

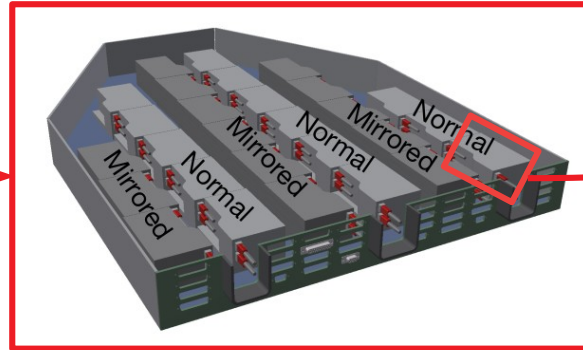
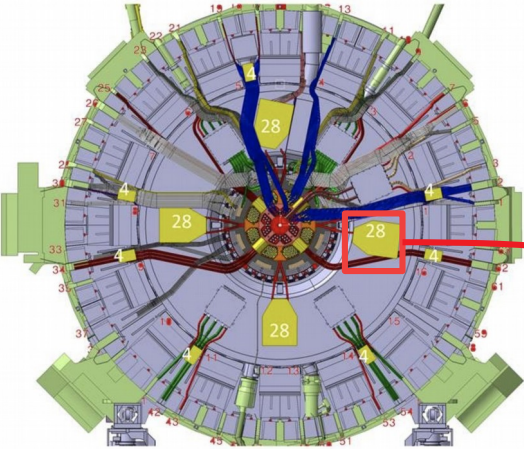
Useful links:

https://indico.cern.ch/event/881276/contributions/3791249/attachments/2006446/3351048/Optosystem_PDR.pdf

https://edms.cern.ch/ui/file/2379183/1/AT2-IP-MG-0010_v1.pdf

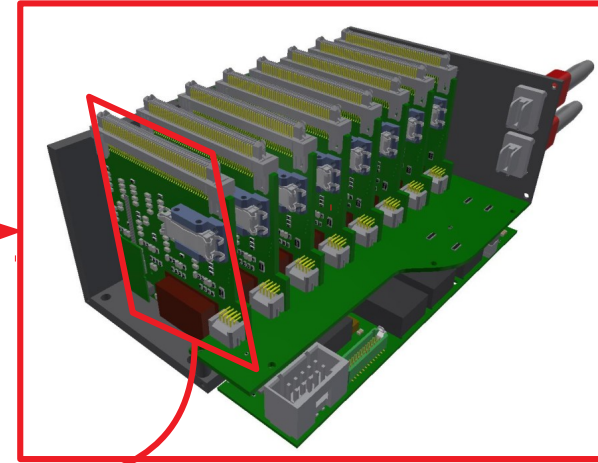
E.J. Schioppa, from a discussion with L. Franconi

