

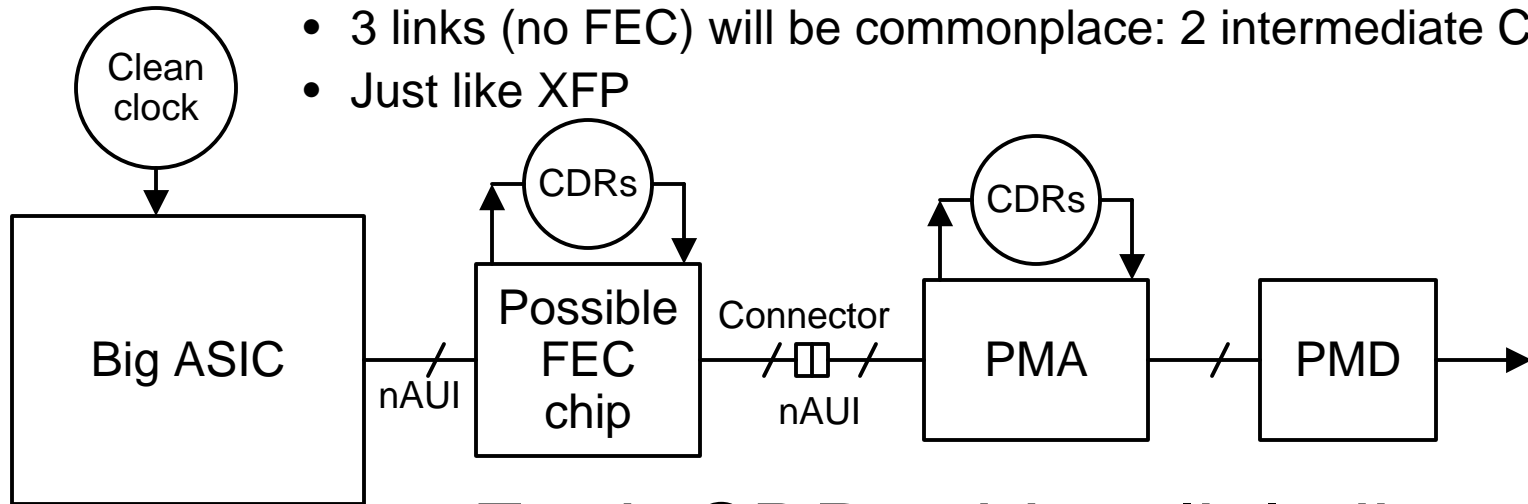
nAUI jitter transfer specs

Piers Dawe

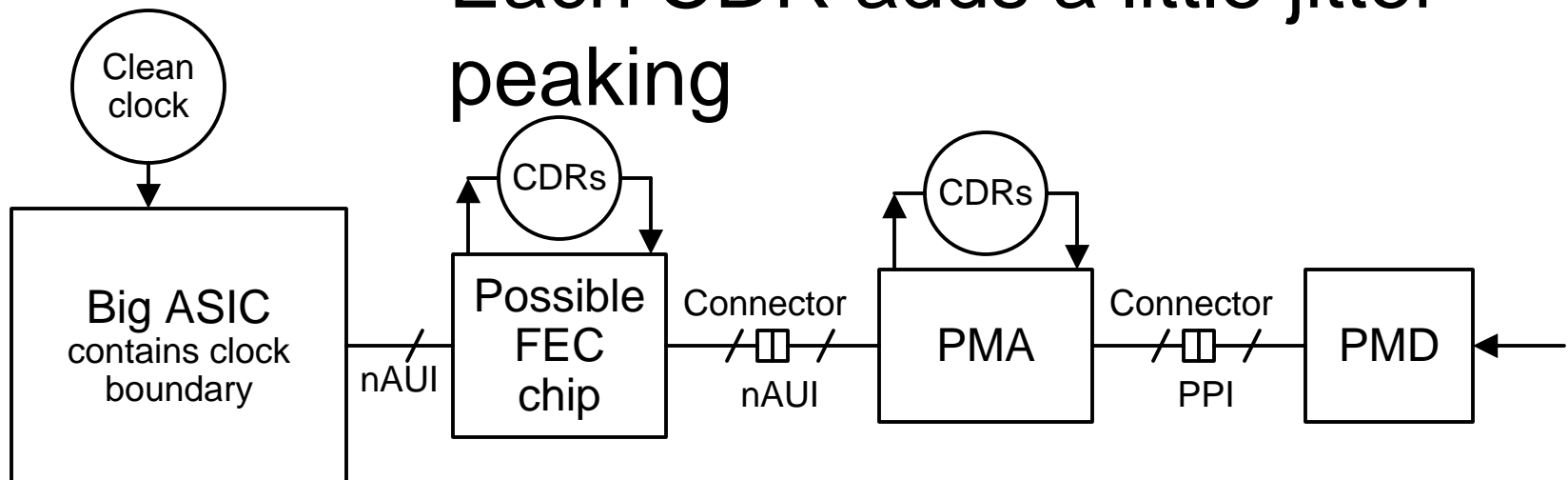
Avago Technologies

nAUI links will be concatenated

- Believe 5 links in series is most that's likely
- 3 links (no FEC) will be commonplace: 2 intermediate CDRs
- Just like XFP



- Each CDR adds a little jitter peaking



Specs seem not to allow for jitter peaking

- Annex 153A XLAUI / CAUI (*n*AUI for short) is basically XFP's XFI electrical interface with some second thoughts
- Needs to support CDR-based modules without reference clocks (like XFP) and unretimed modules with stand-alone CDR or CDR/FEC ICs without reference clocks
- Module receives a signal to be transmitted, filters its high frequency jitter, adding a little jitter peaking near its transmit CDR loop bandwidth frequency, transmits signal
- Second module receives signal, filters its high frequency jitter, adding another little jitter peaking near its receive CDR loop bandwidth frequency, delivers signal to host
- The two loop bandwidths may differ
- The two peaks of jitter transfer mean that sine jitter at one of the jitter peaks delivered by the module to the host **MUST** be more than received by the module from the host
- A spec which has module transmitter jitter tolerance and host receiver jitter tolerance the same (ghiasi_01_0708 slide 29, 83A.3.4.2, 83A.3.4.8) is not viable
- Module transmitter jitter tolerance must be reduced or host receiver jitter tolerance increased