ANALYST BRIEFING AT OFC 2024

Optical Communications

March 26, 2024

Paul Silverstein
Vice President, Investor Relations

COHERENT

HOST

Paul Silverstein
Vice President,
Investor Relations

FORWARD-LOOKING STATEMENTS

This presentation contains forward-looking statements relating to future events and expectations, including our expectations regarding (i) our future financial and operational results; (ii) growth in the communications markets (including datacom and telecom) we serve; (iii) 5G growth in developing economies and the emergence of 6G; (iv) data center capital expenditures by segment and annual infrastructure spending of the top 15 ICPs vs CSPs; (v) the growth of artificial intelligence and machine learning ("AI/ML") in data centers and long-term disruption potential; (vi) the datacom market including with respect to 100G, 200G, 400G, 800G, 1.6T and 3.2T and the duration of the domination of 800G/1.6T; (vii) annual new bandwidth in cloud, telecom and enterprise and our largest telecom opportunity - transceivers; (viii) growth in disaggregated systems; and (ix) shipments of optical circuit switching for datacenters and our positioning for opportunities in such space; (x) the shipment of transceivers for artificial intelligence; (xi) our continued leadership in datacom transceivers in 800G and 1.6T; (xii) the rise of artificial intelligence; (xiii) production of 800G, 1.6T and 3.2T transceivers; (xiiii) opportunities in optical circuit switch for datacenters from our Datacenter Light Crossconnect™; and (xiv) 800G becoming half of our revenue and outpacing market growth in the next five years, each of which, is based on certain assumptions and contingencies. The forward-looking statements are made pursuant to the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995 and relate to the Company's performance on a going-forward basis. The forward-looking statements in this investor presentation involve risks and uncertainties, which could cause actual results, performance or trends to differ materially from those expressed in the forward-looking statements herein or in previous disclosures.

The Company believes that all forward-looking statements made by it in this presentation have a reasonable basis, but there can be no assurance that management's expectations, beliefs, or projections as expressed in the forward-looking statements will actually occur or prove to be correct. In addition to general industry and global economic conditions, factors that could cause actual results to differ materially from those discussed in the forward-looking statements in this presentation include but are not limited to: (i) the failure of any one or more of the assumptions stated herein to prove to be correct; (ii) the risks relating to forward-looking statements and other "Risk Factors" discussed) in the Company's Annual Report on Form 10-K for the fiscal year ended June 30, 2023 and additional risk factors that may be identified from time to time in filings of the Company; (iii) the substantial indebtedness the Company incurred in connection with its acquisition of Coherent, Inc. (the "Transaction"), the need to generate sufficient cash flows to service and repay such debt and the Company's ability to generate sufficient funds to meet its anticipated debt reduction goals; (iv) the possibility that the Company may not be able to continue its integration progress on and/or take other restructuring actions, or otherwise be able to achieve expected synergies, operating efficiencies, including greater scale, focus, resiliency, and lower operating costs, and other benefits within the expected time-frames or at all and ultimately to successfully fully integrate the operations of Coherent, Inc. ("Coherent") with those of the Company; (v) the possibility that such integration and/or the restructuring actions may be more difficult, time-consuming or costly than expected or that operating costs and business disruption (including, without limitation, disruptions in relationships with employees, customers or suppliers) may be greater than expected in connection with the Transaction and/or the restructuring actions; (vi) any unexpected costs, charges or expenses resulting from the Transaction and/or the restructuring actions; (vii) the risk that disruption from the Transaction and/or the restructuring actions materially and adversely affects the respective businesses and operations of the Company and Coherent; (viii) potential adverse reactions or changes to business relationships resulting from the completion of the Transaction and/or the restructuring actions; (ix) the ability of the Company to retain and hire key employees; (x) the purchasing patterns of customers and end users; (xi) the timely release of new products, and acceptance of such new products by the market; (xii) the introduction of new products by competitors and other competitive responses; (xiii) the Company's ability to assimilate other recently acquired businesses, and realize synergies, cost savings, and opportunities for growth in connection therewith, together with the risks, costs, and uncertainties associated with such acquisitions; (xiv) the Company's ability to devise and execute strategies to respond to market conditions; (xv) the risks to realizing the benefits of investments in R&D and commercialization of innovations; (xvi) the risks that the Company's stock price will not trade in line with industrial technology leaders; and/or (xvii) the risks of business and economic disruption related to worldwide health epidemics or outbreaks that may arise. The Company disclaims any obligation to update information contained in these forward-looking statements, whether as a result of new information, future events or developments, or otherwise. Unless otherwise indicated in this presentation, all information in this presentation is as of March 26, 2024.

SPEAKERS

Dr. Sanjai Parthasarathi
Chief Marketing Officer

Dr. Julie Sheridan Eng
Chief Technology Officer

Dr. Lee Xu
Executive Vice President,
Datacom Transceivers

Dr. Beck Mason
Executive Vice President,
Telecommunications

COMMUNICATIONS MARKET UPDATE AND OFC SHOWCASE

Dr. Sanjai Parthasarathi - Chief Marketing Officer

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MARKET UPDATE

ALL OUR MARKETS ARE HEALTHY AND GROWING OVER THE LONG TERM

Industrial

TAM: **$25B**
CAGR: 8%

Communications

TAM: $**29B**
CAGR: 15%

Electronics

TAM: **$9B**
CAGR: 28%

Instrumentation

TAM: **$6B**
CAGR: 7%

Combined CY24 TAM of **$69 B** growing to **$135 B** within five years

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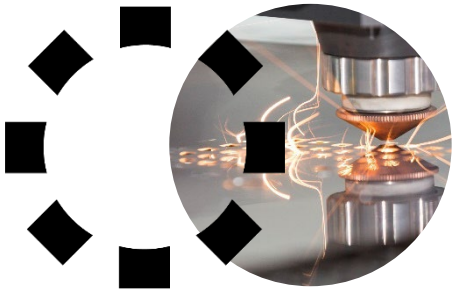
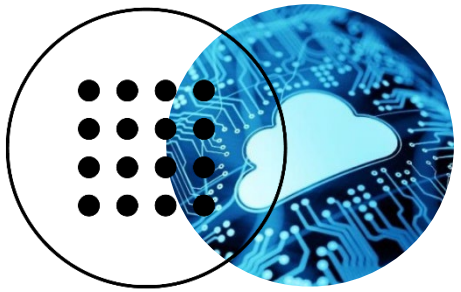
OUR MARKETS AND VERTICALS

Industrial Market



- Precision Manufacturing
- Semiconductor Capital Equipment
- Display Capital Equipment
- Aerospace & Defense

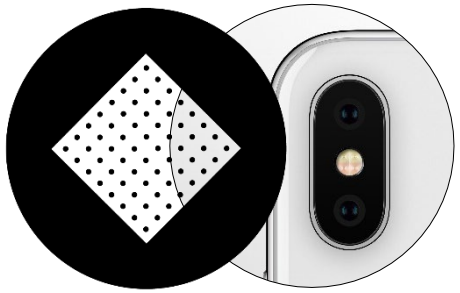
Communications Market



- Datacom
- Telecom

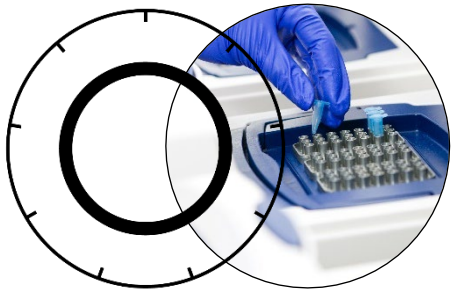
Focus of Today's Event

Electronics Market



- Consumer Electronics
- Automotive

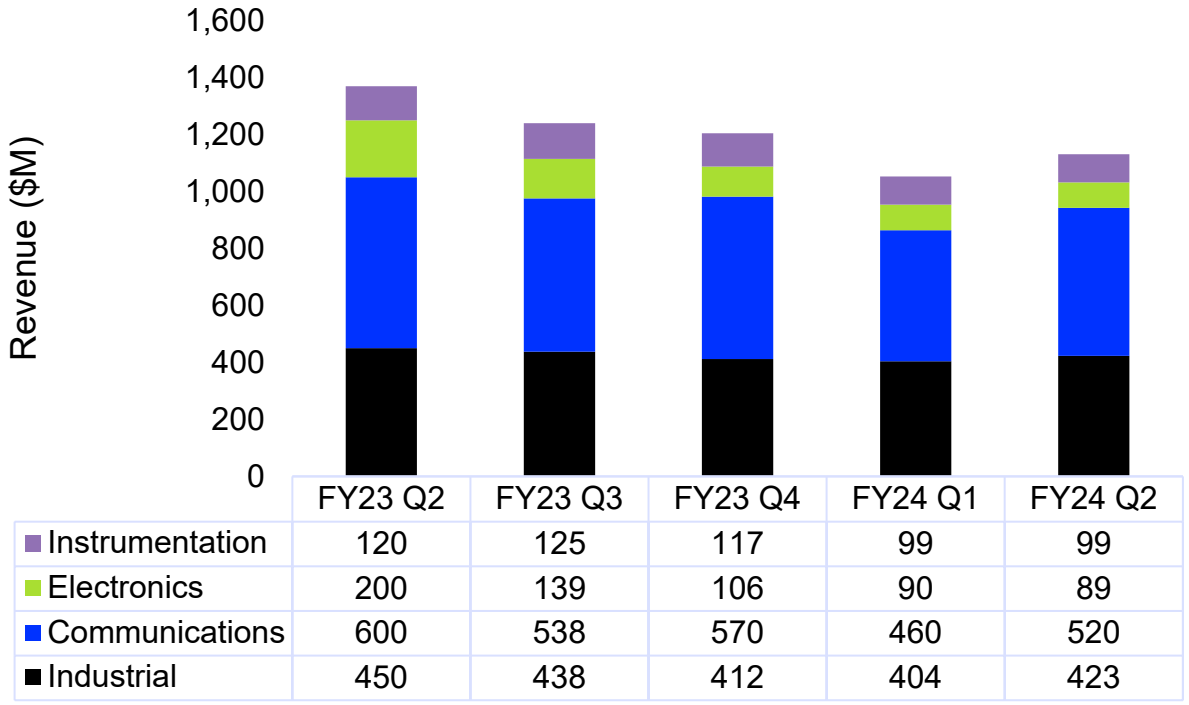
Instrumentation Market



- Life Sciences
- Scientific Instrumentation

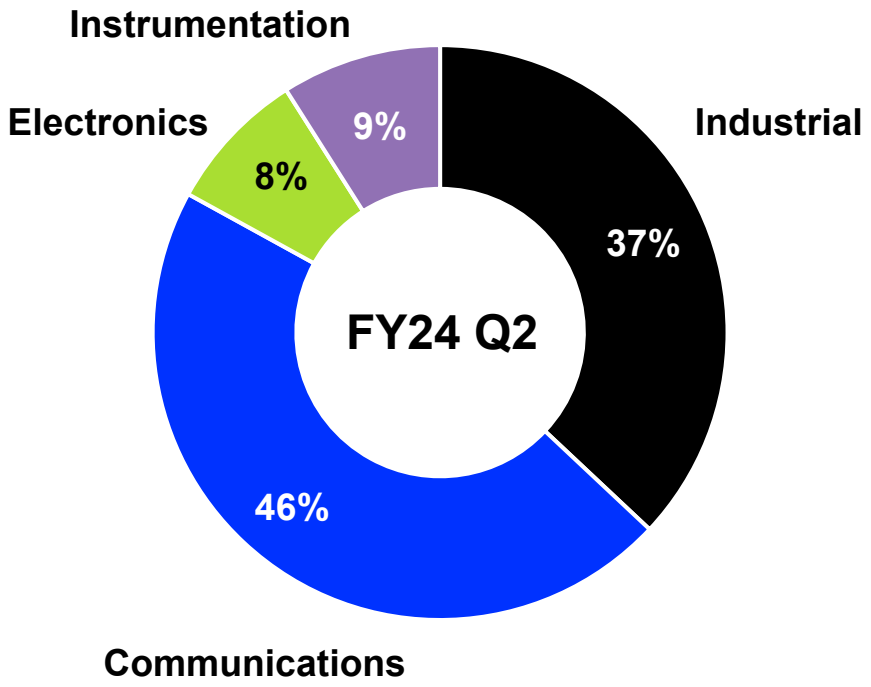
COMMUNICATIONS IS OUR LARGEST MARKET

Quarterly Revenue Trend



	FY23 Q2	FY23 Q3	FY23 Q4	FY24 Q1	FY24 Q2
Instrumentation	120	125	117	99	99
Electronics	200	139	106	90	89
Communications	600	538	570	460	520
Industrial	450	438	412	404	423

Revenue Distribution (1)

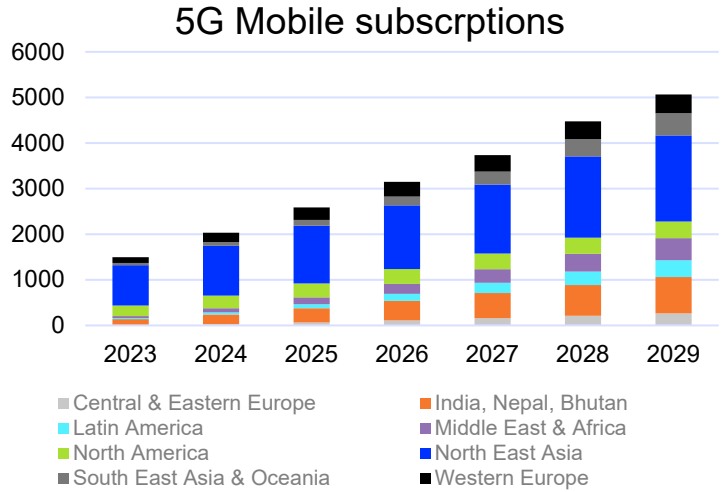


(1) Amounts may not recalculate due to rounding.