The Itk Optosystem



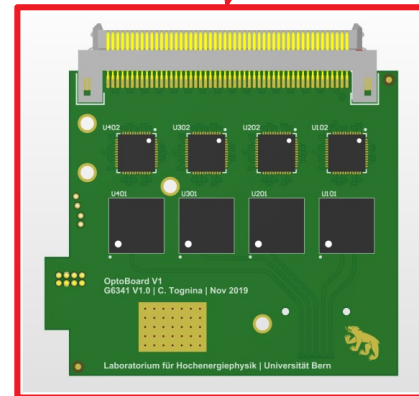
Optopanel

4 side A
4 side C



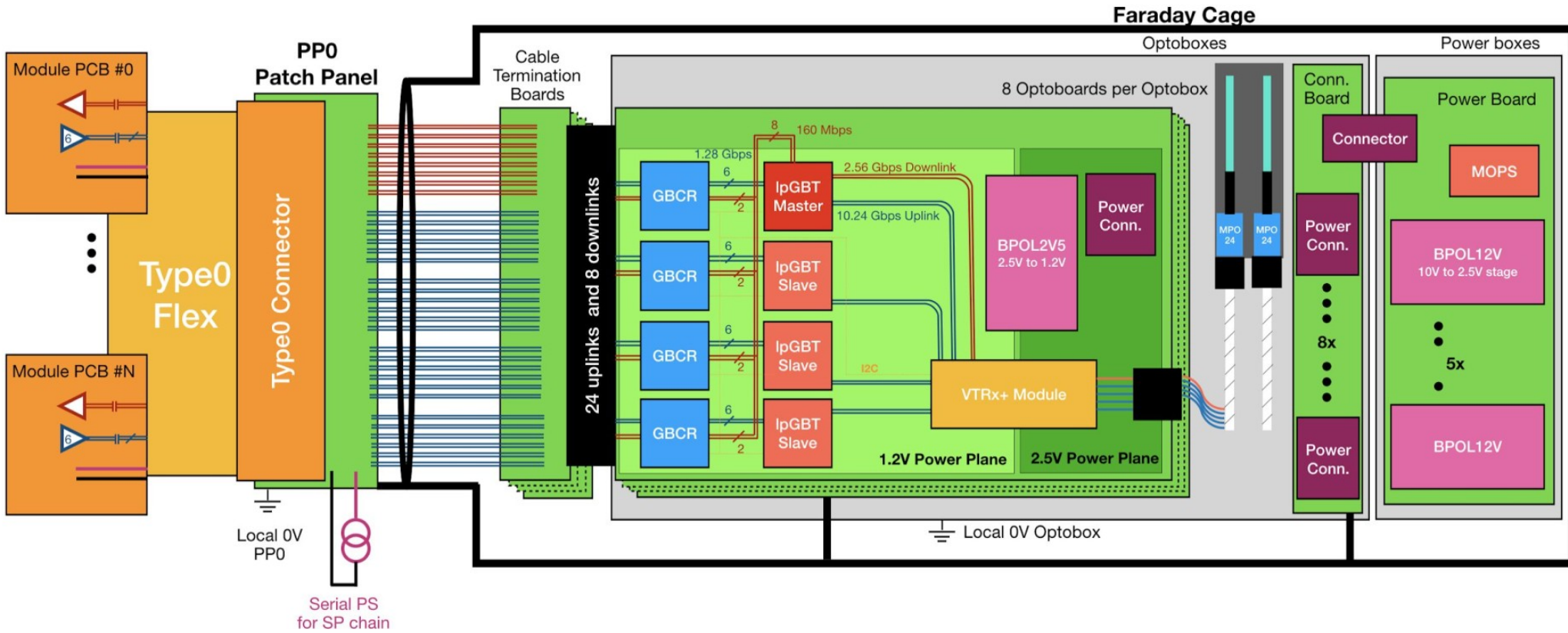
Optobox

28 per optopanel

