

ARISTA

400G: The Easiest Way to go Faster, is to go Faster

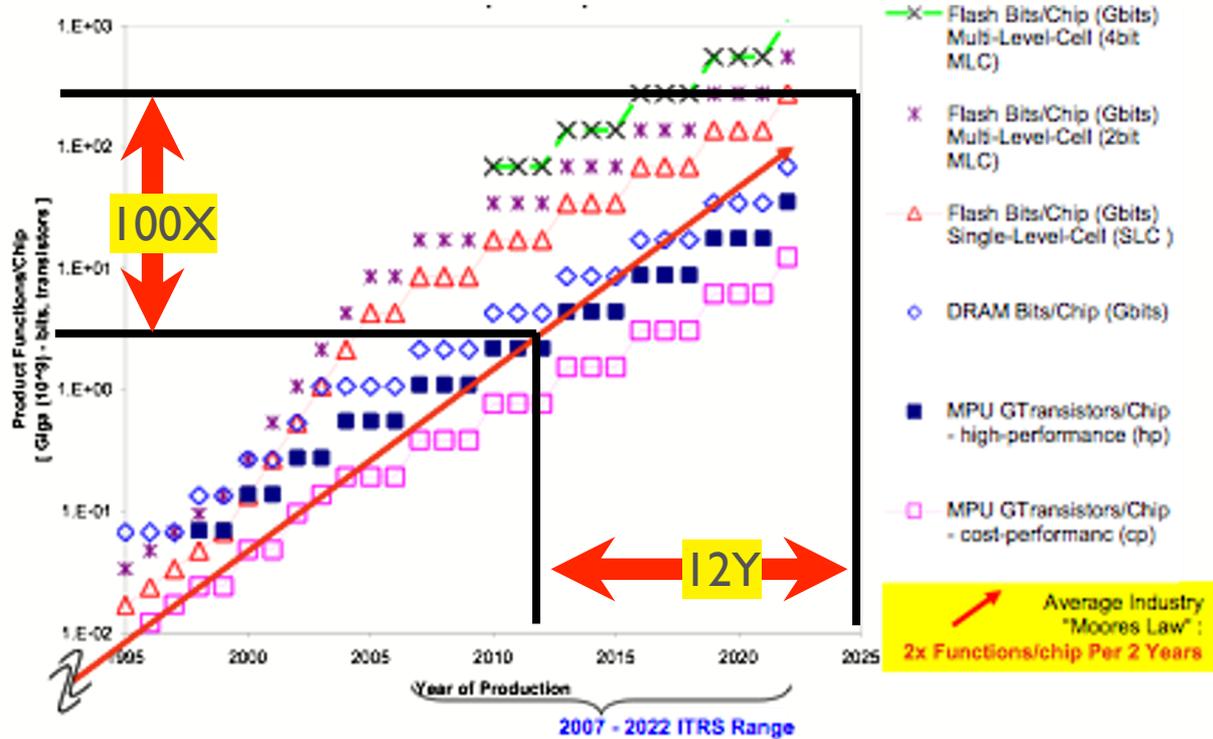
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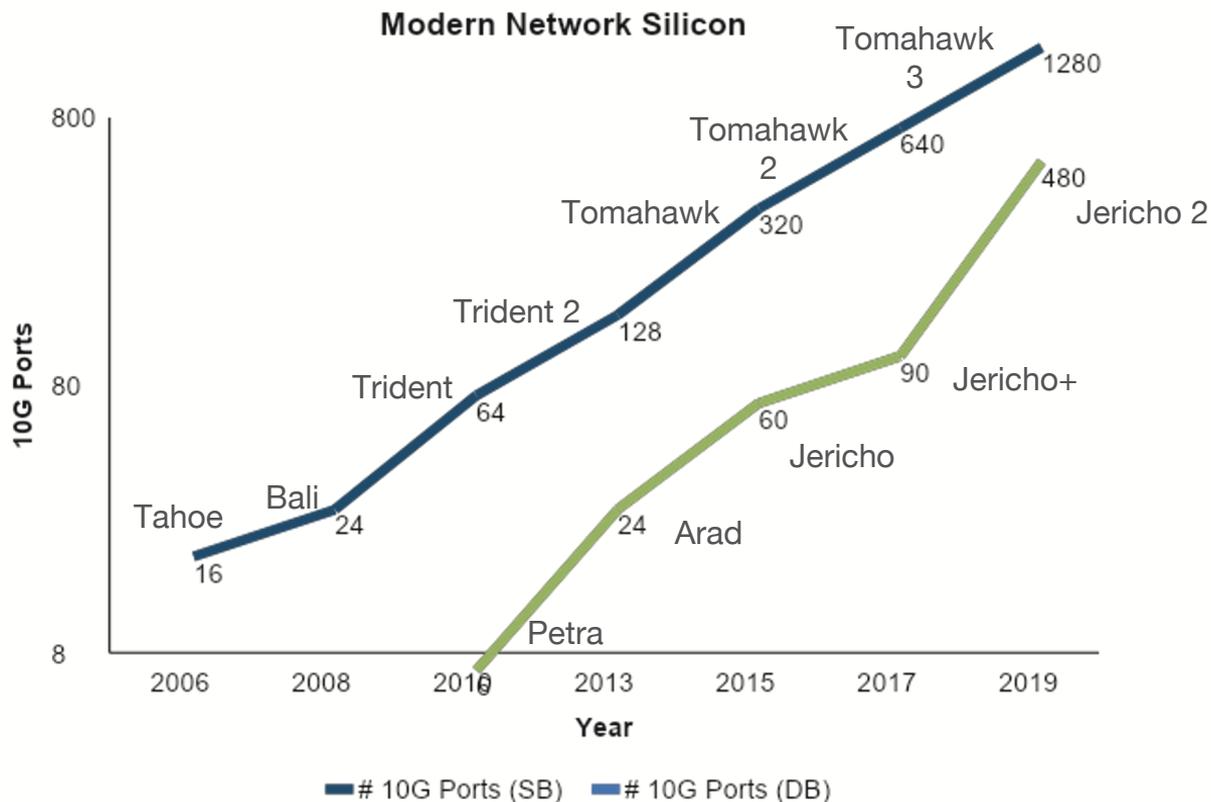
The Easiest Way to go Faster is to go Faster