COMMUNICATIONS MARKET DRIVERS

2.6 Billion
(1/3 of global population) still not connected to the internet

10 Tbps	1 Tbps
Full parallax High-definition holographic display	6G



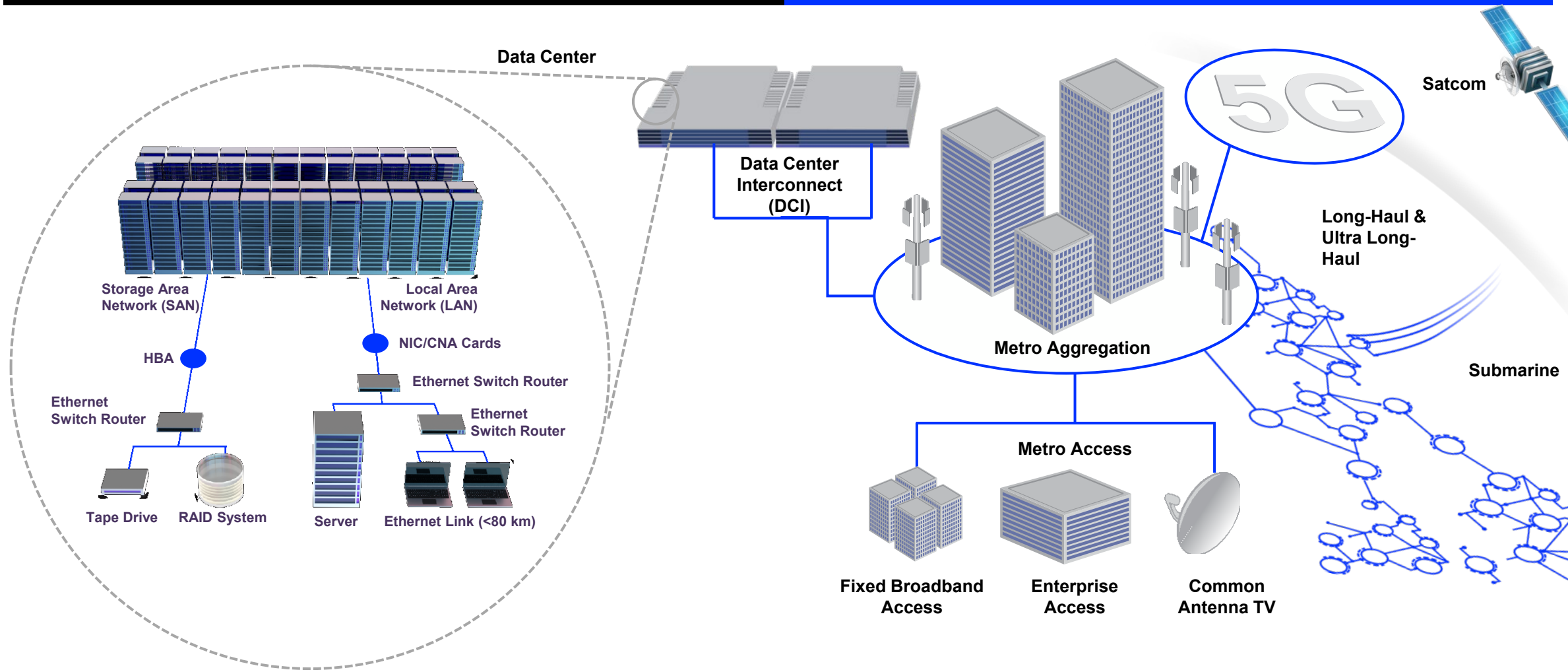
Forecasted 5G Growth in developing economies
Source: Ericsson Mobility Visualizer

Eventual emergence of
6G

DATACOM AND TELECOM VERTICALS DEFINED

DATACOM

TELECOM

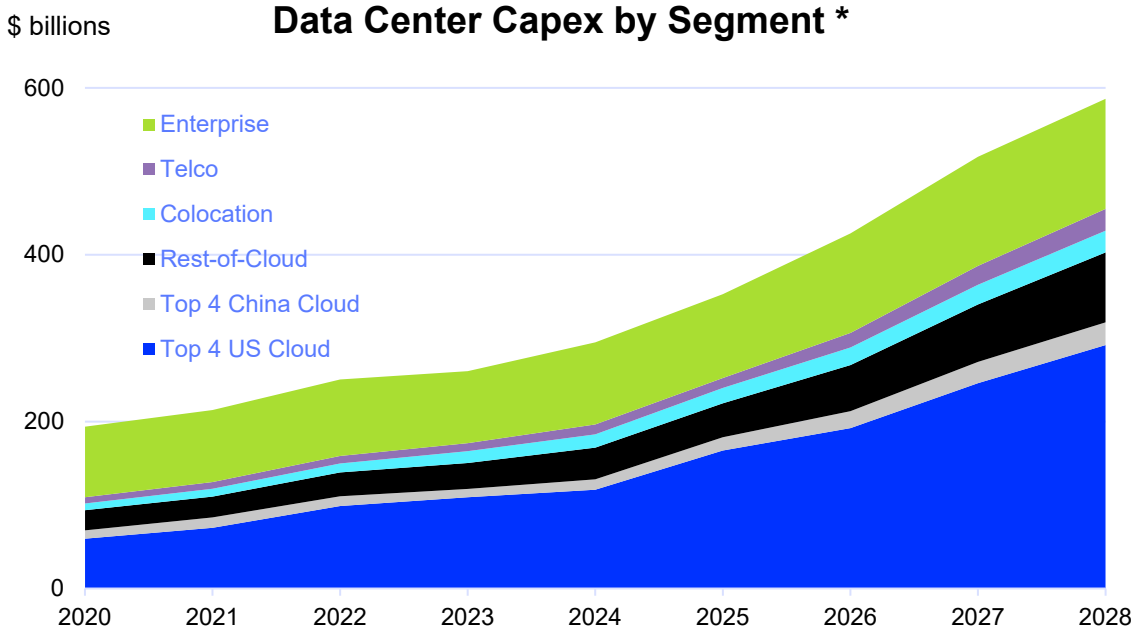


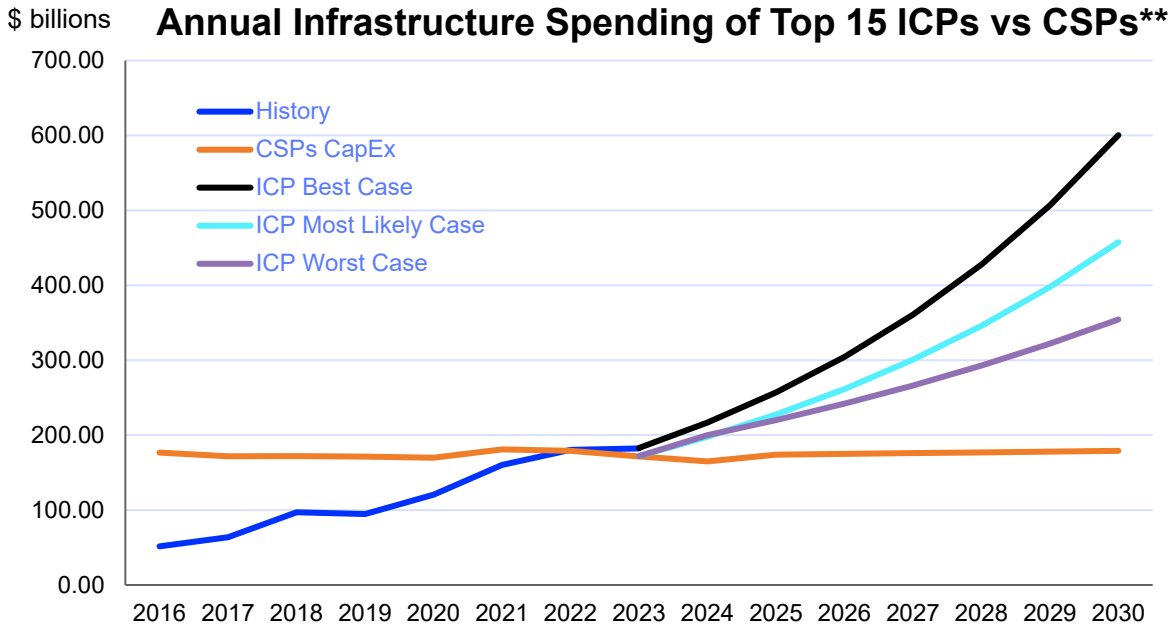
INFRASTRUCTURE SPEND AND OUR EXPANDING SAM

Our SAM	2024	2029	CAGR
Datacom	$9B	$21B	17%
Telecom	$8B	$16B	16%

Expanding SAM through:

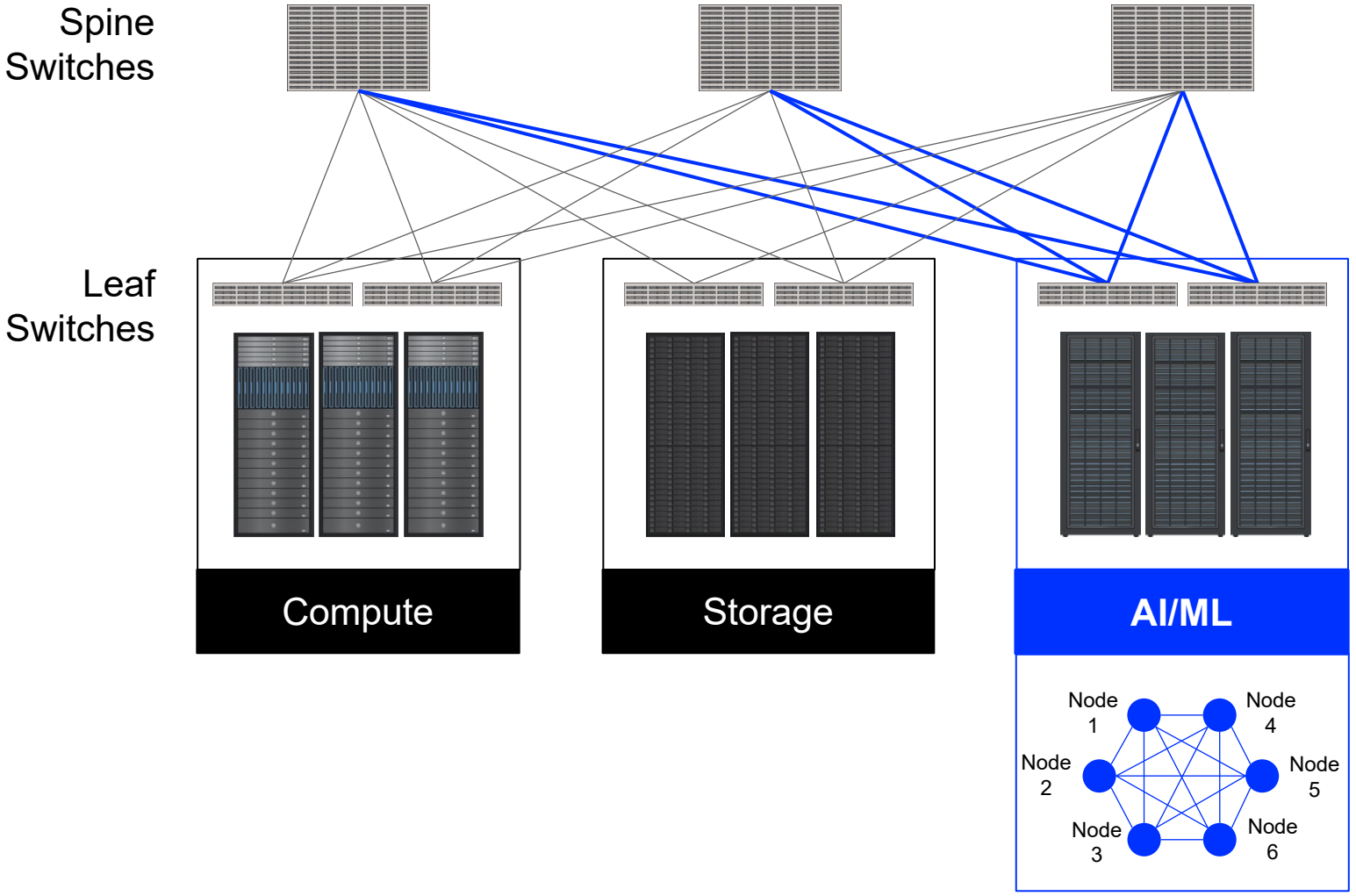
- New coherent transceivers
- Disaggregated systems
- Optical circuit switches





Source: * Dell'Oro Group – Data Center Capex forecast report-Jan 2024, ** LightCounting – Mar 2024

THE GROWTH OF AI/ML IN DATA CENTERS IS A LONG-TERM DISRUPTION



Frontend Connections

- Rapid rise of new networks dedicated to AI/ML inside a data center
- Our optics powers both frontend & backend connections
- Evolution: Now AI, non-AI, and High Performance Computing are blending into an amorphous network

Backend Connections

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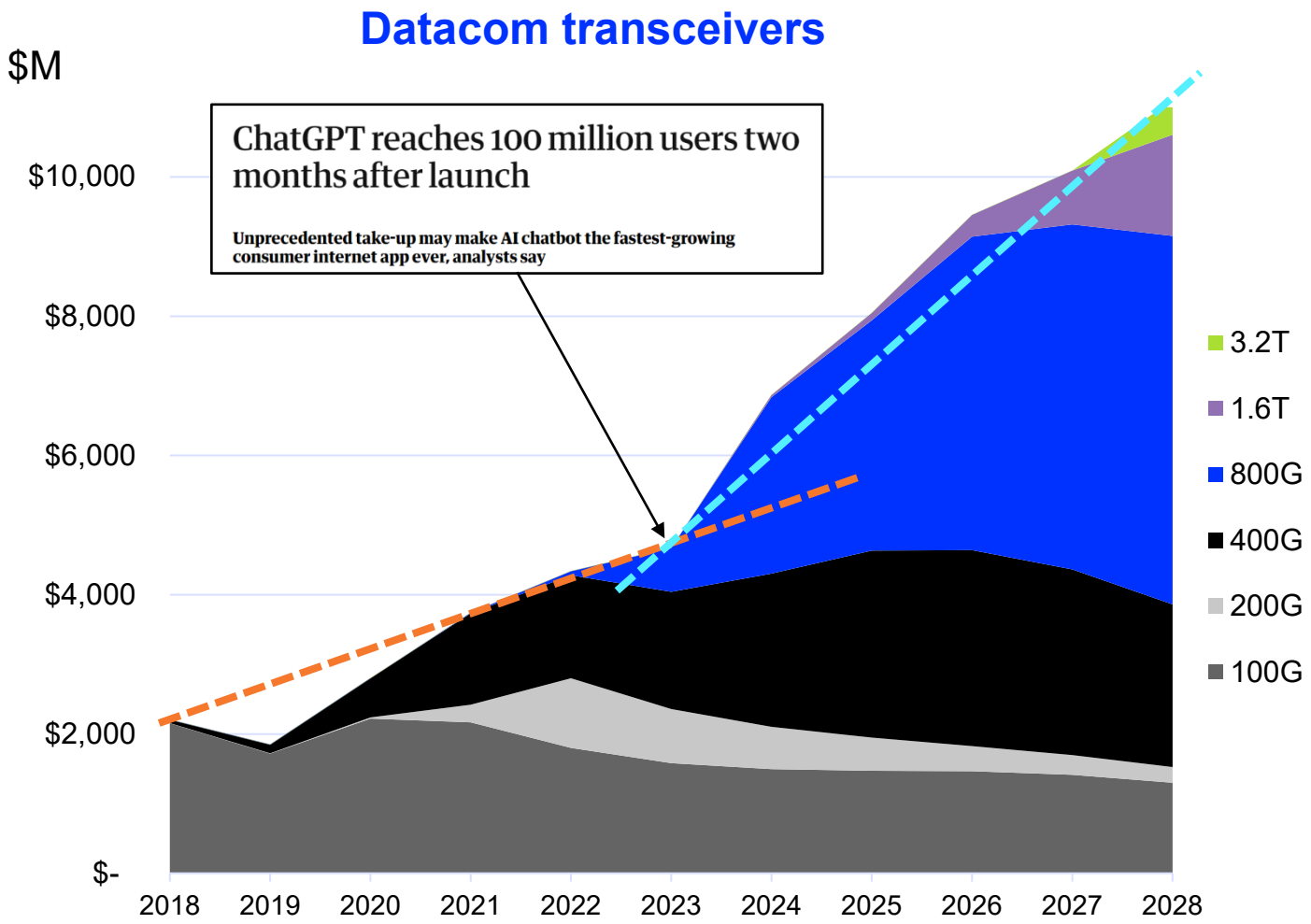
DATACOM MARKET IS ENJOYING AN INFLECTION POINT, THANKS TO AI BOOM



