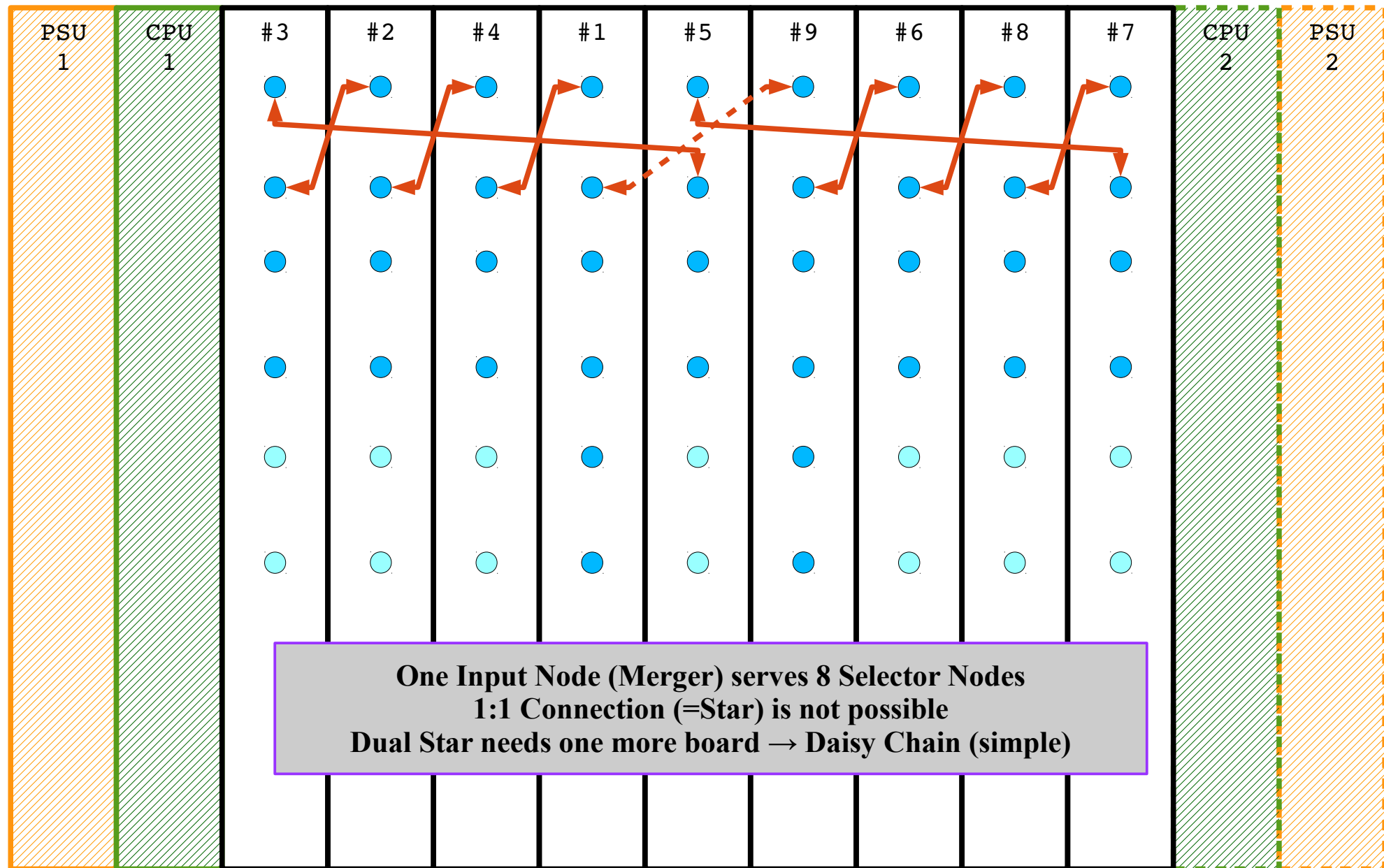
Backplane Layout (Stars 6+3) for DATCON