Ethernet Speed Transitions have been the primary driving force to improve the throughput and the cost-performance of any network

Semiconductor Technology Roadmap



Network Speed Increase in Silicon



Semiconductor Process Technology Roadmap

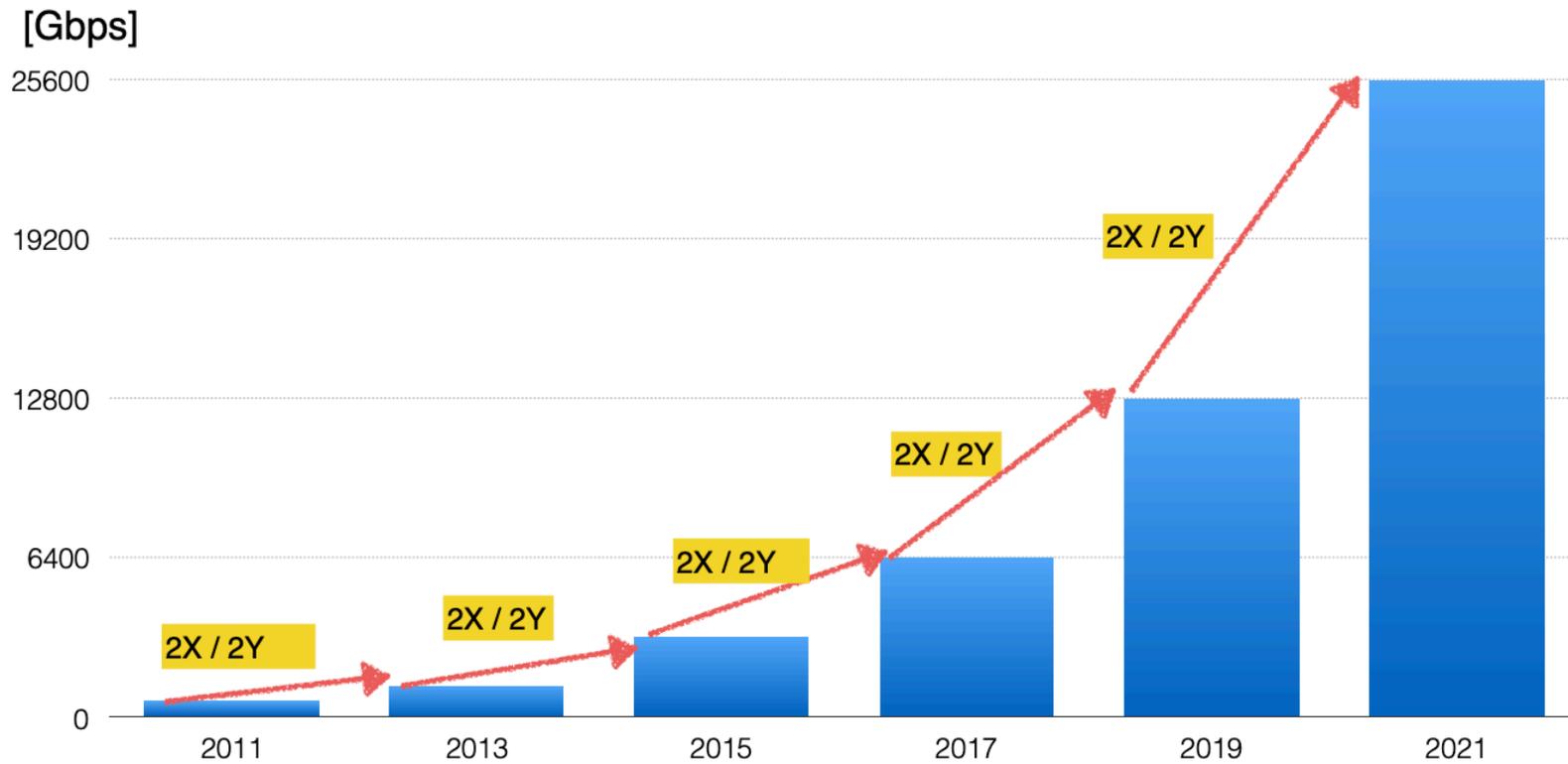


Networking silicon has been lagging behind CPU Technology

Gap is now shrinking due to more competition in the market

As a result, network silicon is advancing more quickly than CPUs

Merchant Single Switch Silicon Bandwidth Growth

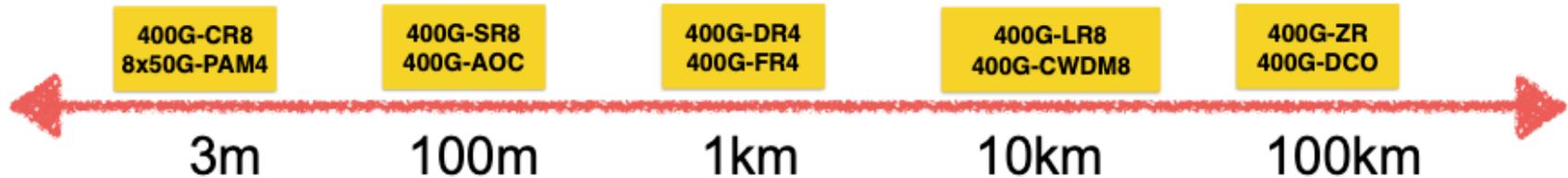


Matching Optics Lambda to SERDES Speed

Optics \ SERDES	25G SERDES (TH2)	50G SERDES (TH3)	100G SERDES (TH4)
25G Lambda Optics (100Gbps)	Natural Match	Requires Gearbox	Requires Gearbox
50G Lambda Optics	Requires Gearbox	Natural Match	Requires Gearbox
100G Lambda Optics (400Gbps)	Requires Gearbox	Requires Gearbox	Natural Match

100G Lambda optics are the best choice with 100G Serdes

400G Use Cases



No Single 400G optics technology addresses all market requirements

1. Copper cables for TOR-SERVER (3m max)
2. 400G-SR8 or AOC cables for TOR-LEAF (30m max)
3. 400G-DR4 or 400G-FR4 for LEAF-SPINE (500m - 2km)
4. 400G-LR8 or 400G-CWDM8 for Campus Reach (10km)
5. 400G-DCO for Metro Reach DCI (40km-300km)
6. 400G-ZR(+) for Long Range (100km-1000km)

What is 400G-ZR/ZR+?