Expect **800G/1.6T** to dominate for **next 5 years**

Long overlapping cycles

Fast rise, slow decay

"Annuity" model of **ROI**

Source: LightCounting & Internal Estimates

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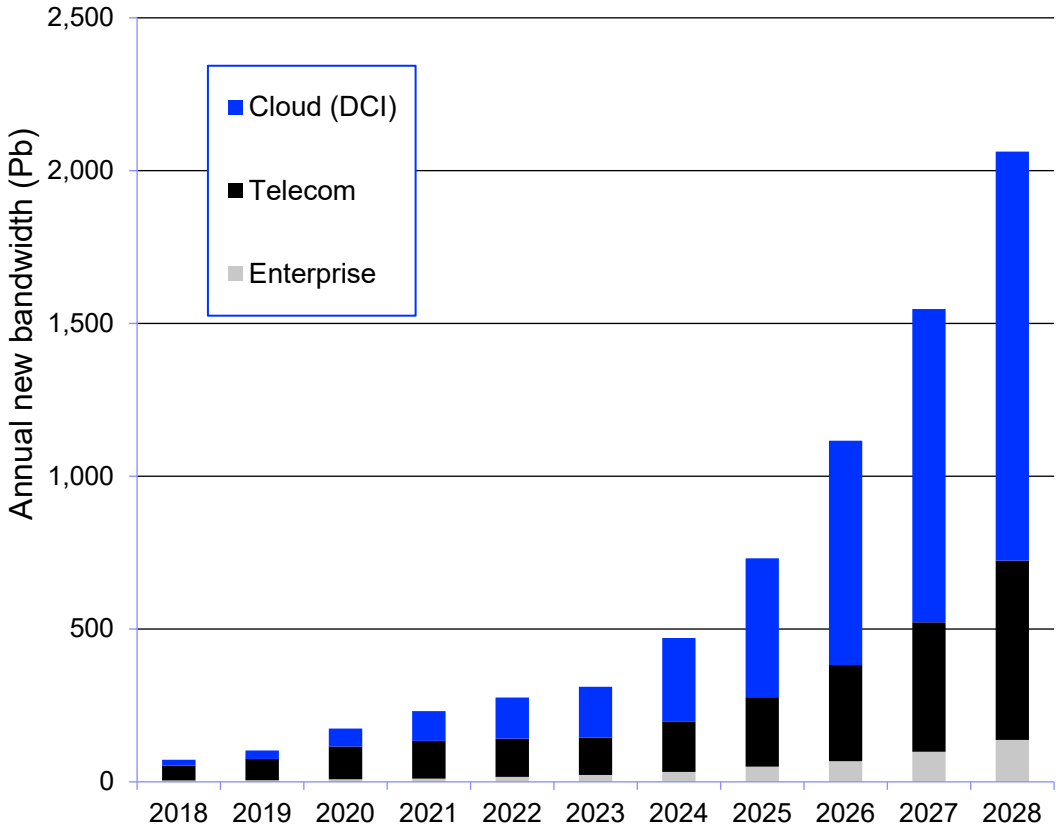
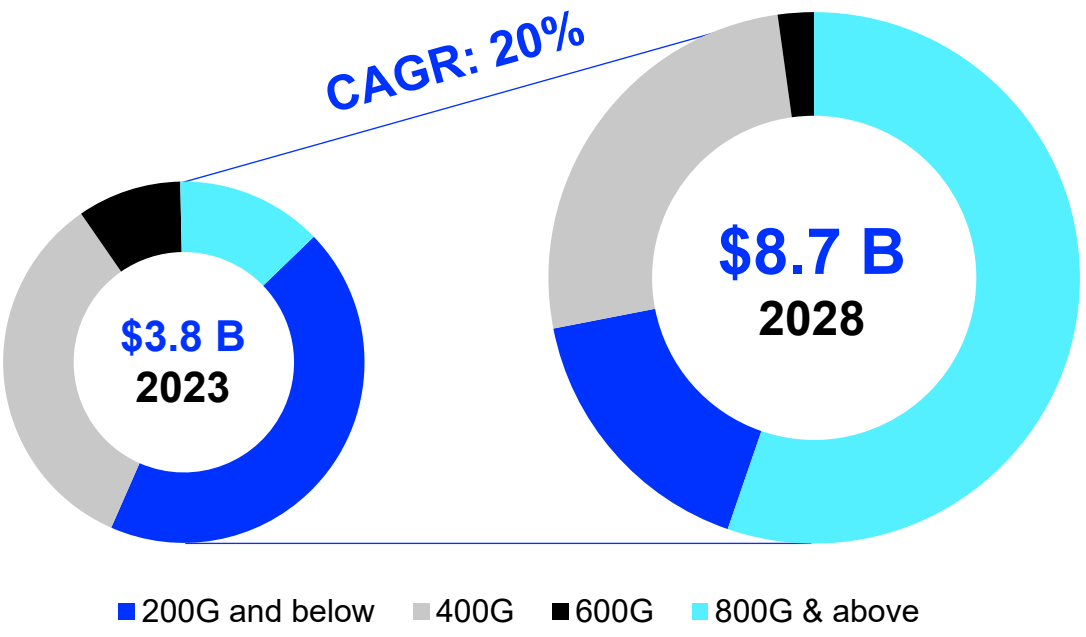
EXPANDING SAM: OUR LARGEST TELECOM OPPORTUNITY - COHERENT TRANSCEIVERS



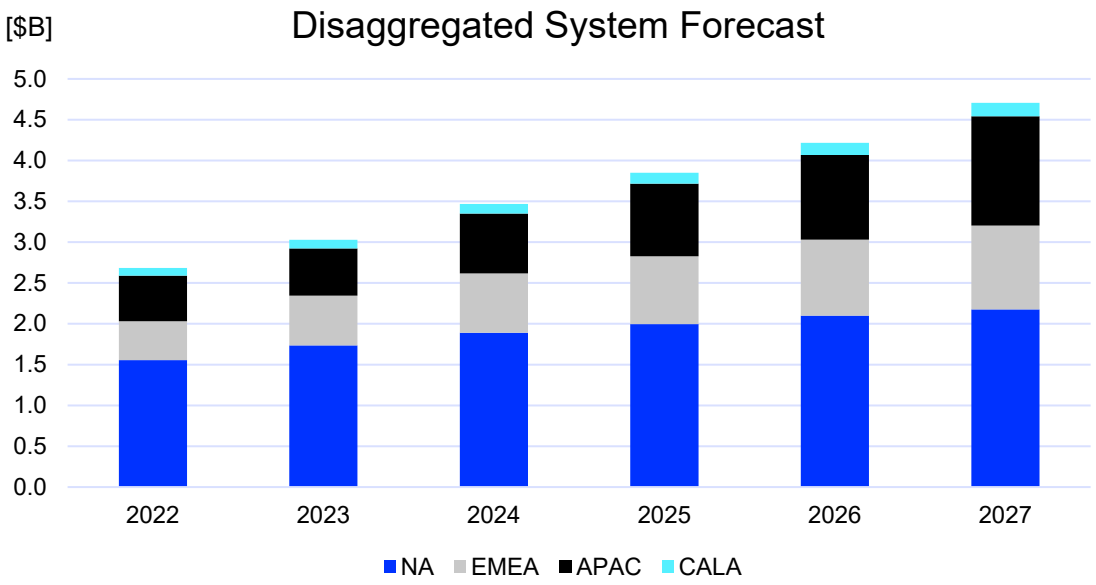
Source: LightCounting



EXPANDING SAM – CLIMBING UP VALUE CHAIN

IPoDWDM gaining traction:

- Application space has expanded well beyond metro DCI
- Cross-selling opportunity with DCO pluggables



Cignal AI - Compact Modular Forecast - 4Q23 Transport Hardware Report

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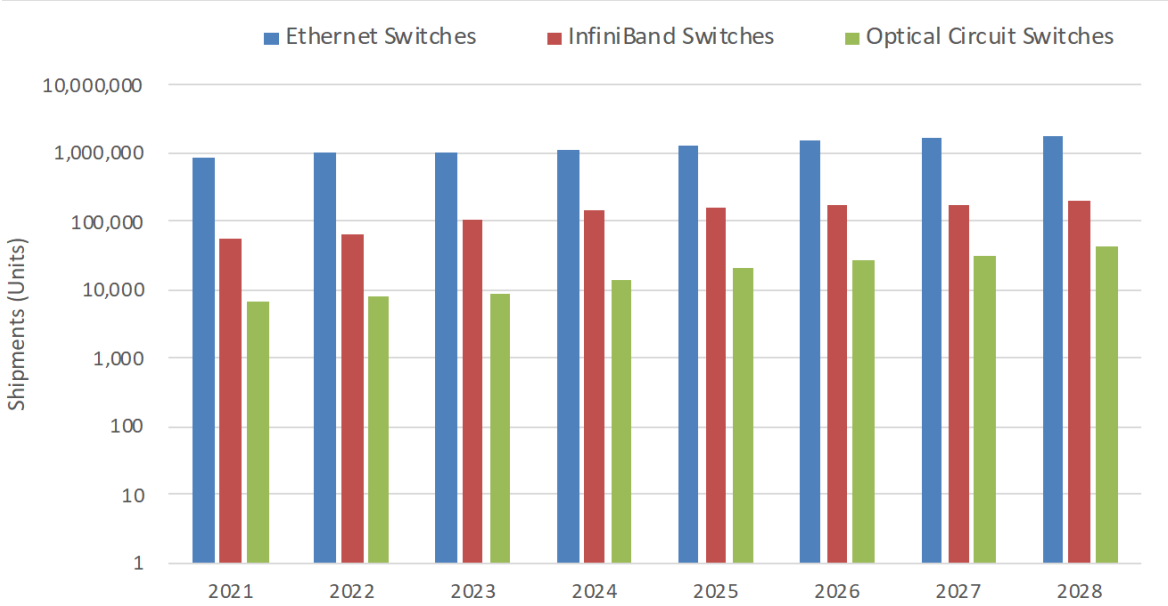
Introducing at **OFC**

Coherent Datacenter Lightwave Cross-Connect (DLX™)

EXPANDING SAM - OPTICAL CIRCUIT SWITCHING FOR DATACENTERS



Source: LightCounting

Our expertise & decades of experience with our Liquid Crystal WSS platform positions us well for this opportunity!

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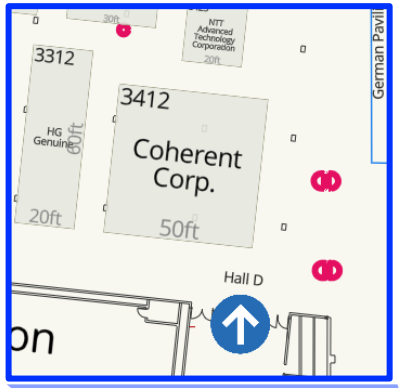
OFC 2024 SHOWCASE

OUR BEST OFC EVER !!



OFC 2024 – San Diego, March 26 – 28, 2024

Booth 3412

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THREE COHERENT EXECUTIVES AT OFC'S HEADLINE EVENT

Event

Optica Executive Forum at OFC 2024

Hilton San Diego Bayfront, March 25, 2024

Session 3: Photonic Manufacturing and Enabling Technologies

Moderator:
Dr. Sanjai Parthasarathi, Coherent Corp.

Speakers:
Dr. Giovanni Barbarossa, Coherent Corp.
Giorgio Cazzaniga, Jabil
Dr. Ted Letavic, Global Foundries
Dr.Tim Vang, Semtech
Mike Bell, Corning

Session 4: CEO Panel

Moderator:
Dr. Michael Lebby, Lightwave Logic

Speakers:
Dr. Chuck Mattera, Coherent Corp.
David Heard, Infinera
Alan Lowe, Lumentum
Bill Brennan, Credo

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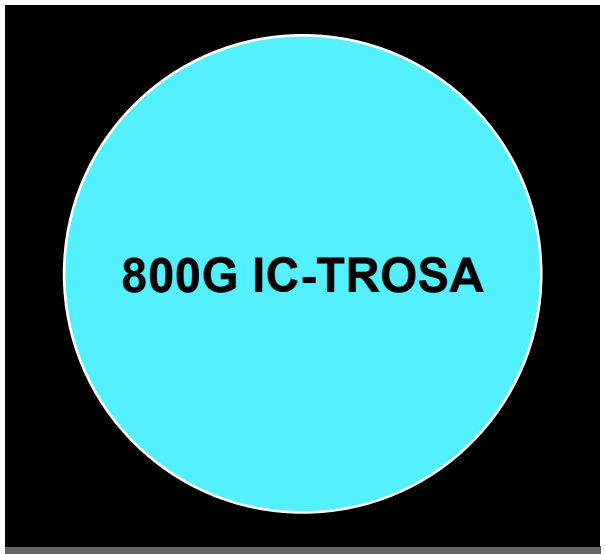
LIGHTWAVE INNOVATION AWARDS RECIEVED YESTERDAY

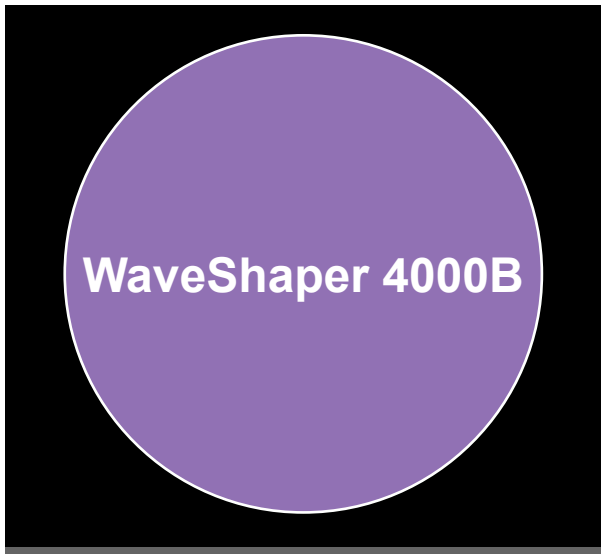
2024 LIGHTWAVE INNOVATION REVIEWS

March 25, 2024

Optical Transceivers and Transponders



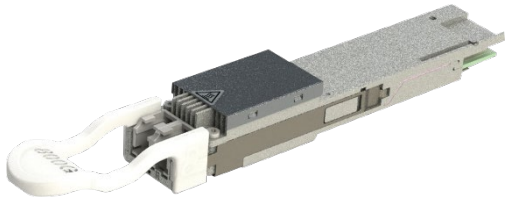
Optical Components



Lab/Production Test Equipment

PLEASE COME AND SEE OUR PRODUCT DEMOS AT BOOTH # 3412

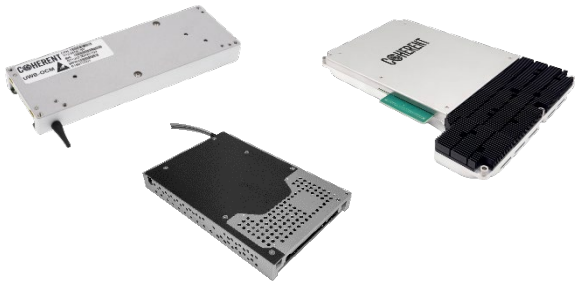
300x300 OCS with 800G 2xFR4



800G QSFP-DD DCO

800G DR4 LPO (using DFB-MZ)

