

The Interconnect Wall

Addressing Bottlenecks to Scale

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Safe Harbor Disclosure

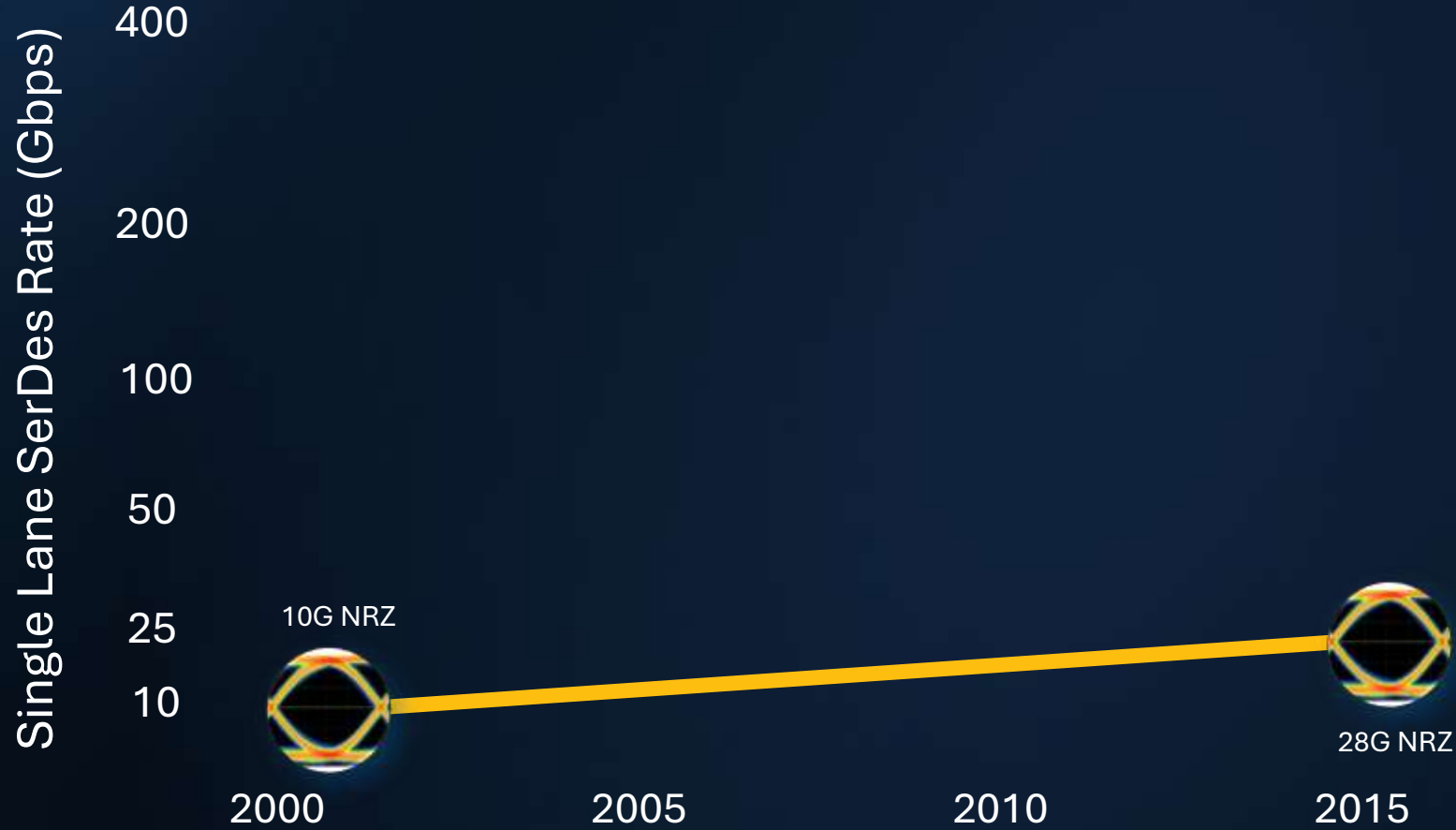
We have made statements in this presentation that are forward-looking statements. In some cases, you can identify these statements by forward-looking words such as “may,” “might,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue,” the negative of these terms and other comparable terminology. These forward-looking statements, which are subject to risks, uncertainties and assumptions about us, may include projections of our future financial performance, our anticipated growth strategies and anticipated trends in our business and in the industry in which we operate. These statements are only predictions based on our current expectations and projections about future events. There are important factors that could cause our actual results, level of activity, performance or achievements to differ materially from the results, level of activity, performance or achievements expressed or implied by the forward-looking statements, including those factors discussed in our registration statement, including (but not limited to) those discussed under the caption entitled “Risk Factors” in our registration statement.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. These forward-looking statements speak only as of the date of this prospectus. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by applicable law.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the SEC as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.