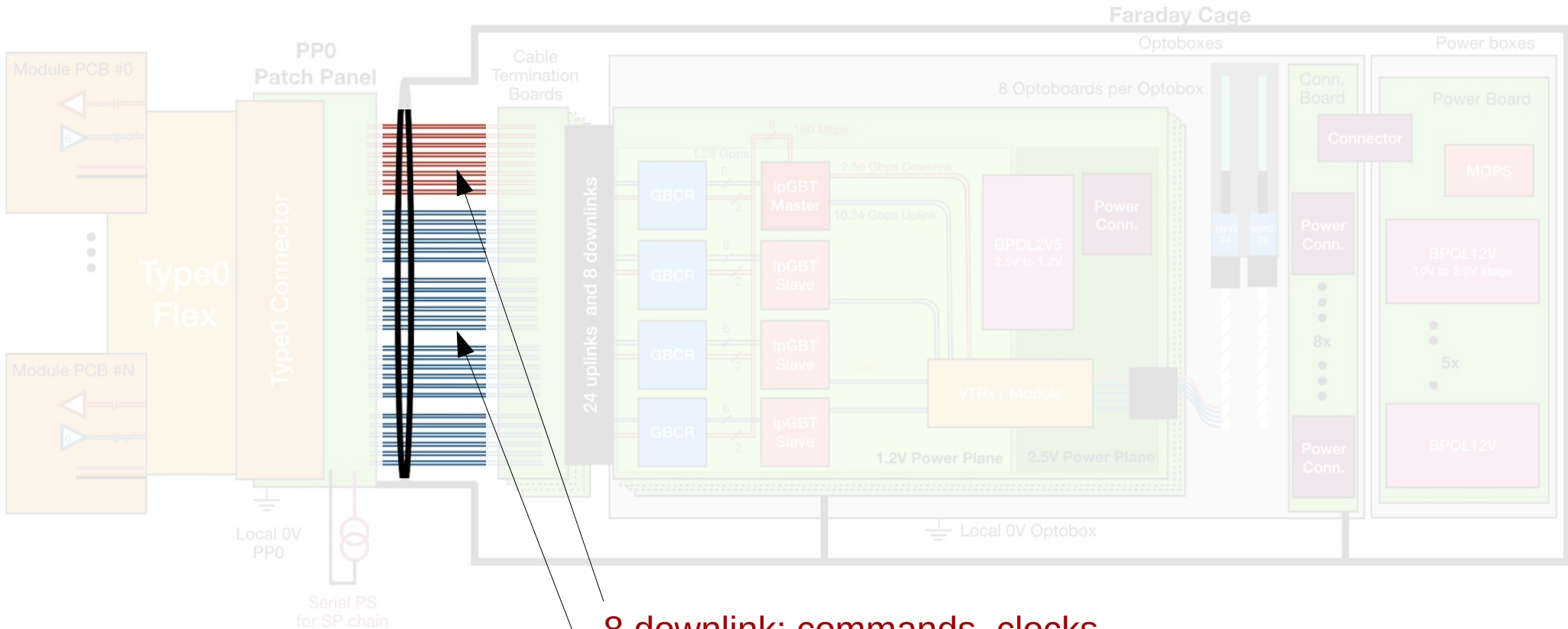


Optoboard

Up to 8 per optobox

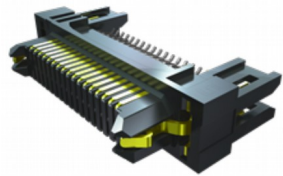
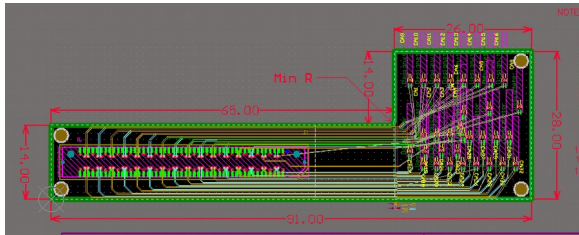
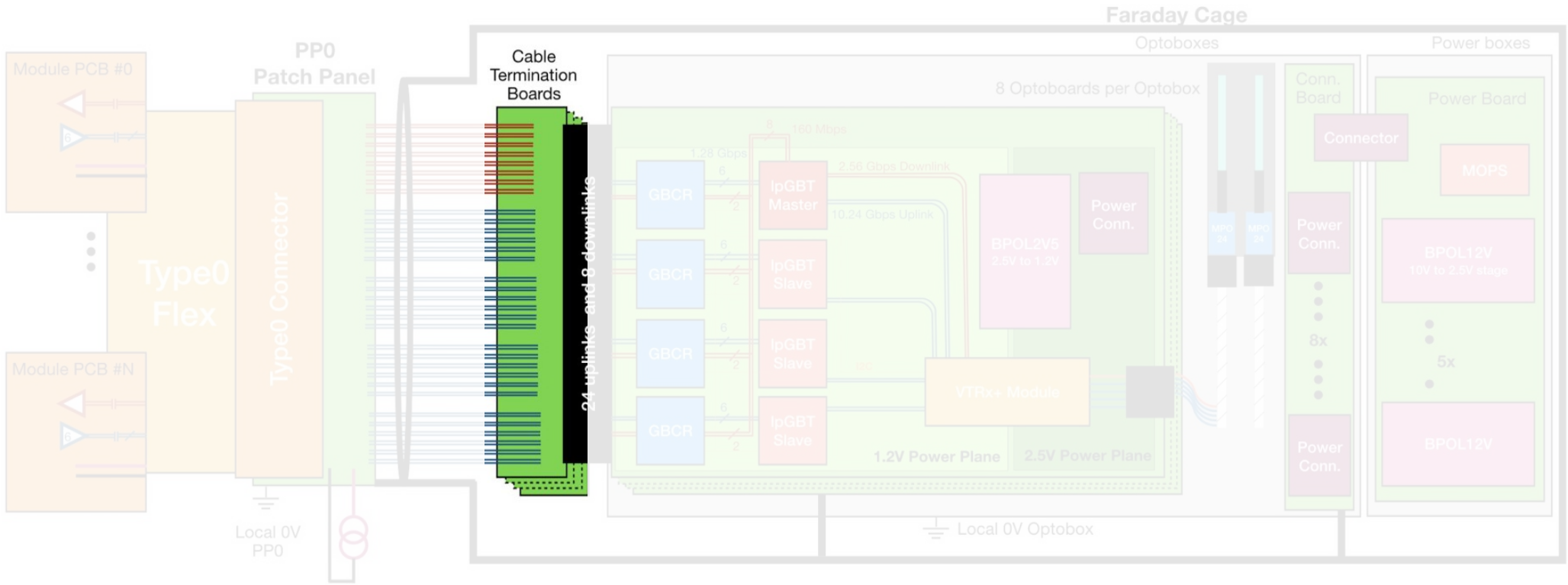