100G QSFP28 DCO I-Temp



C+L Wideband OCM, 2x32 C+L WSS, C+L Amps

WaveShaper for O-Band; Wavemaker C+L

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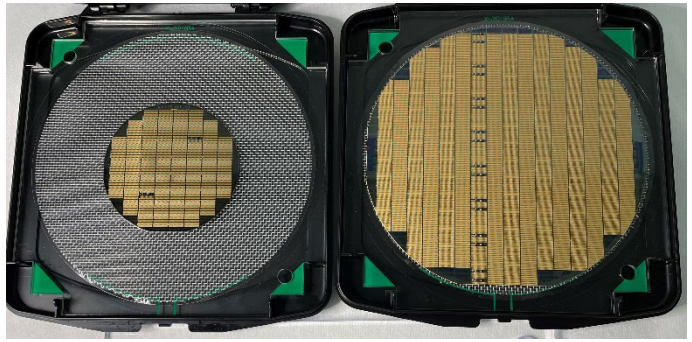
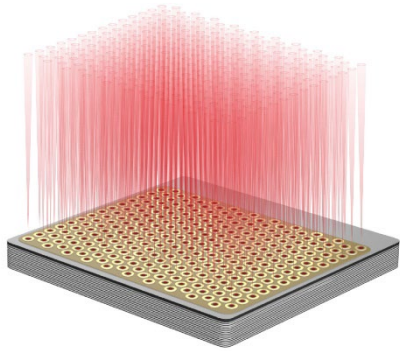
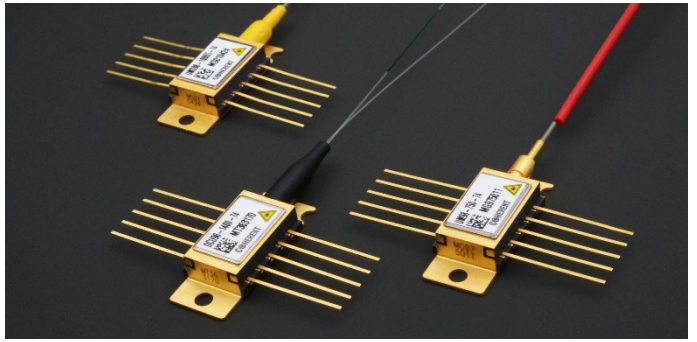
SIGNIFICANT ANNOUNCEMENTS



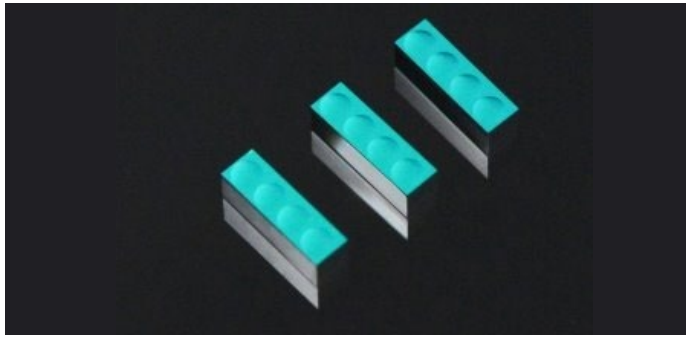
6” InP Platform



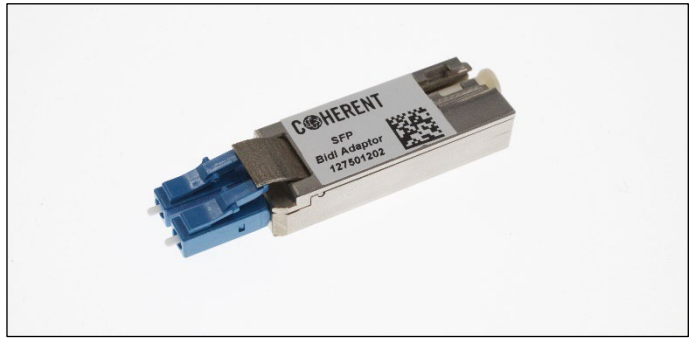
Path to 200 G VCSELs



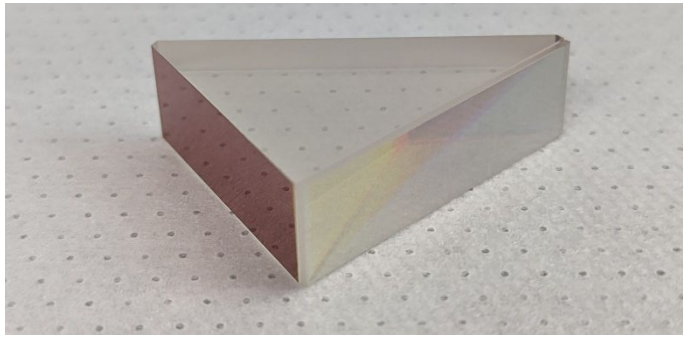
New Pump lasers
Single & Dual chip uncooled



Micro Lens Array



BiDi Adaptor



Extended Range Grism

DATACENTER PANEL: AI/ML AND FUTURE NETWORKS TO SUPPORT IT

Session Description
This panel will be focused on component suppliers for ML/AI systems inside the data center

Today at 12:30 pm Theatre 2

Organizer
Dr. Sanjai Parthasarathi
Chief Marketing Officer
Coherent, United States

Panelist
Vipul Bhatt
VP Marketing, Datacom Vertical
Coherent, United States

Panelist
Dr. Cedric Lam
Principal Engineer
Google, United States

Google

Panelist
Craig Thompson
VP of Business Development
NVIDIA, United States

NVIDIA

Panelist
Marek Tialka
Senior Director of Marketing High Performance Analog Macom, United States

MACOM

Panelist
Mark Kimber
Production Definition
Semtech, United States

SEMTECH

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HEAR OUR OTHER SPEAKERS

Lithographic Aperture VCSELs Enabling Beyond 100G Datacom Applications

Stefano Tirelli

10:30 – 10:45 am
March 25th
M2D Room 3

Mobile Optics (MOPA) for the 6G Era

Gert Sarlet

11:00 – 12:00pm
March 26th
Theater III

CableLabs: Empowering Access Networks with Coherent Optics

Shawn Esser

11:30 – 12:30pm
March 27th
Theater II

Integrated Coherent Transmit-Receive Optical Sub-Assembly (IC-TROSA) for 140 GBd Applications

Efthymios Rouvalis

2:15 – 2:30pm
March 27th
W3A.2

Coherent Optics Unleashed: From 400ZR Success to 800ZR/LR Advancements and 1600ZR Kick-off

Gert Sarlet

4:00 – 5:00pm
March 27th
Theater I

Multimode Links Based on High-Speed VCSELs for Cost-Effective Data Center Connectivity

Vipul Bhatt

12:30 – 2:00pm
March 26th
Theater II

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TECHNOLOGY FOR DATACOM AND AI TRANSCEIVERS

Dr. Julie Sheridan Eng - Chief Technology Officer

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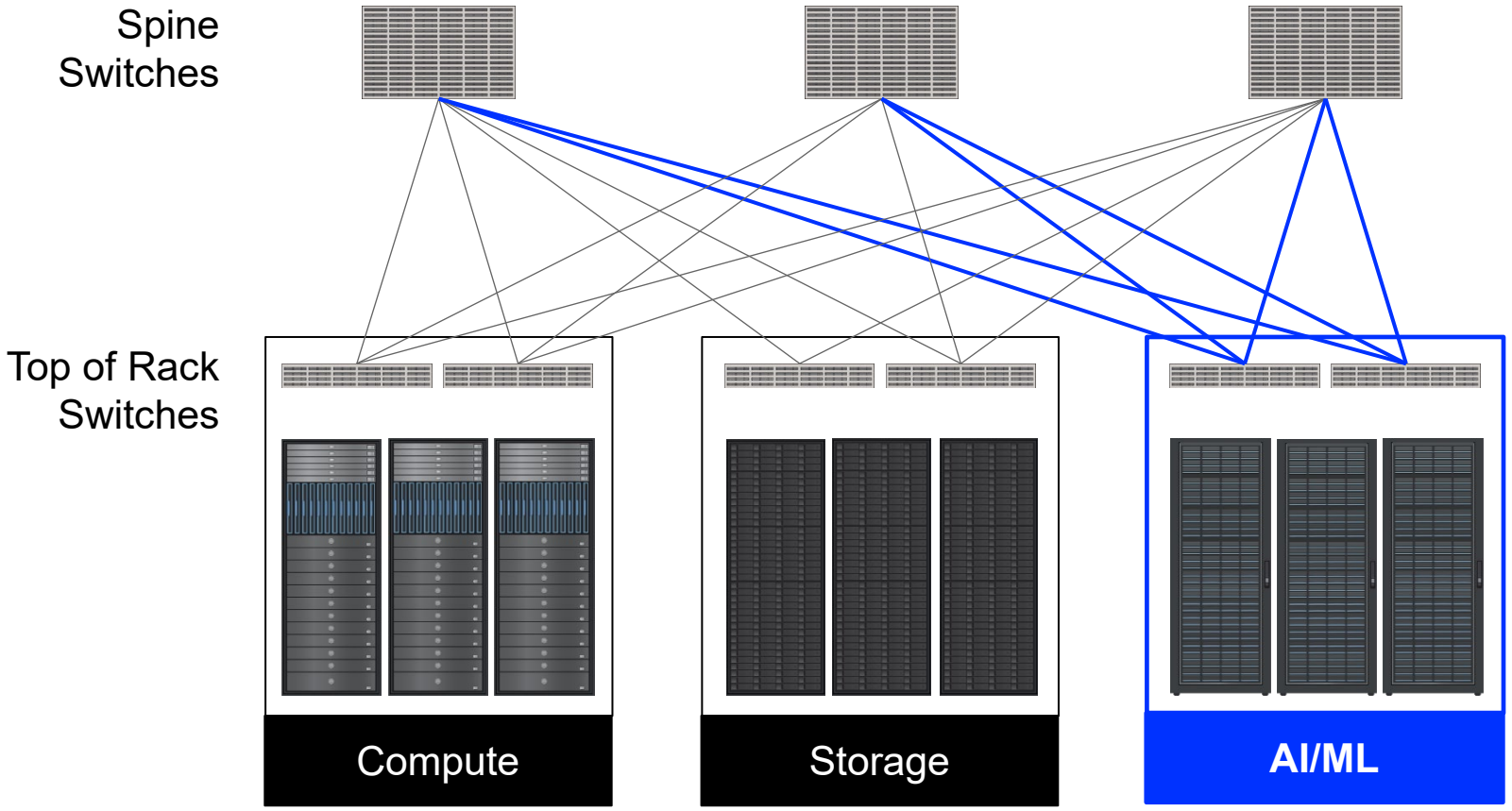
THE GROWING FOOTPRINT OF AI/ML IN DATA CENTERS



AI/ML

- A new datacenter network dedicated to AI/ML
- Many optical connections
- AI/ML link data rates expected to grow much faster than compute and storage

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TECHNOLOGIES FOR AI/ML

Artificial Intelligence and Machine Learning are accelerating the pace of innovation in transceivers and optical components

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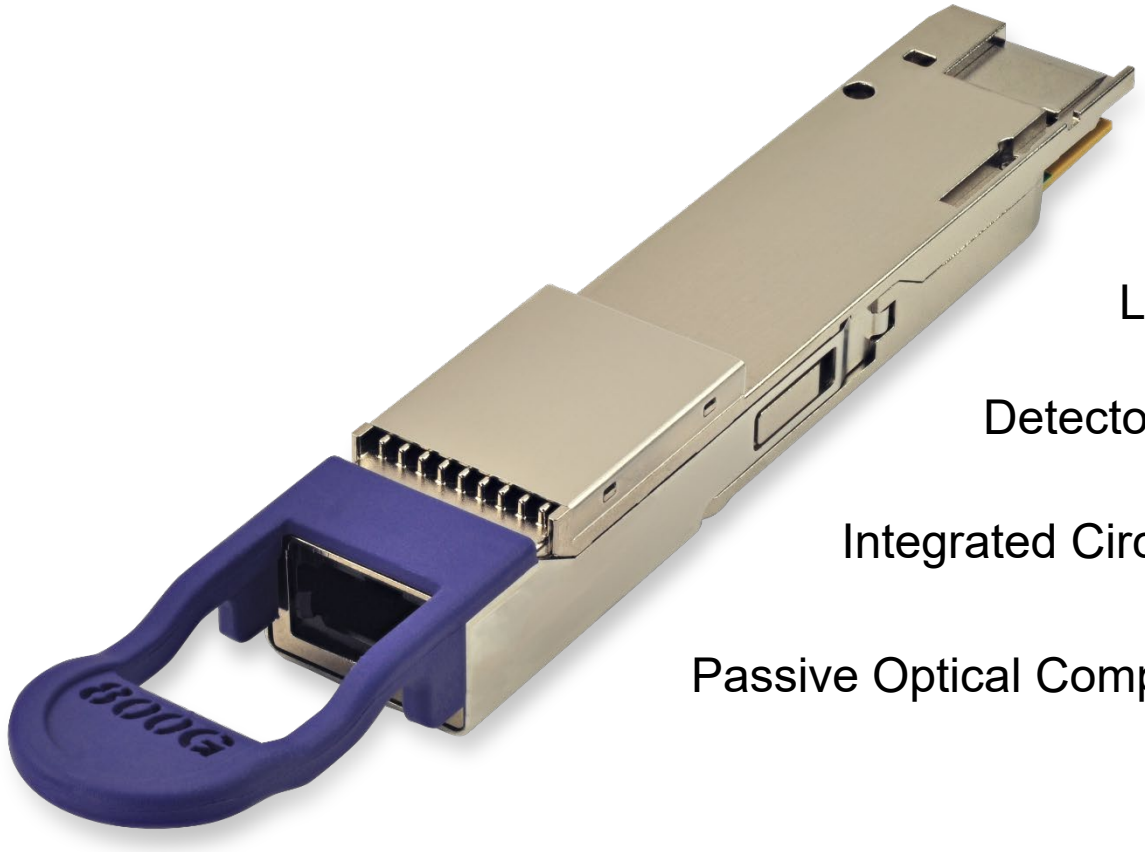
OUR VERTICAL INTEGRATION IN LASERS, DETECTORS, INTEGRATED CIRCUITS, AND PASSIVE OPTICS IS A DIFFERENTIATOR