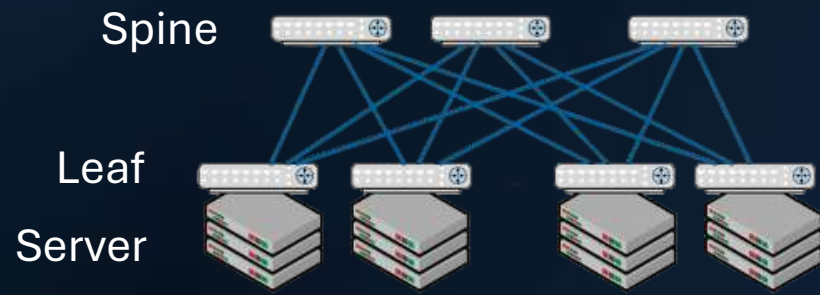
Interconnect Was **Static** For Many Years...



...until Data Centers and AI Went Mainstream



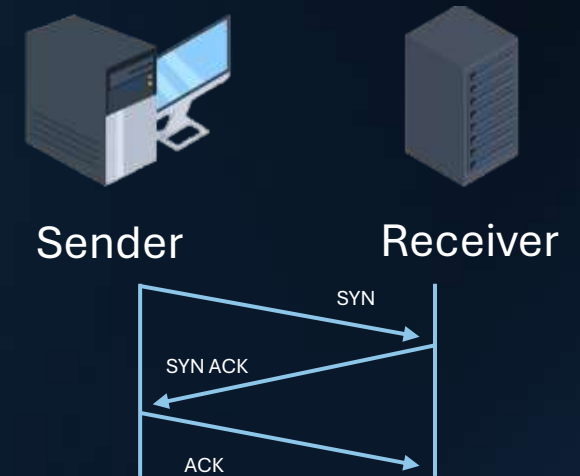
Interconnect Reliability Wasn't Critical...



Fully Redundant
CLOS Networks



10MW
Data Centers



Resilient TCP
Protocol

Assumptions: 1500W/GPU, 3 layer CLOS Network, One Front End per Four Scaleout Links
Optics : 10M hrs MTBF, 300k hrs MTTF MTBF = Mean Time Between Failures (Hard) MTTF = Mean Time to Flap (Linkflap)



...Until AI Training Workloads Scaled

	Cluster Power / GPUs	Optics Transceiver Count per Cluster	Optics Failure MTBF	Optics Link Flap MTTL
2023	30MW / 20k	>100k	4 days	3 hours
2024	300MW / 200k	>1M	7 hours	12 min
2025	4.5GW / 3M	>10M	30 min	48 seconds

Copper for $\leq 7m$, but Optics needs better Reliability

Assumptions: 1500W/GPU, 3 layer CLOS Network, One Front End per Four Scaleout Links

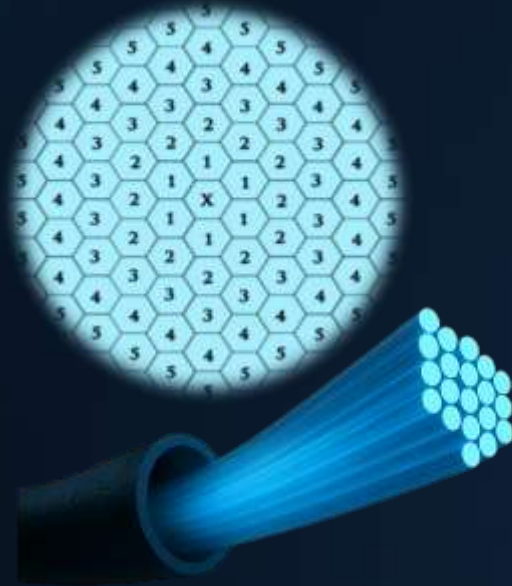
Optics : 10M hrs MTBF, 300k hrs MTTF

MTBF = Mean Time Between Failures (Hard)

MTTF = Mean Time To Linkflap

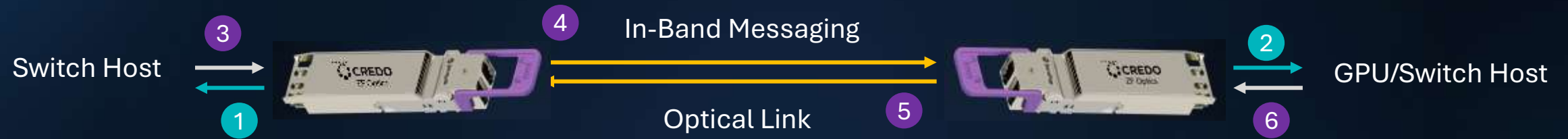


Introducing Credo's Active uLED Cables (ALC)