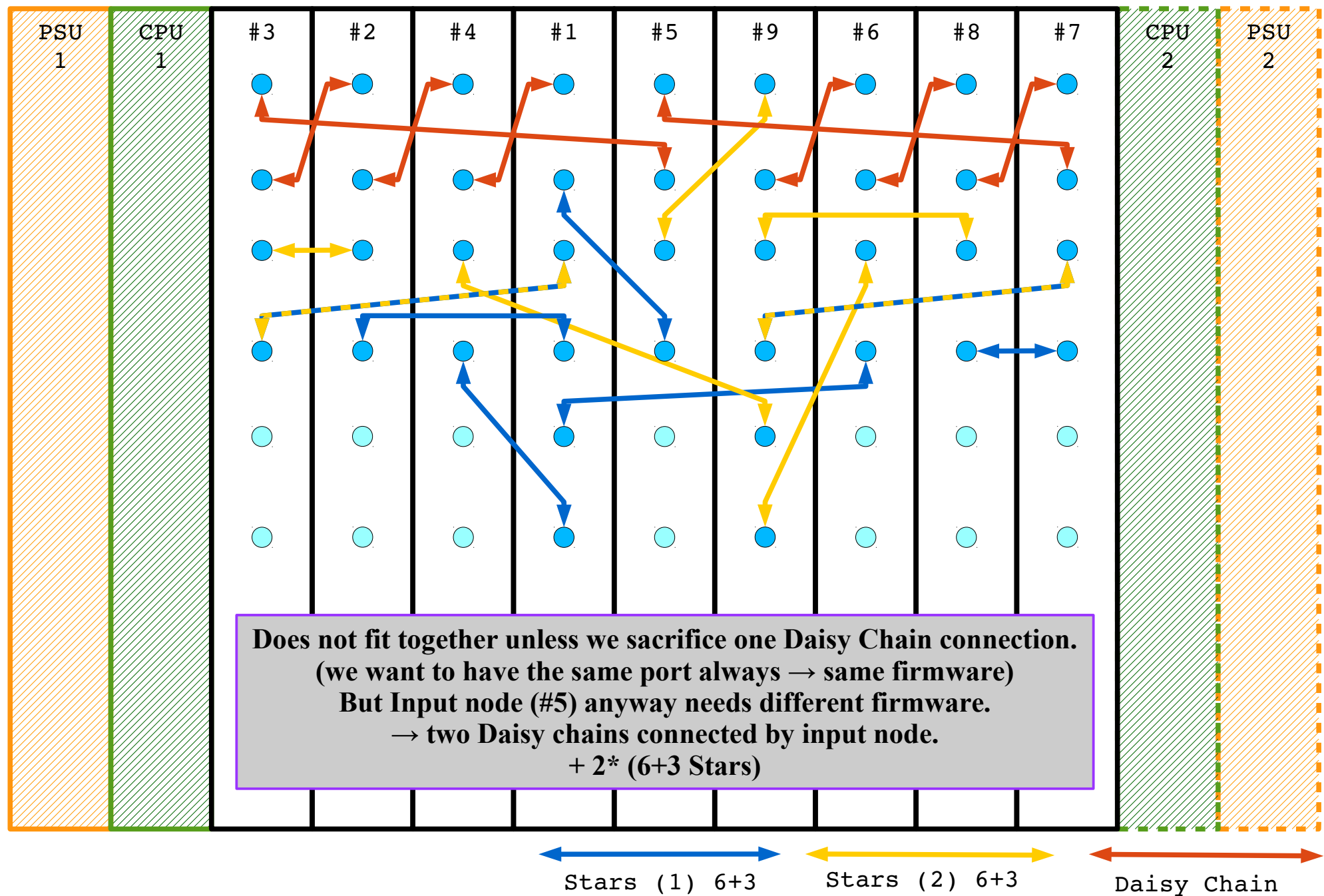
(always use same port as output -> firmware!)