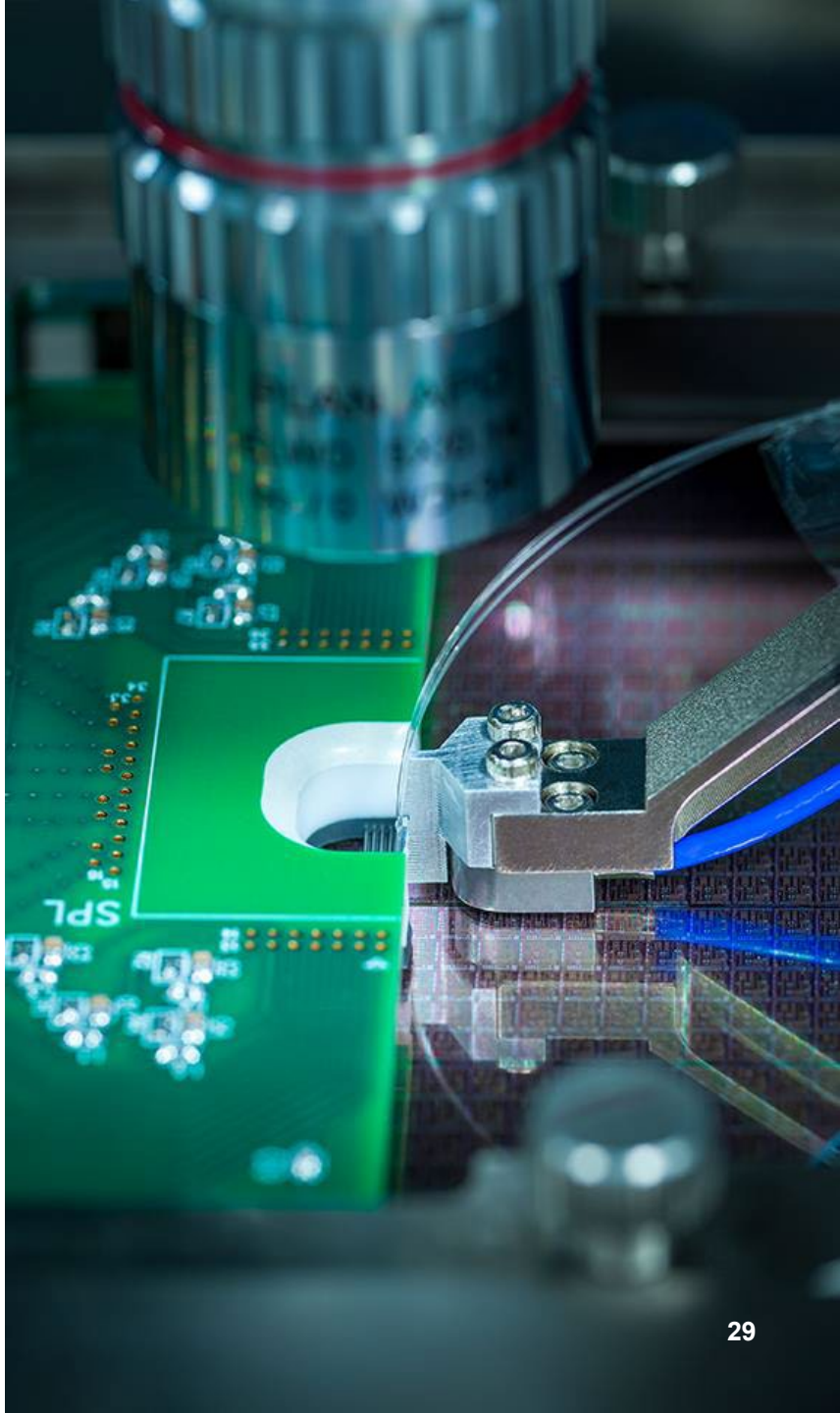


Lasers

Detectors

Integrated Circuits

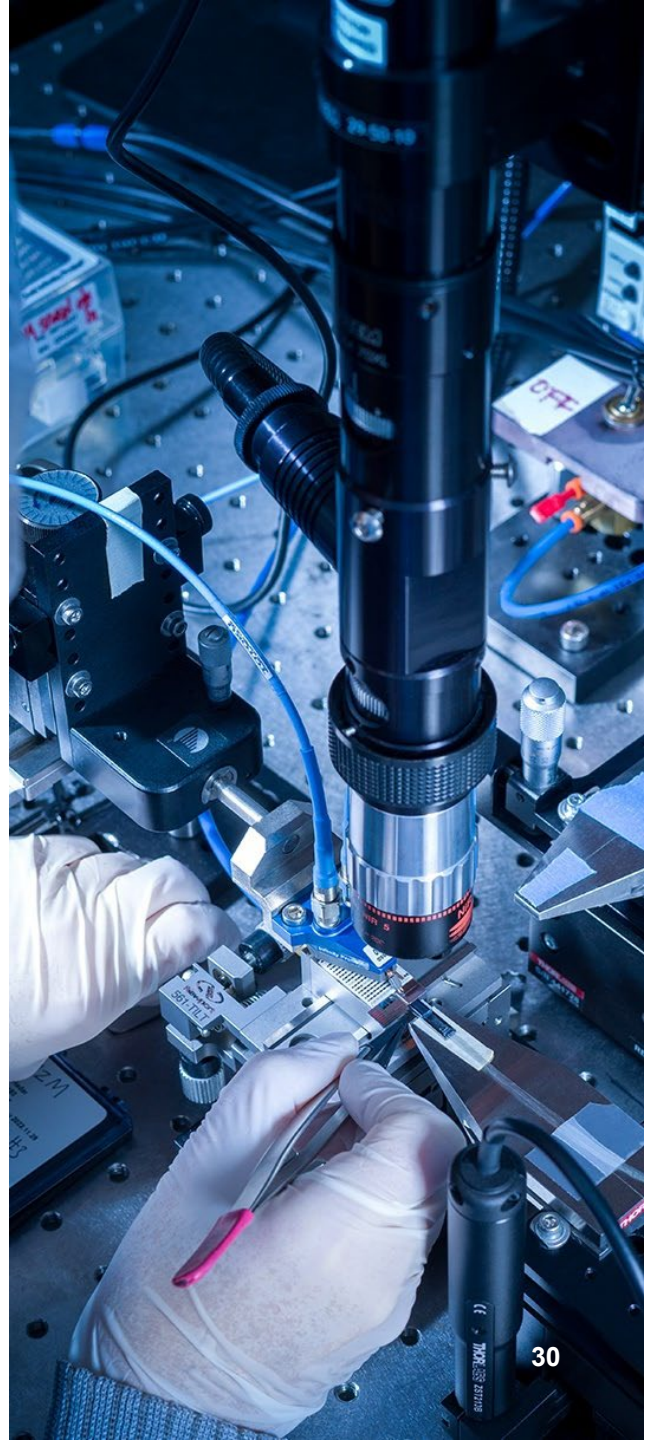
Passive Optical Components



100G AND 200G/LANE LASERS FOR 800G AND 1.6T

Short-Reach **< 50 m**	Mid-Reach **500 m to 2 km**	Long-Reach **Up to 10 km**
8x100G for 800G 8x200G for 1.6T	8x100G for 800G 4x200G for 800G 8x200G for 1.6T	8x100G for 800G 4x200G for 800G 8x200G for 1.6T
Gallium Arsenide	**Indium Phosphide, Silicon Photonics**	**Indium Phosphide**
▪ VCSEL	▪ EML ▪ InP CW Laser with Silicon Photonics	▪ EML ▪ DFB-MZ

VCSEL: Vertical Cavity Surface-Emitting Laser
EML: Electro-Absorption Modulated Laser
CW: Continuous Wave
DFB-MZ: Distributed Feedback Laser with Mach-Zehnder Modulator



Datacom transceiver R&D in Fremont, CA

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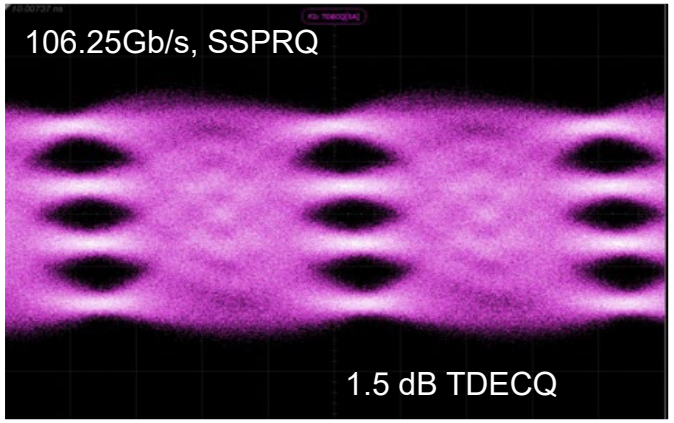
GALLIUM ARSENIDE PLATFORM FOR SHORT-REACH 800G AND 1.6T TRANSCEIVERS

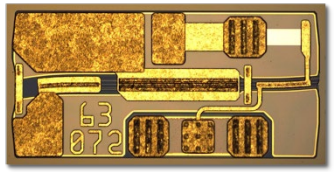


- 100G VCSELs shipping in production for 400G and 800G transceivers
- 200G/lane VCSEL in development for 800G and 1.6T transceivers
- Over 200B VCSEL emitters shipped

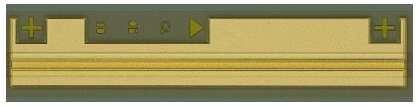
Vertically integrated 6” GaAs platform
Sherman, TX

INDIUM PHOSPHIDE TECHNOLOGY PLATFORM FOR LONG-REACH TRANSCEIVERS

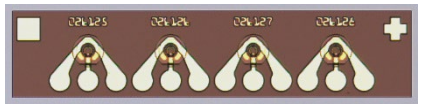
Over 200M datacom lasers shipped



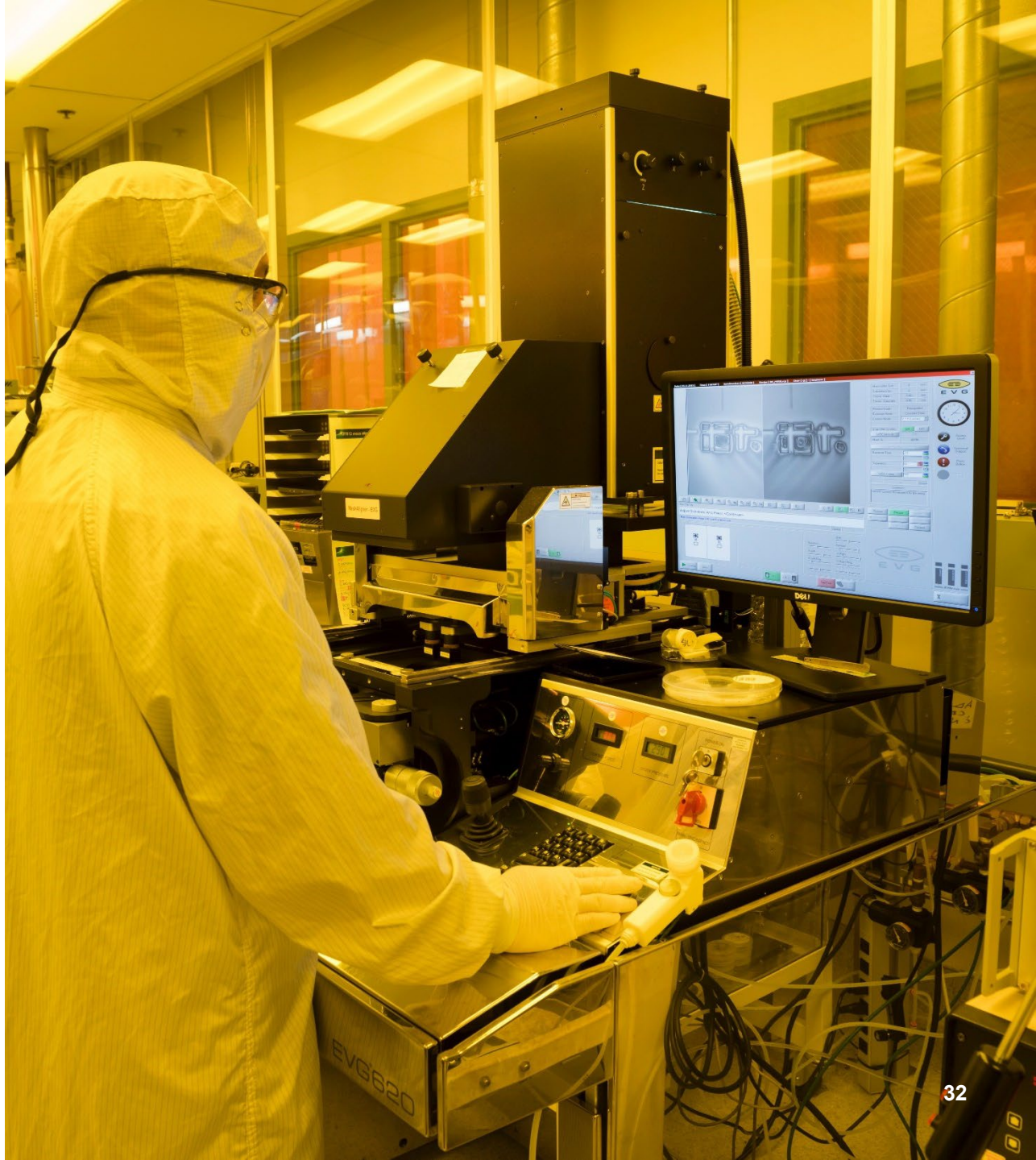
Electro-Absorption Modulated Laser (EML)



Continuous Wave Laser (CW Laser)



InP-based Photodetectors



Indium phosphide wafer fab in Fremont, CA

COHERENT

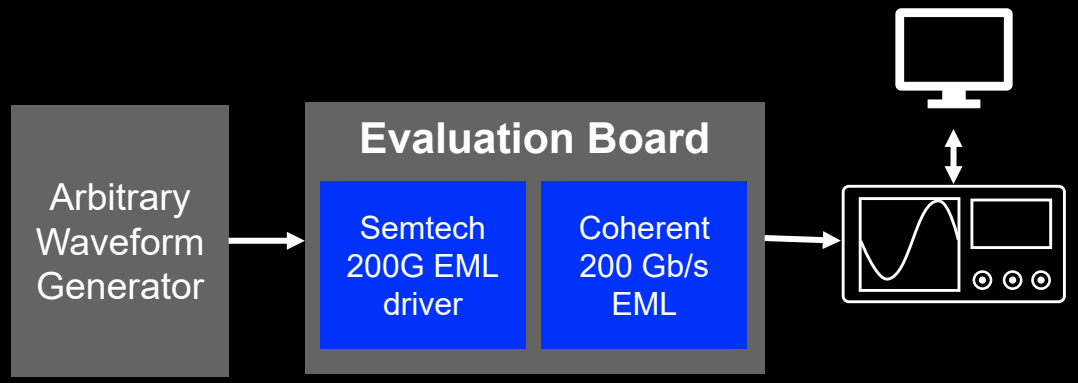
EMLs FOR 100G AND 200G/LANE FOR 800G AND 1.6T TRANSCEIVERS

- **100G/Lane Electro-Absorption Modulated Lasers (EMLs) are shipping in volume today in 800G transceivers**

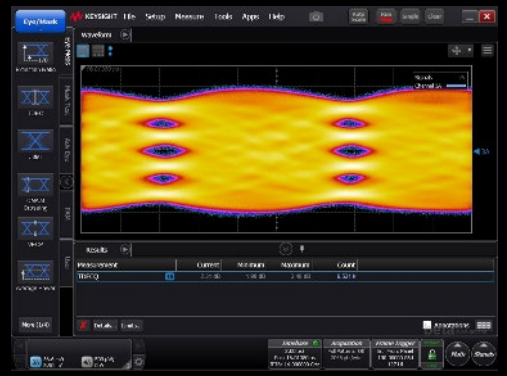
- **200G/lane in development, supports 800G (4x200G) and 1.6T (8x200G) transceivers**