- Thousands of tiny fibers per link
- Copper Level Reliability (100M hrs MTBF)
- Up to 30m reach
- Sub pj/bit power

Introducing Credo's ZeroFlap (ZF) Optics



Segment by Segment
Link Telemetry



Transceiver
Health Telemetry (ESD)



Fiber Plant
Health Telemetry



Hardened
Optics



Remote Diagnostics
and Firmware Updates



Control at Optics
or Centralized



ZF Optics and System Details

- ✓ Integrated Intelligence → monitor and log link health in real-time for every connection
- ✓ Automated Responses → prevent, localize and remediate link flaps
- ✓ Damage Detection → self-diagnose potential ESD or EOS exposure
- ✓ Smart Ticketing → eliminate guesswork from service requests
- ✓ Maximize Cluster Revenue → fast turn on, high productivity, prevent data loss
- ✓ Network Time Machine → review historical events, trends and performance



PILOT GUI - Link Health Data Examples



AI Interconnect Opportunity Today is Vast and Driven by Training...

	Front End Network	Scale-Out Network	Scale-Up Network
Workload	Data Ingress/Egress	Pipeline Parallel	Tensor Parallel
Scale	Data Center 100ks of GPUs	Data Center 100ks of GPUs	Rack → Row 1000s of GPUs
Bandwidth with per GPU	200Gb	800Gb	10Tb+

...But the Future is about Inference...



Chatbots



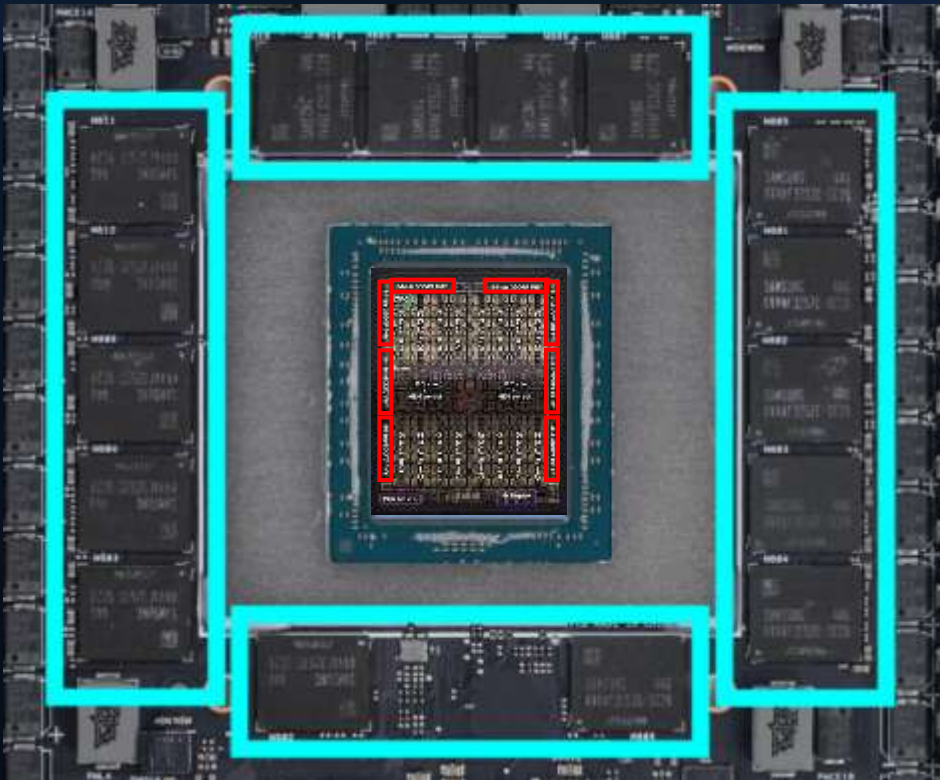
AI Generated Video



Self Driving Cars

...and Inference is about Memory...

Rubin CPX



Minutes to generate a video just 20s seconds long...why?

The Rubin CPX Memory Wall:

- 128GB of GDDR7 @ 2TB/s (blue)
- ~75% of the beachfront (red)
- ~20% of the die area

Memory fanout is only millimeters...

...and Memory Needs a Proper SERDES.