Proposal from Michael Schnell

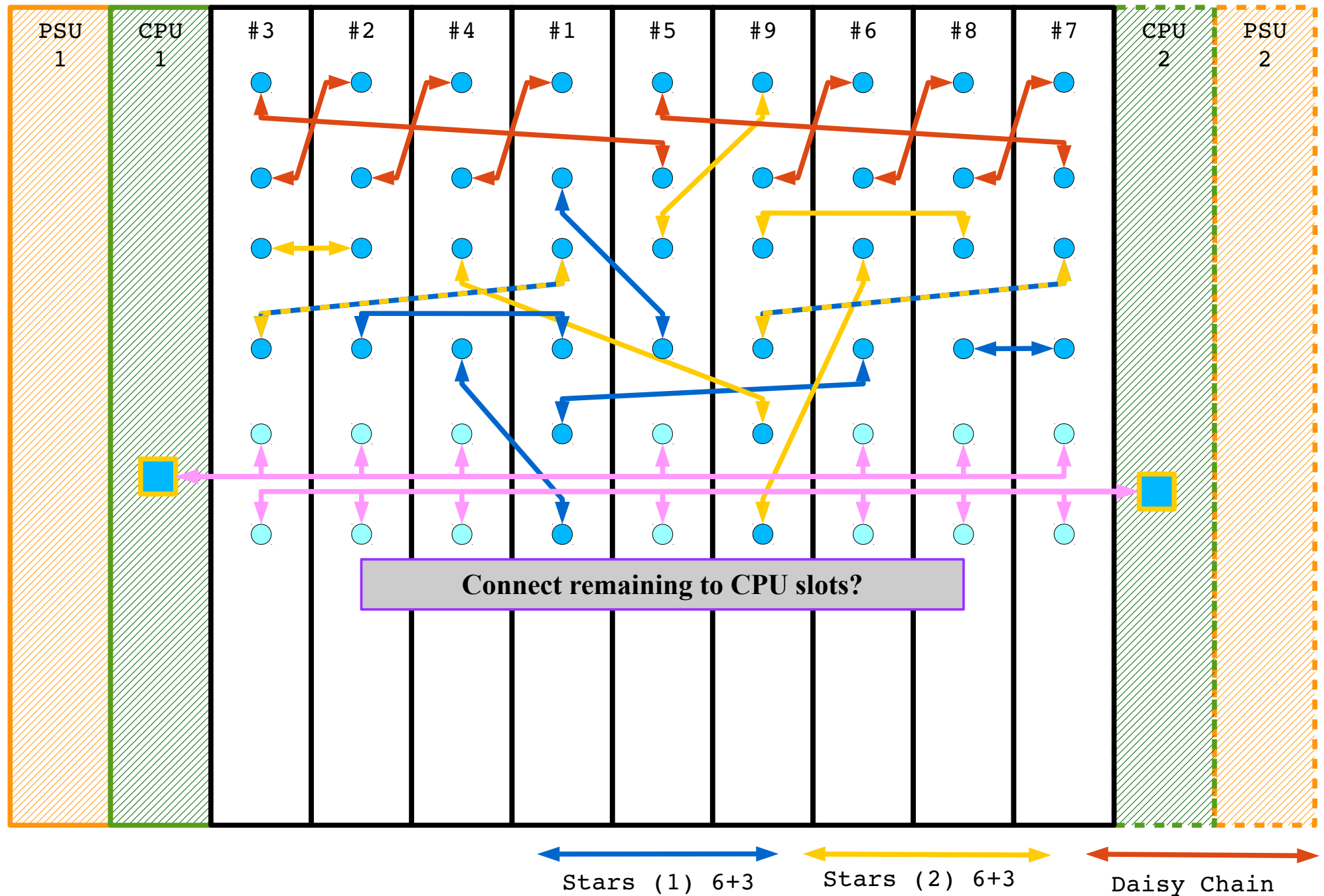
Backplane Layout (Daisy Chain) for ONSEN