This is the sketch of a **full Optobox**



8 downlink: commands, clocks

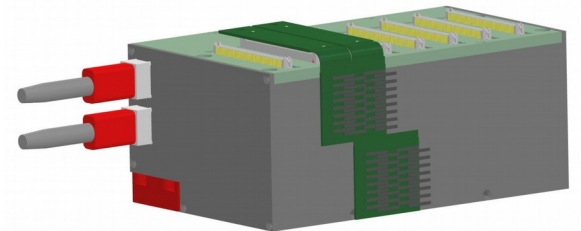
4x6 uplink: data



ERM8 connector

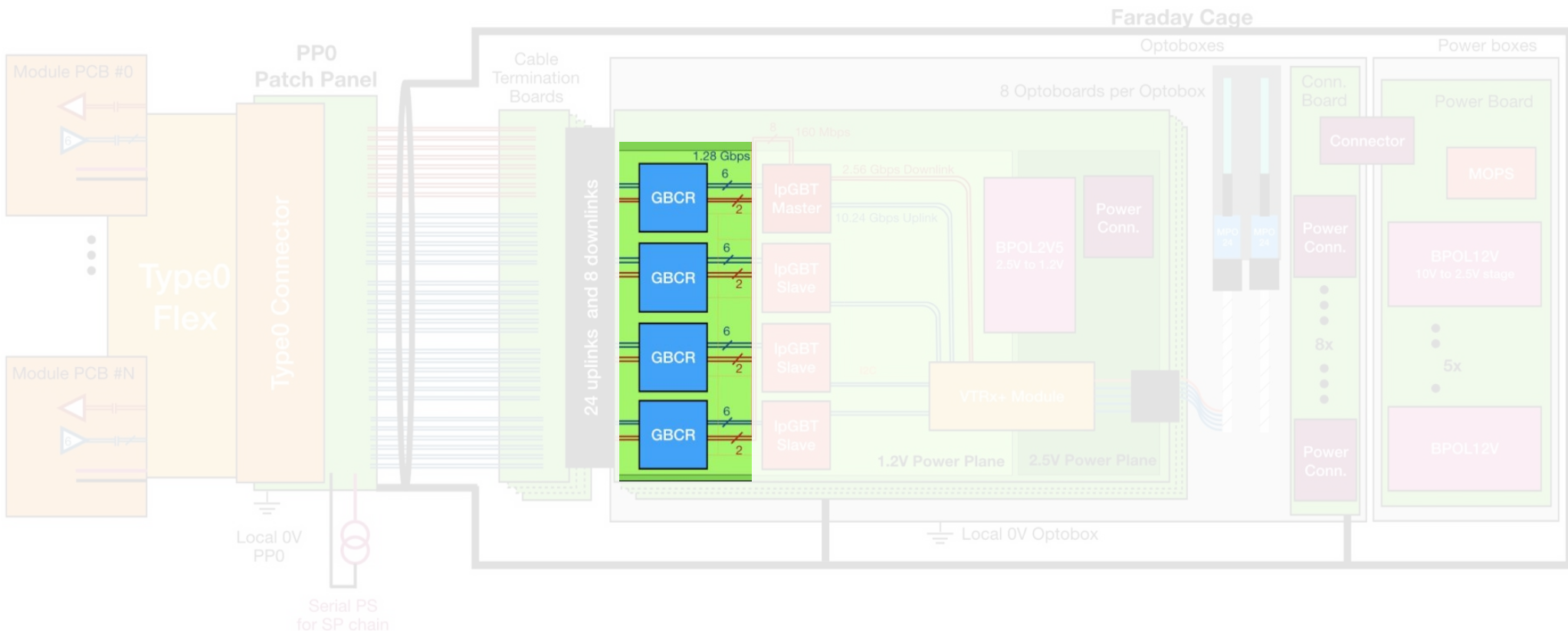
Termination board:

