



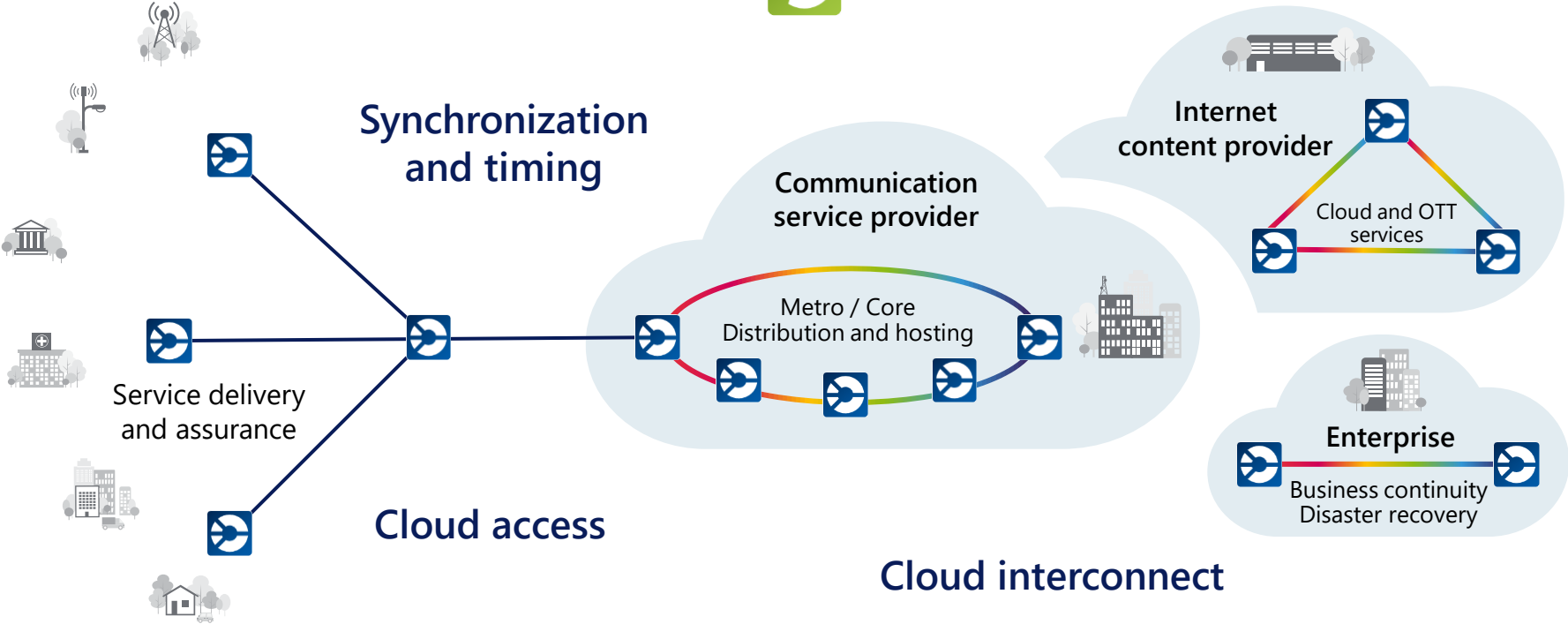
Inter-DCI & co-packaged optics

EPIC technology meeting on roadmap 2021 for co-packaged optics

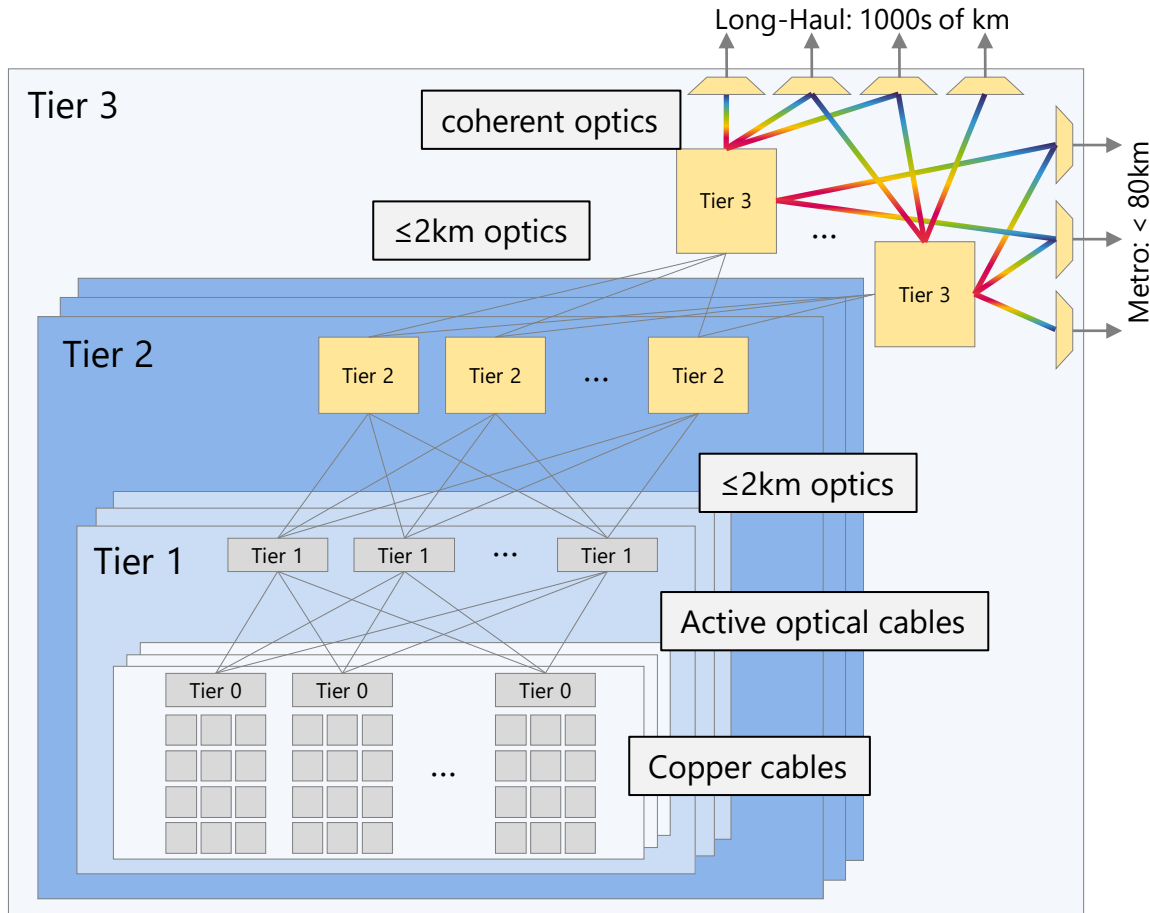
3 March 2021

ADVA's solutions

Ensemble network management and control



Data center architecture