2023 LIGHTWAVE 4.5 INNOVATION REVIEWS

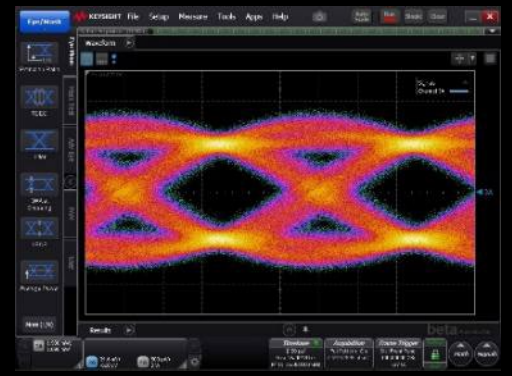
Demonstrated at ECOC 2022



Optical Eye



200G PAM4



100G NRZ

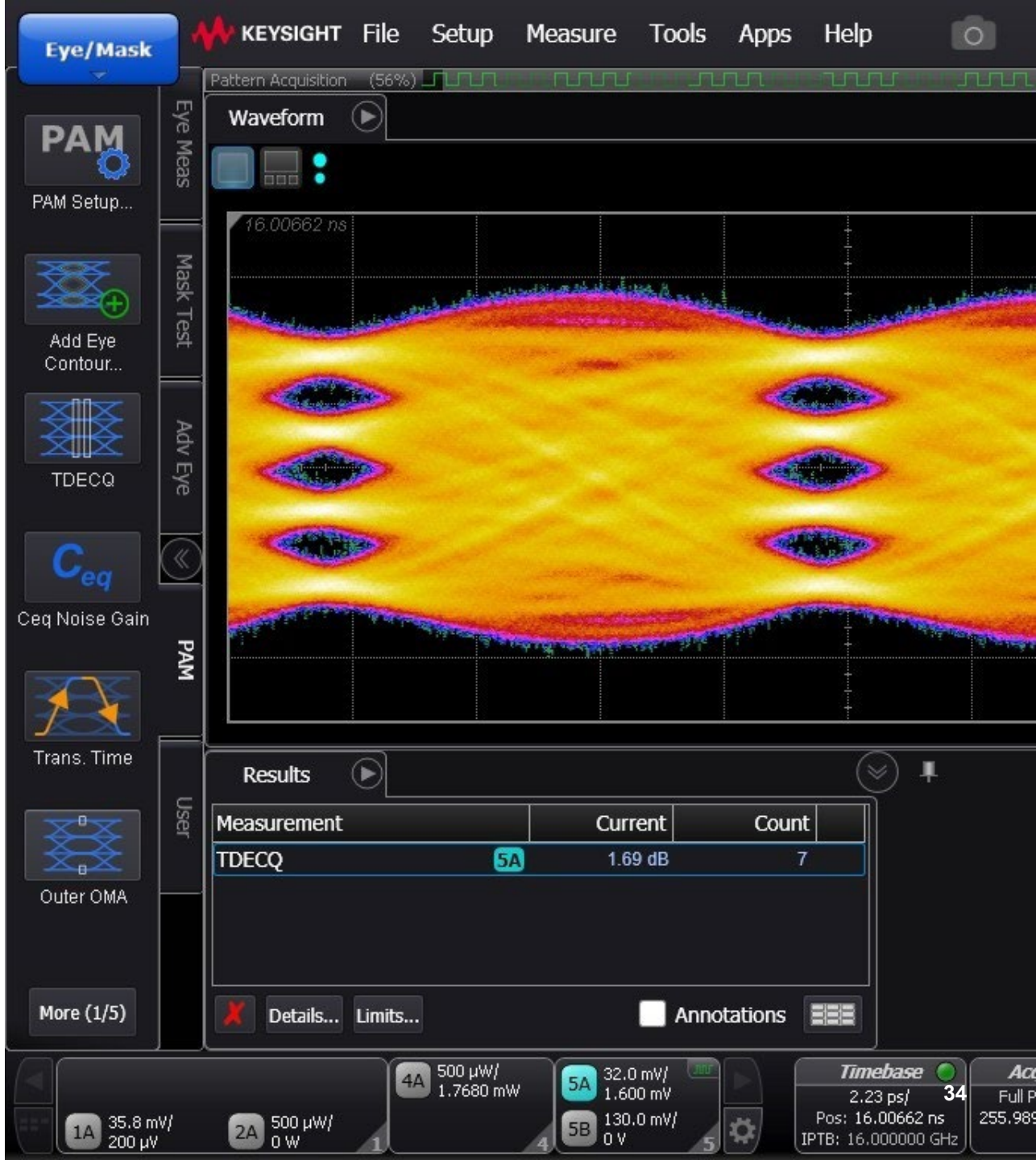
COHERENT

200G PAM4 DFB-MZ LASER FOR HIGHER PERFORMANCE 800G/1.6T

- **Supports 800G and 1.6T at 10 km**
  - LAN-WDM and CWDM wavelengths
  - High Output power and superior signal integrity
  - Linear performance a great fit for Linear Pluggable Optics (LPO)

- **Live demo of 800G FR4 OSFP with DFB-MZ at ECOC 2023**

- **ECOC 2023 Industry Award for “Most Innovative Product”**



COHERENT

INVESTMENT IN 6” InP PLATFORM TO SUPPORT AI VOLUMES

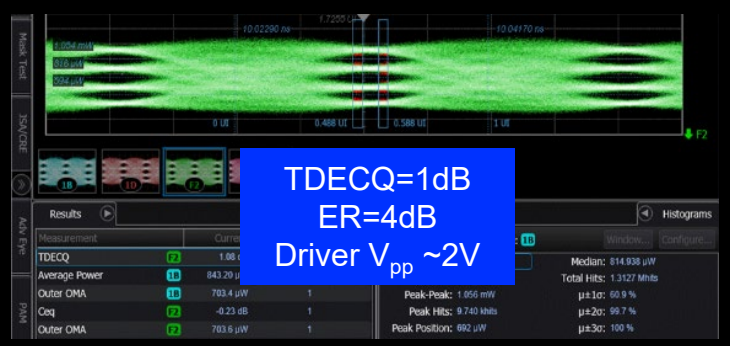
- Investing in 6” InP in Jarfalla, Sweden and Sherman, Texas

Coherent high-volume fab in Sherman Texas

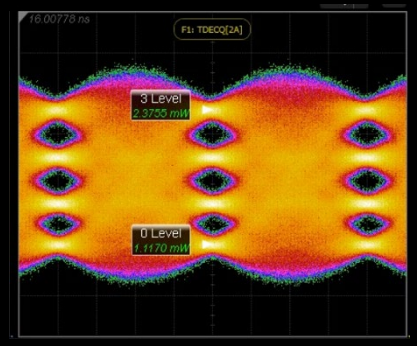
6” InP wafer

SILICON PHOTONICS FOR 100G/LANE AND 200G/LANE

SiPh-based Module

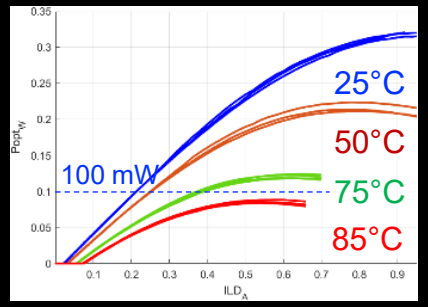


Modulation diagram from 800G 2xFR4 transmitter



224 Gb/s PAM4 optical eye

100 mW Laser



Output power vs. bias current

- **For some applications, Silicon Photonics reduces module cost and complexity by integration of passives**
- **Silicon Photonics based 800G (8x100G) DR8 demonstrated ECOC 2022**
- **224 Gb/s PAM4 eyes demonstrated, <1 dB TDECQ**
- **Silicon Photonics requires high power InP CW laser**
  - 100 mW uncooled and 200 – 400 mW cooled
  - 1310nm, CWDM, LWDM

COHERENT

TRANSCEIVERS FOR AI

800G transceivers in production

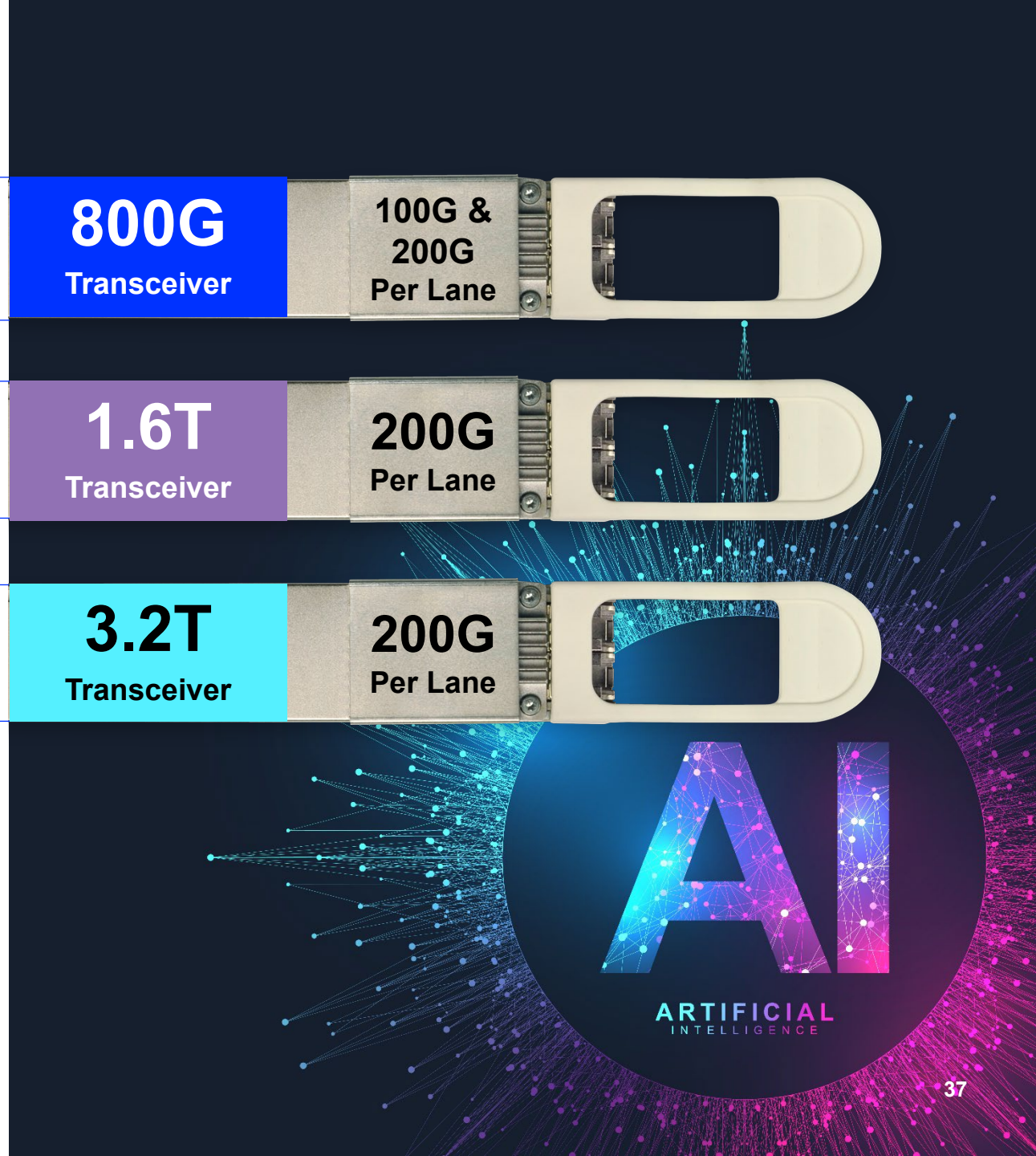
- Supporting all protocols

1.6T transceivers will be shipped in 2024

3.2T with 200G/lane likely next

After that

- More lanes or
- 400G/lane or
- More advanced modulation

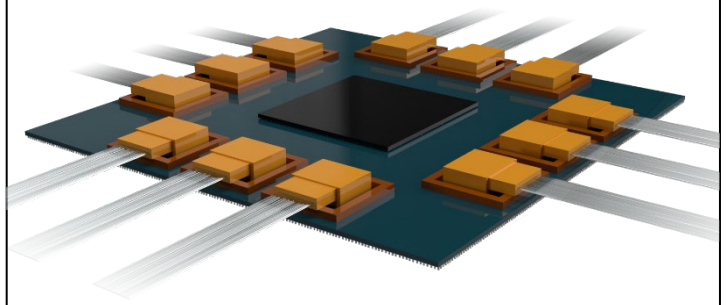


COHERENT

INTERNAL COMPONENTS SUPPORT ALL ARCHITECTURES

Traditional retimed pluggable transceivers, including InfiniBand and Ethernet

Linear Pluggable Optics (LPO) and Linear Receive Optics (LRO) pluggable transceivers

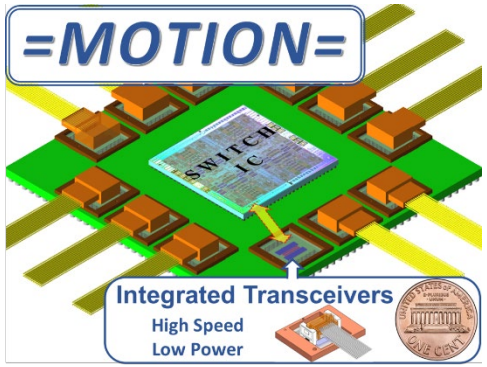


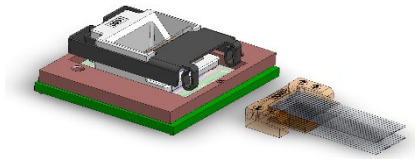
Near-Packaged Optics (NPO) and Co-Packaged Optics (CPO)

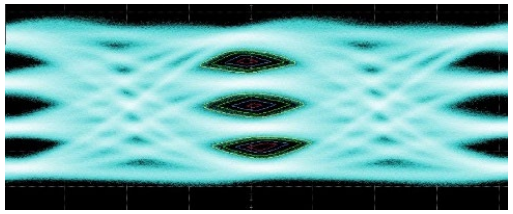
LINEAR, LINEAR-RECEIVE, NEAR AND CO-PACKAGED OPTICS

- LPO, LRO, NPO, and CPO are packaging and architectural partitioning compared traditional retimed pluggable optics
- Optical components are largely the same
- Coherent demo of 800G OFSP DR4 (4 x 200) LPO based on DFB-MZ at OFC 2024

Live demo of **800G VCSEL-based CPO** at OFC 2023







940nm VCSEL @ 112G PAM-4

Live demo of **OSFP 800G-DR8 LPO** at ECOC 2023

WHY THE INDUSTRY LOVES PLUGGABLE TRANSCEIVERS

- **Multi-vendor ecosystem**
  - 1G – 800G, 30 m – 10 km
- **Standards-based**
- **“Pay-as-you-grow” cost model**
- **Easily replaceable**
- **Flexibility: Lower cost, lower power shortwave modules for shorter links and long wave modules for longer links**

Pluggable transceivers have been successful for these reasons for 25+ years, with hundreds of millions of units shipped

COHERENT

COHERENT HAS BEEN A LEADER IN DATACOM TRANSCEIVERS FOR TWO DECADES

Deep expertise in transceivers and in internal components

- Gallium Arsenide and Indium Phosphide semiconductor lasers
- Silicon Photonics
- IC’s
- Passive Optical Components