SerDes for Memory Fanout ($\geq 250\text{mm}$ or 10")

Serdes (all N3)	N3 Power (pJ/bit)	Beachfront Density (Tb/mm)	RTT Latency (ns)
64GT PCIe6/CXL3	3	0.17	80
224G LR	4	0.15	>200
112G VSR	1.15	2	40

What does a 112G VSR Serdes bring?

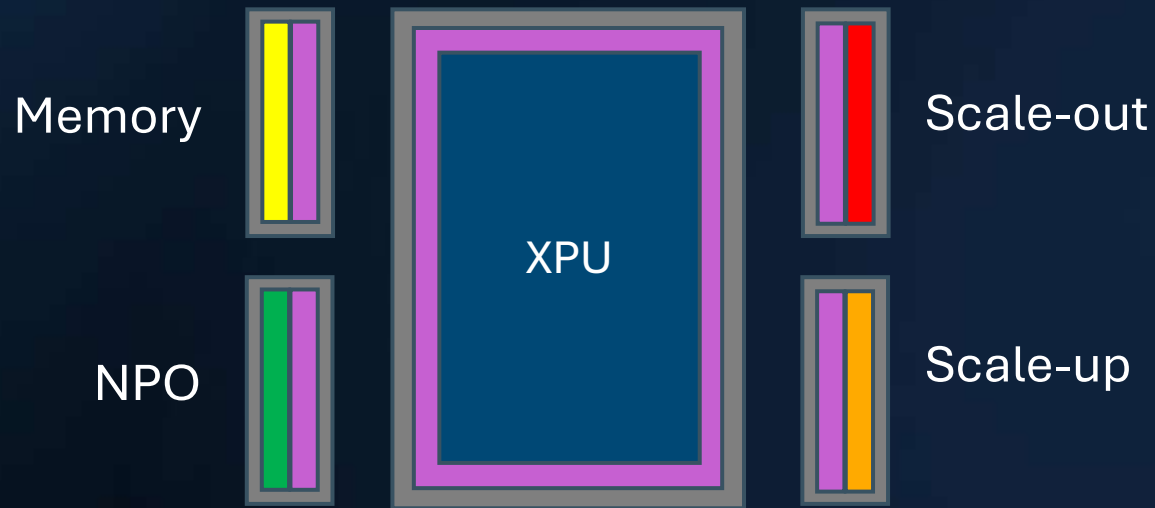
- More Memory : 128GB \rightarrow 6.4TB (30x)
- More Bandwidth : 2TB/s \rightarrow 16TB/s (8x)
- Less Beachfront : ~90% Reduction

Goal : Realtime, Longform Custom Generated Video

Autonomous Driving needs way more Memory



Introducing Credo's OmniConnect Gearboxes



112G VSR SerDes
Package Substrate

Memory

- Up to 6.4TB at 16TB/s
- Upgrade path: LPDDR5 → LPDDR6

Scale-Out Interface

- Upgrade path: 112G → 224G → 448G

Scale-Up Interface

- Upgrade path: PCIe6 → PCIe7 → 224G

Near Package Optics (NPO)

- Upgrade path: Copper to Optics (uLED)

Credo Connectivity Solutions

Active Electrical Cables
(AEC)



Up to 7m

Active uLED Cables
(ALC)



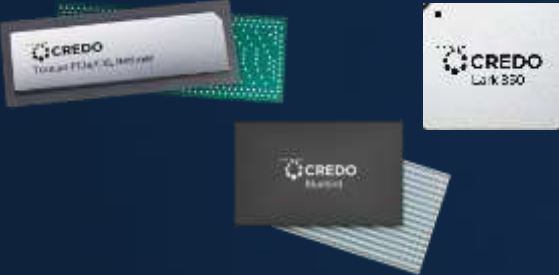
Up to 30m

ZeroFlap Transceivers
(ZF Optics)

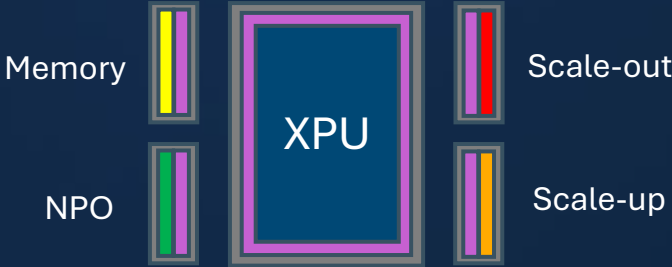


Up to 1km

Retimers and Optical DSPs



OmniConnect Gearboxes



PILOT Debug and Telemetry Software



Five Multi-billion Dollar Markets





CREDO

we connect.