Challenges in DCs

- high-speed interface between silicon and optics
- i/o power reduction
- faceplate density
- cost reduction

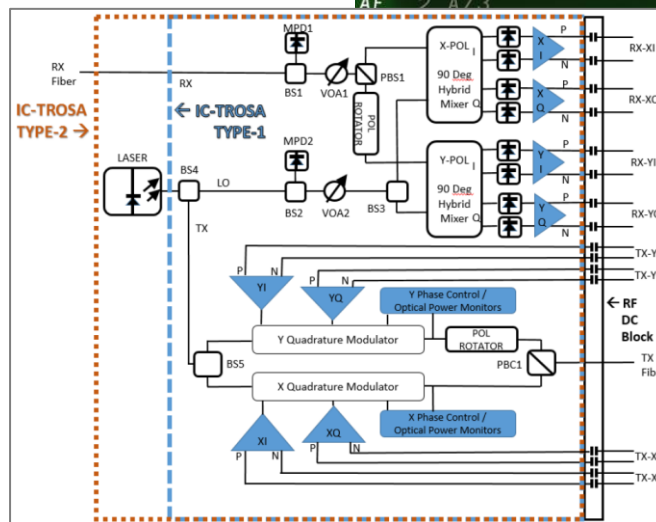
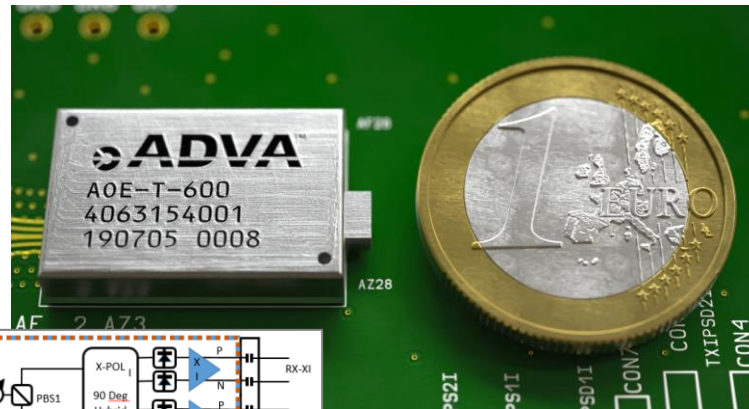
so... when do we see CPOs?
25.6T? 51.2T? 102.4T?