Experienced manufacturing at scale with geodiversity for supply risk management

We will continue to lead at 800G and 1.6T, supporting rapid growth of AI

COHERENT

DATACOM BUSINESS UPDATE – FOCUS ON AI

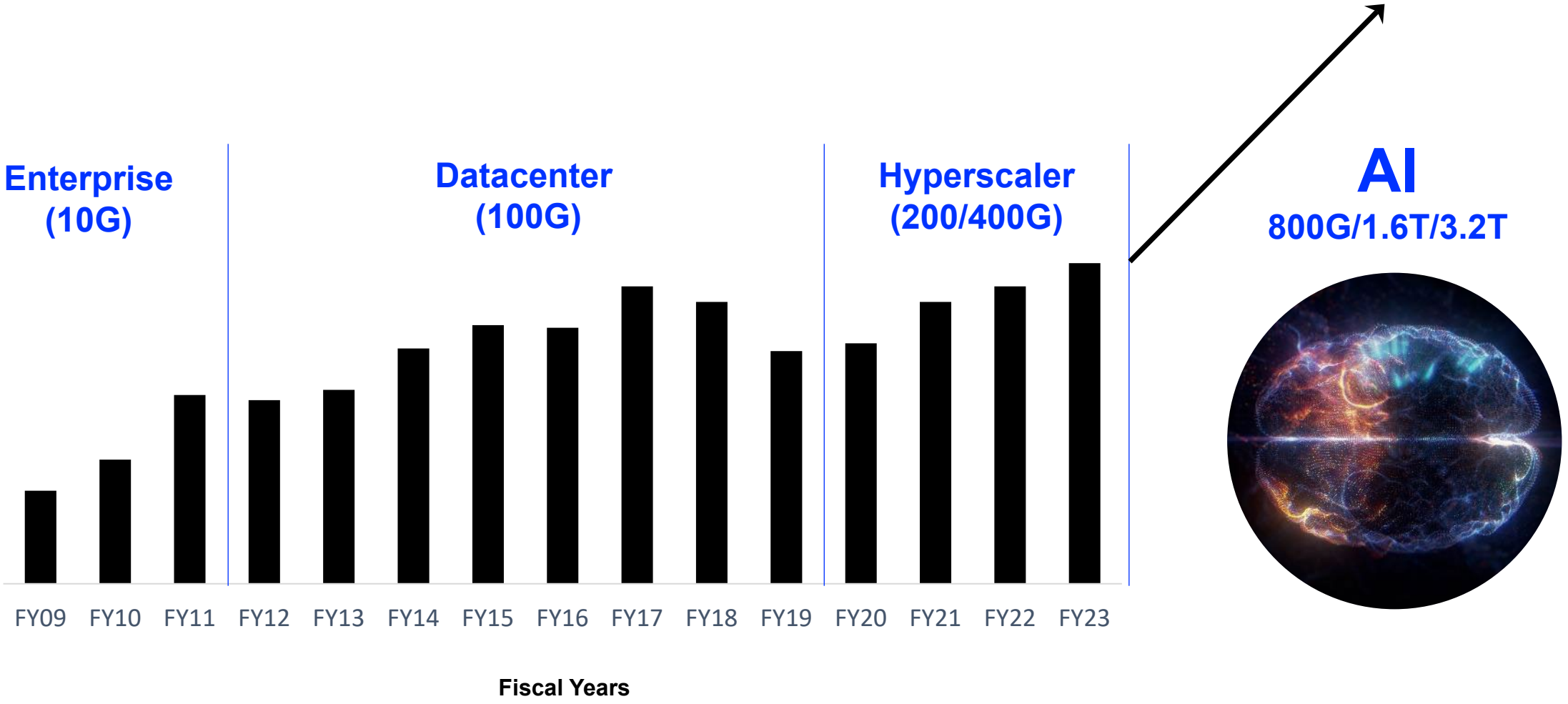
Dr. Lee Xu - Executive Vice President, Datacom Transceivers

COHERENT

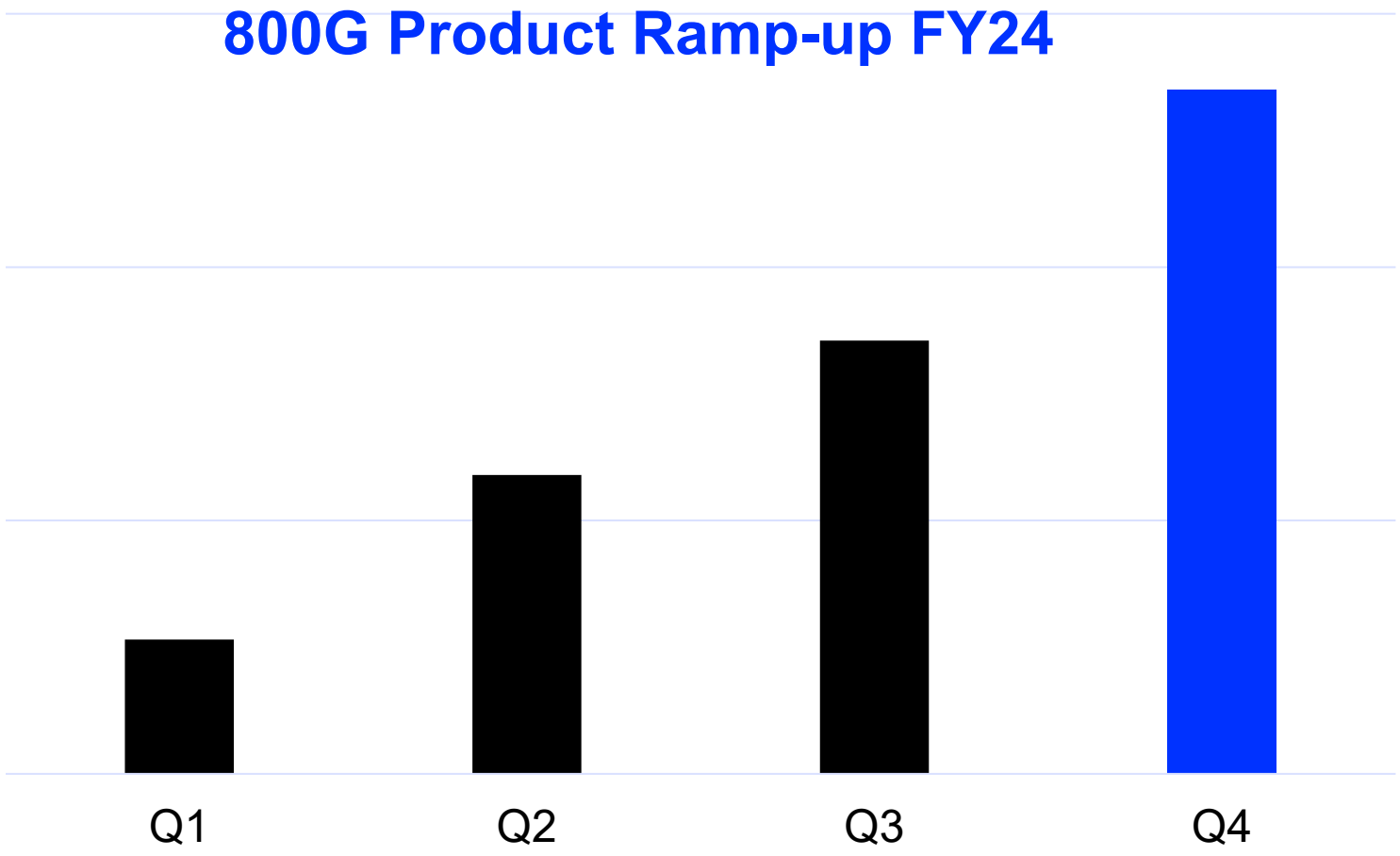
CONTENT

- **Our Datacom transceiver and AI business ramp**
- **Our product and technology roadmap**
- **Our Value Prop and Differentiation**

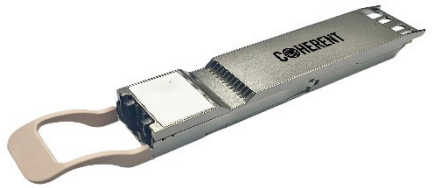
DATACOM: THE RISE OF AI



COHERENT'S AI TRANSCEIVER RAMP IN FY24

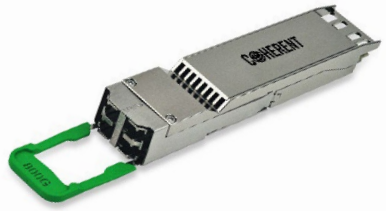


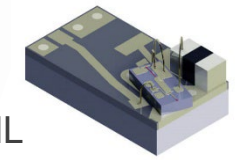
Short Reach



Coherent VCSEL Array

Long Reach

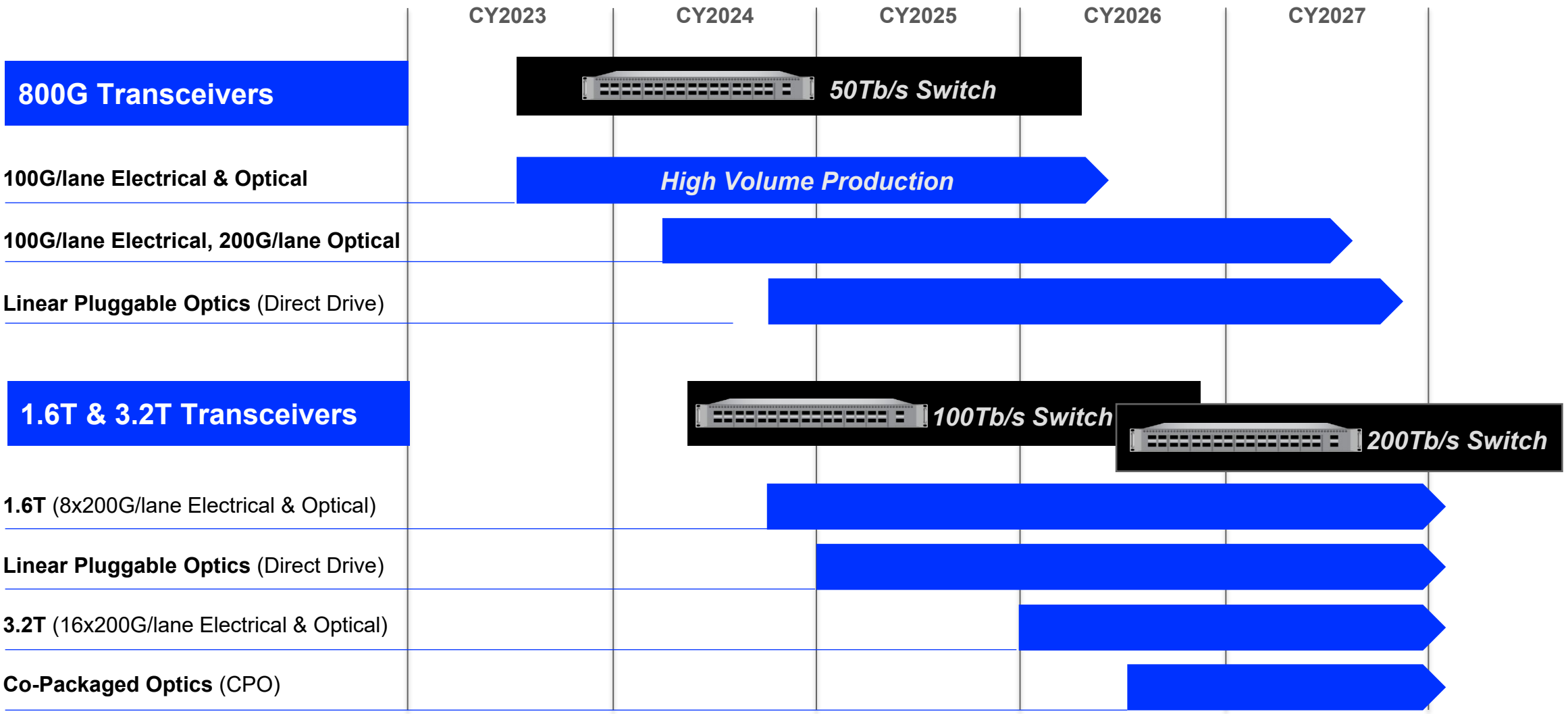




Coherent EML

COHERENT

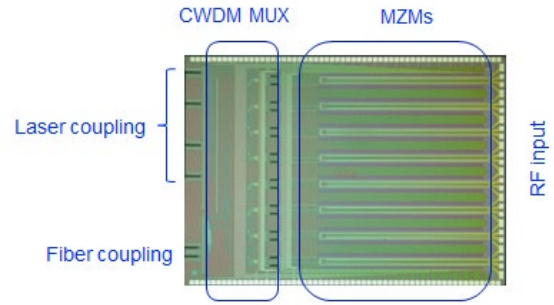
DATACOM TRANSCEIVER HIGH LEVEL ROADMAP



COHERENT

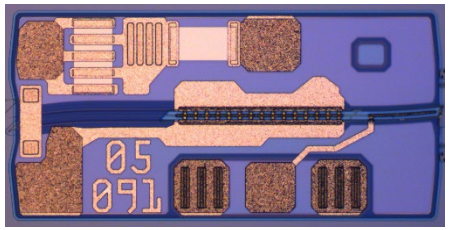
TECHNOLOGY DEVELOPMENT OF 1.6T/3.2T
OUR VERTICAL INTEGRATION OF 200G PER OPTICAL LANE

Silicon Photonics (SiPh)



Silicon Photonics IC

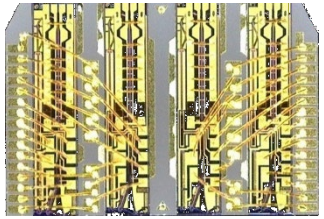
EMLs



Coherent EML

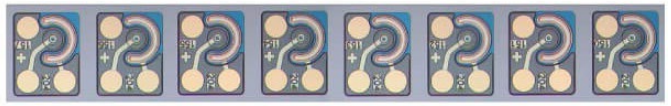
DFB-MZ

- Needed for 2-6 km distance
- Better linearity



Coherent DMZ CoC, 4ch

200G/lane VCSEL exploration



Coherent VCSEL Array

COHERENT

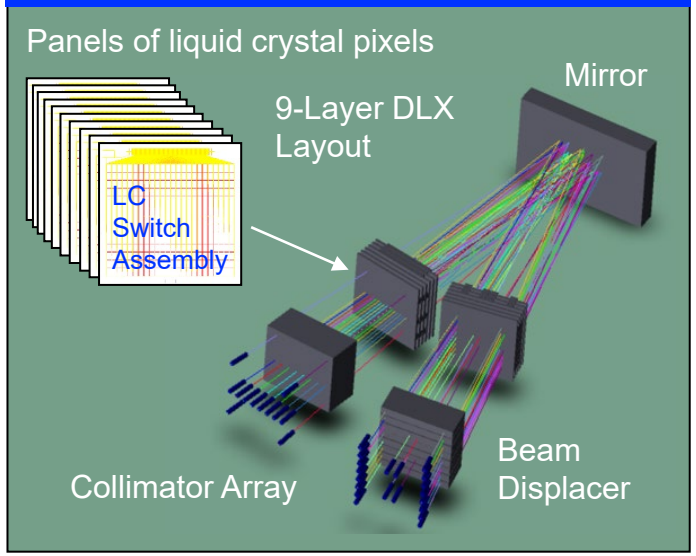
COHERENT'S OPTICAL CIRCUIT SWITCH FOR DATA CENTER

- **Datacenter Lightwave Cross-Connect (DLX™)---a multi-hundred million dollar opportunity**
- **Combines three key Coherent assets:**
  - Digital liquid crystal technology from our CoAdna WSS
  - Our systems capability from our optical line system (OLS) team
  - Our datacom customer intimacy from transceiver business