- Twinax → ERM8
- Partly flexible



Chiral



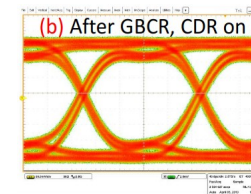
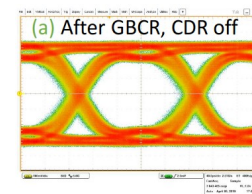


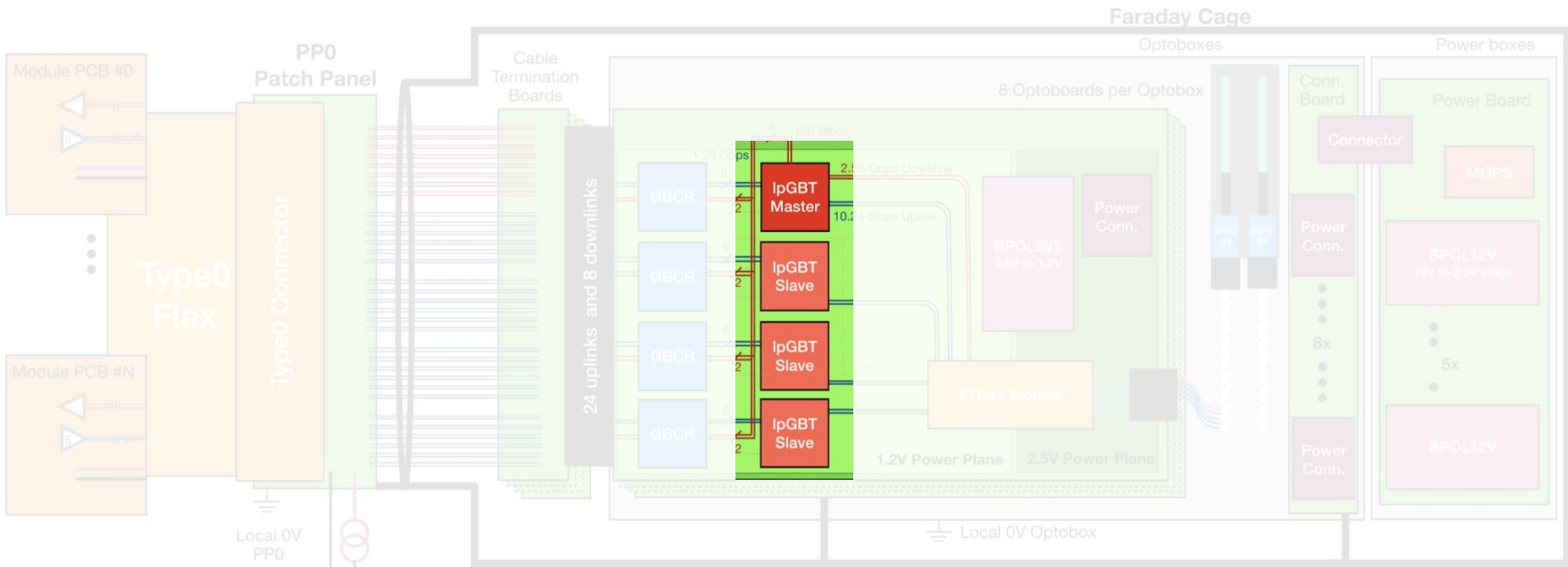
GBCR

- 65nm CMOS
- Gigabit transceiver