But we see steps in this direction for inter-DCI...

The IC-TROSA – a coherent CPO module

Integrated Coherent Transmit Receive Optical Sub-Assembly

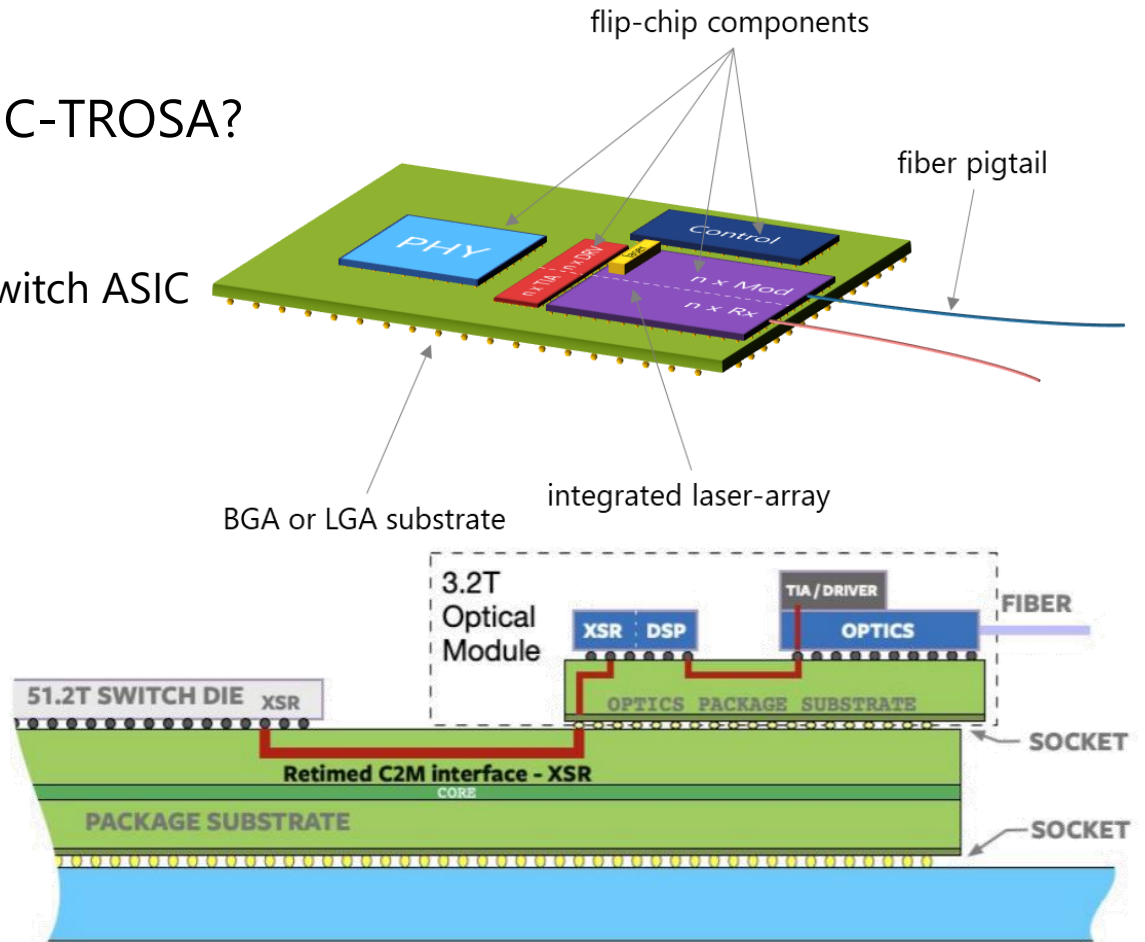
- 400G coherent module
- solder reflow compatible (BGA)
- includes DP-IQ modulator, DP-Co-Rx, quad-driver, quad-TIA, MCU
- 22.5 x 15 x 3.6 mm footprint
- non-hermetic package
- no laser included (yet)
- Standardized in OIF
OIF-IC-TROSA-01.0



Co-packaged optics

How does it compare to the IC-TROSA?

- Compact formfactor
 - Need many modules close to switch ASIC (16x8 at 51.2T)¹
- Exhaustive
 - Includes DSP, RF electronics, modulator, receiver, MCU, laser
 - External multi- λ laser source?
- High RF bandwidth
 - BGA or LGA
- Easy cooling
 - Avoiding thermal crosstalk
- Low cost
 - Simplified assembly



¹16x8 400G Modules DR4 or FR4 for 51.2T switch generation (3.2 Tb/s Copackaged Optics Optical Module Product Requirements Document, OIF)



Thank you

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