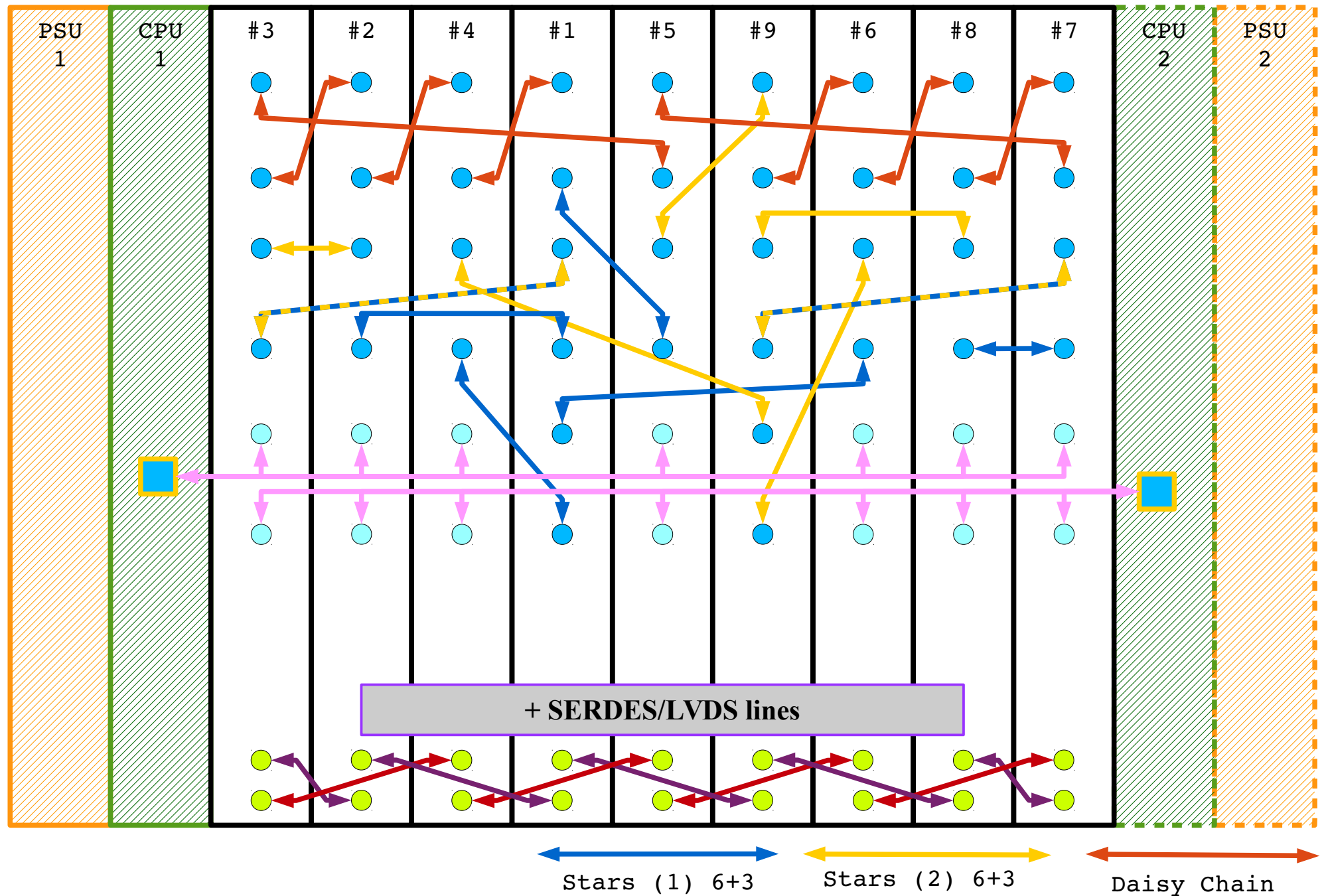
(remark: connections have to be always bidirectional, even so used in only one direction)



Backplane Layout (optional)



Backplane Layout (optional)



- From the connection side, the backup solution would work.
- Daisy chain “simplest” solution for us.
 - How about unused ports/connections? (optional)
- Not shown: I2C, power lines, etc
- Question: Time and manpower for routing the backplane
- No carrier board → No firmware, no IPMI board and firmware
- Firmware update only by JTAG possible
- Nevertheless, the cores which I presented before are needed then on the Merger/Input boards.