Uplink → signal recovery

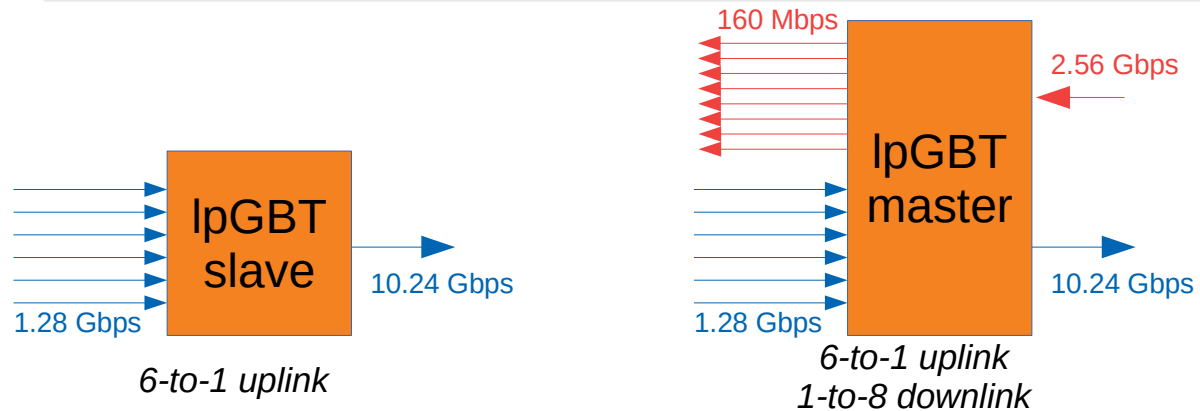
Downlink → preemphasis

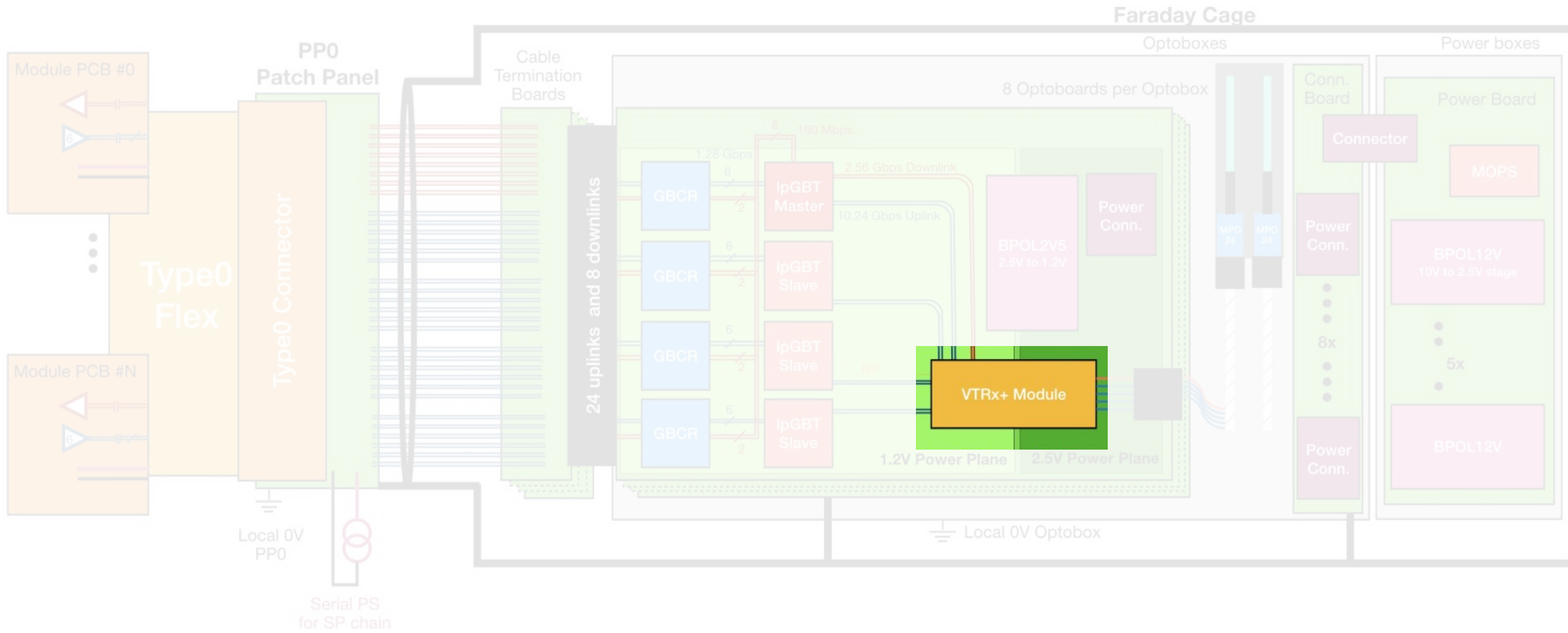




IpGBT

- (de)serielizing





VTRx

- Electrical ↔ optical