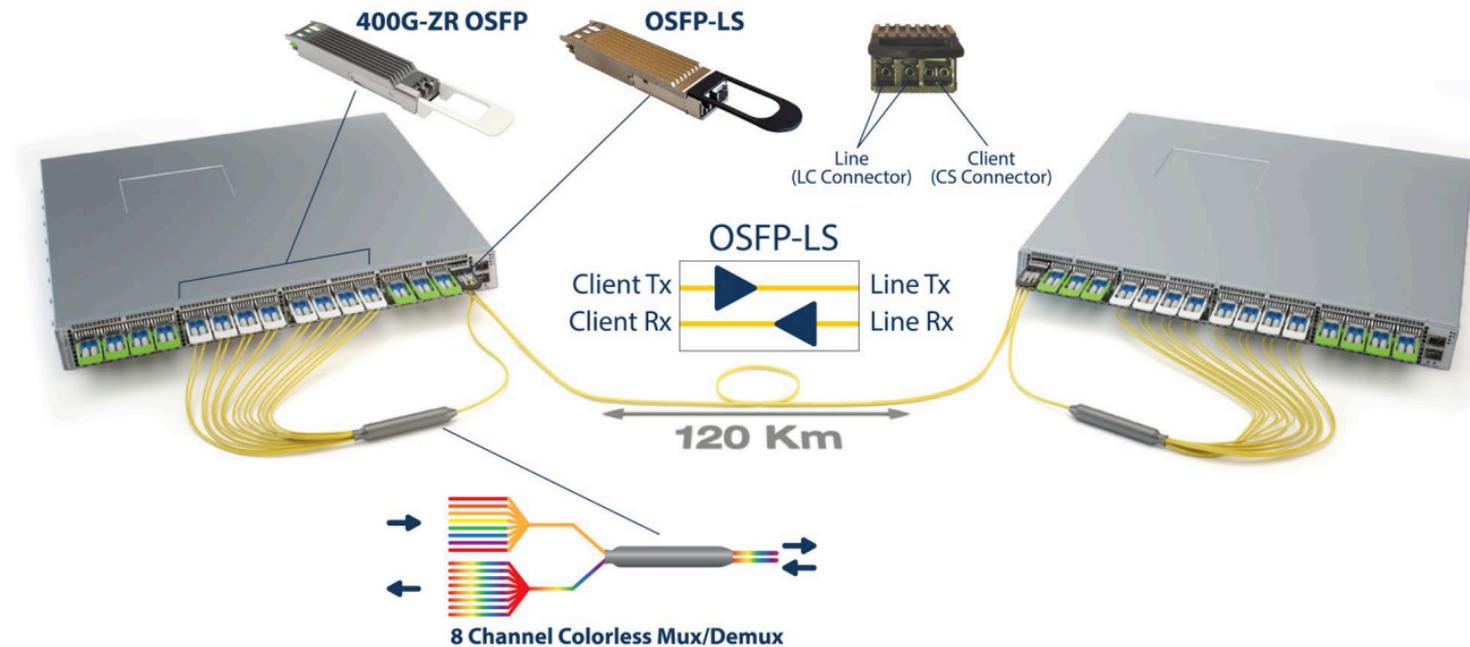
- Coherent, Tuneable, Pluggable DCO Module
- 400G, 300G, 200G and 100G speeds
- **Industry's First Multi-vendor DWDM Standard**
- Dense Client Optics Formfactor
- Supports 14.4 Tbps per 1U
- Max 20W power for 400G-ZR+

- 400G-ZR = 100KM Reach @ 15W Power
- 400G-ZR+ = 1000KM Reach @ 20W Power

- Requires External Amplifiers to Achieve Distance



Today: World's First Integrated Optical Line System



Data Center Interconnect using 400G-ZR optical modules and the OSFP-LS