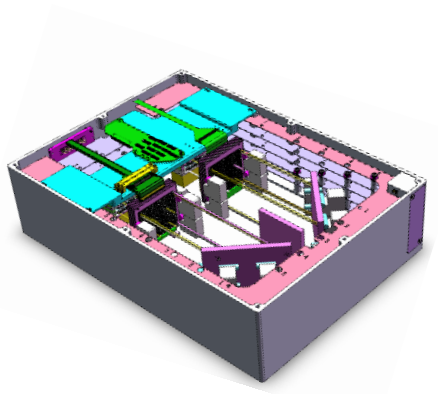
Target Customers

- Major hyperscaler and AI cluster builders

Optical Flow



OCS Engine

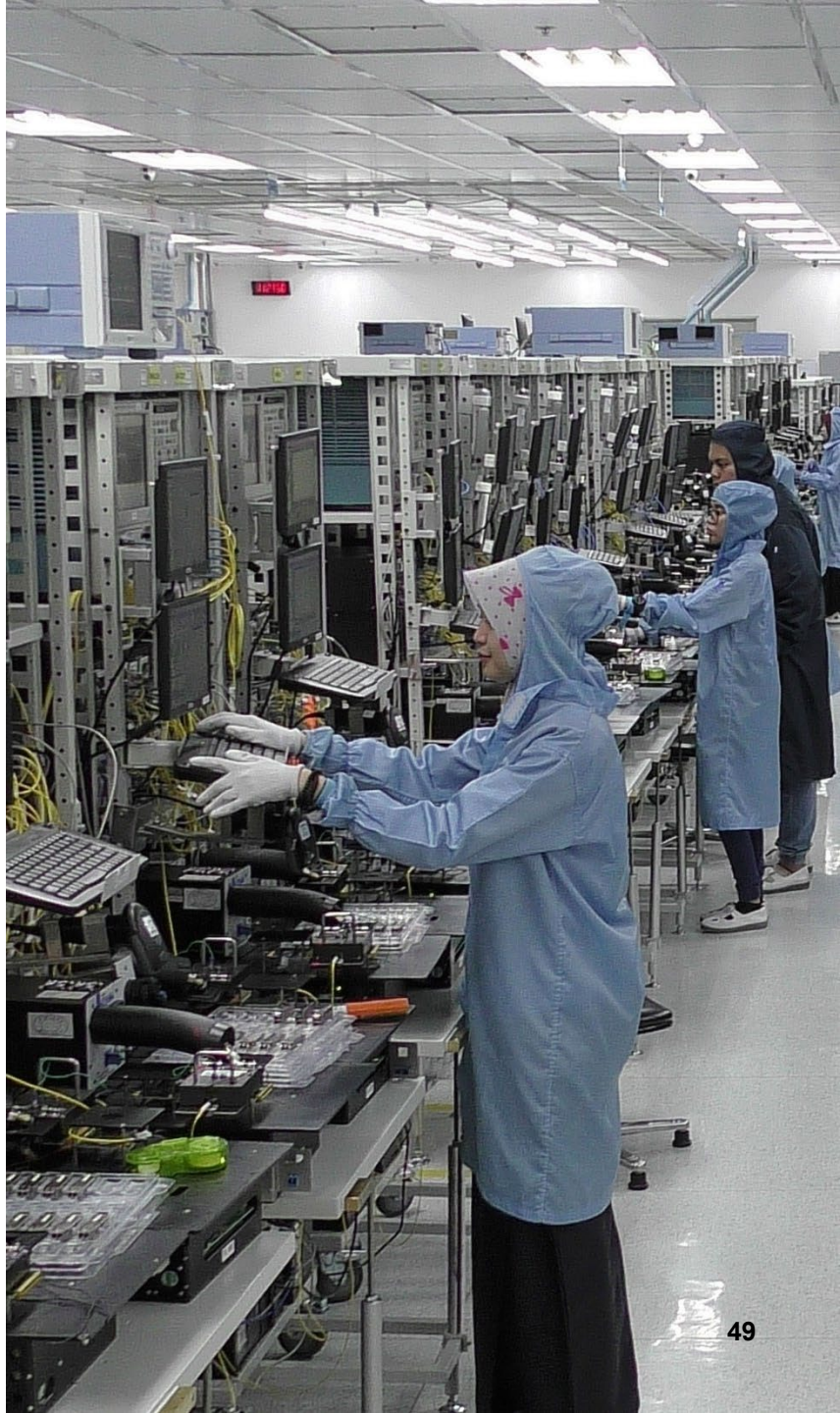


OCS System

OUR CORE COMPETENCIES AND HOW WE COMPETE

- **Market leader in optical transceivers***
- **Broad portfolio and customer base**
- **Time to market—advanced R&D**
- **Vertical integration**
  - From design to manufacturing
  - Internal lasers and other optical components
- **Diversified, high quality, and scalable manufacturing**
  - Uniquely capable of satisfying demand from both within and outside China

*As tracked by Omdia



Transceiver volume assembly manufacturing facility in Ipoh, Malaysia

COHERENT

SUMMARY

AI surge is an enormous opportunity

800G ramping up to half of our revenue

We aim to grow faster than market over the next 5 years

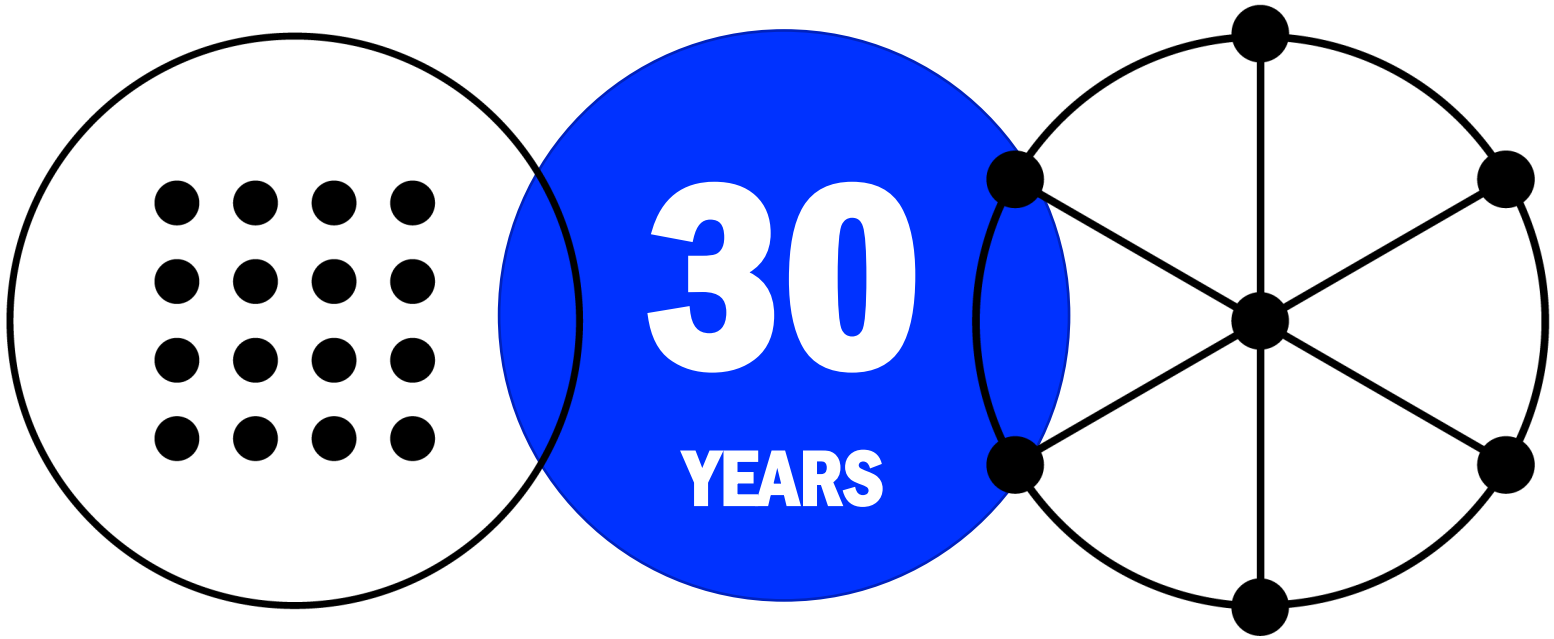
1.6/3.2T development with laser and transceiver advantages

COHERENT

TELECOM BUSINESS UPDATE

Dr. Beck Mason - Executive Vice President, Telecommunications

OUR HERITAGE

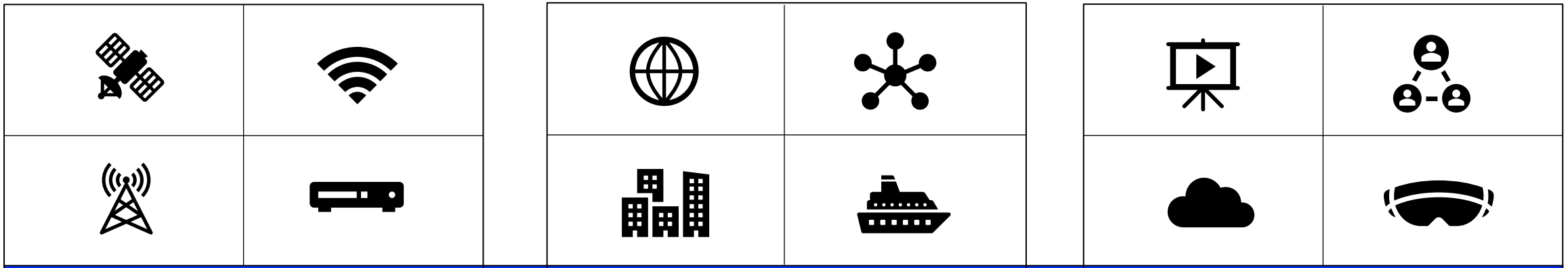


1990

- Foundational IP
- TEC Technology
- Passive Optical Solutions
- Faraday Rotators
- Pump Laser, Amplifier and Signal Monitoring
- WSS Platforms
- InP Lasers
- Optical Transceivers and Transmission Components Technology

COHERENT

COMMUNICATIONS NETWORKS



Access Networks	Transport Networks	Datacenters
▪ 5G Wireless ▪ Fiber-to-the-home ▪ Broadband cable ▪ Low-orbit satellites	▪ Metro ▪ Regional ▪ Long-haul ▪ Submarine	▪ Video streaming ▪ Cloud services ▪ Social media ▪ Big data/AI/ML

TELECOM MARKET

29.3 Billion
Networked devices

5.3 Billion
Internet users

Internet traffic growth

24%

per year

Telecom market growth

16%

per year
for the next 5 years

Source: Cisco Annual Internet Report (2018-2023) White Paper

COHERENT

BROAD PORTFOLIO OF TELECOM PRODUCTS

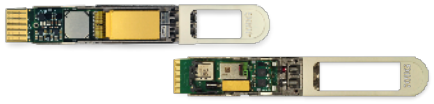
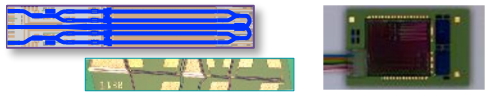
We have the broadest portfolio of optical components and modules for transport applications

- Subsystems are more differentiated and enable us to sell on features and capability
- Our focus is on subsystem and system level solutions that maximize our share of the total value stream

	**Systems**
	**Subsystems**
	**Modules-Amps, WSS, OCM, …**
	**Optical components**

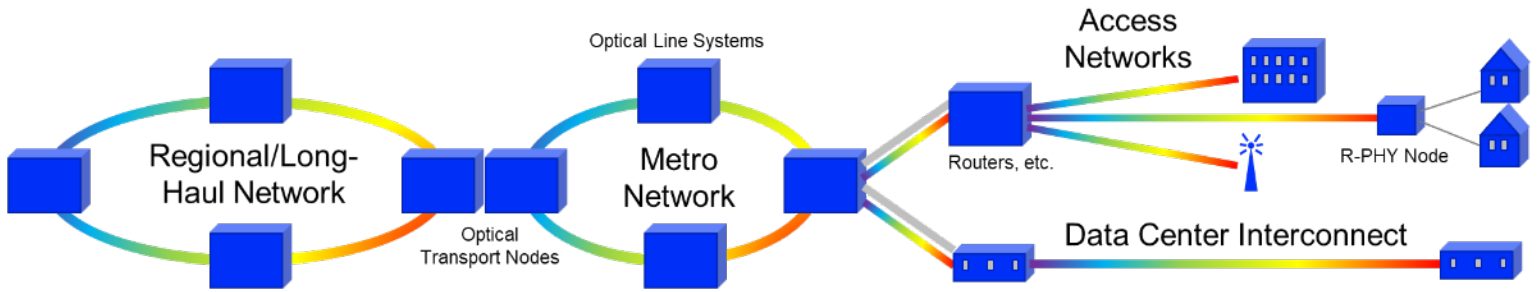
We are leaders in the fundamental enabling technologies for optical transmission

- IC and photonic chip technology enables us to differentiate our solutions, increase gross margins and gain better control over time to market
- Our focus is on go to market at the module and component level to maximize revenue and profit opportunity

	**Transceiver modules**
	**Optical components**
	**High speed IC and Coherent DSP**
	**Photonic chips InP and SiP**

OPTICAL LINE SYSTEMS

Capabilities	Solutions
Module Integration, Algorithms & Firmware	 ROADM Linecards  Optical Channel Monitor  Wavelength Selective Switch  Optical Amplifier  Mux/Demux Modules  OTDR Modules
Device Packaging	 980nm & 14xx Pump Lasers  Isolators & Mux/Demux  Tunable Filters  Variable Optical Attenuator
Semiconductors, Polishing & Coatings	 Lenses & Filters  Ga As, Si and InP Wafers  Laser Chips  LCOS  ASIC  Gratings



COHERENT

TELECOM TECHNOLOGY EVOLUTION

Wavelength Selective Switch

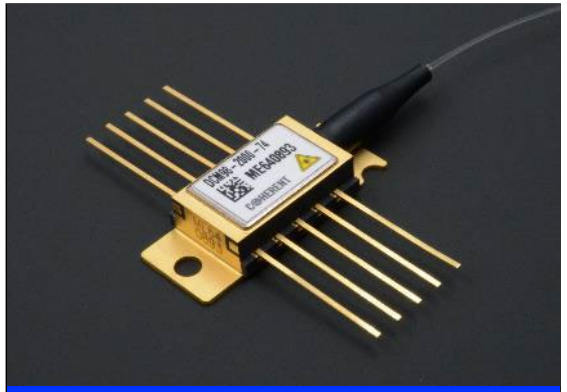
2x C&L bands channels

Amplifier

Higher power pump capability to deliver more efficient amplifiers

Optical Channel Monitoring

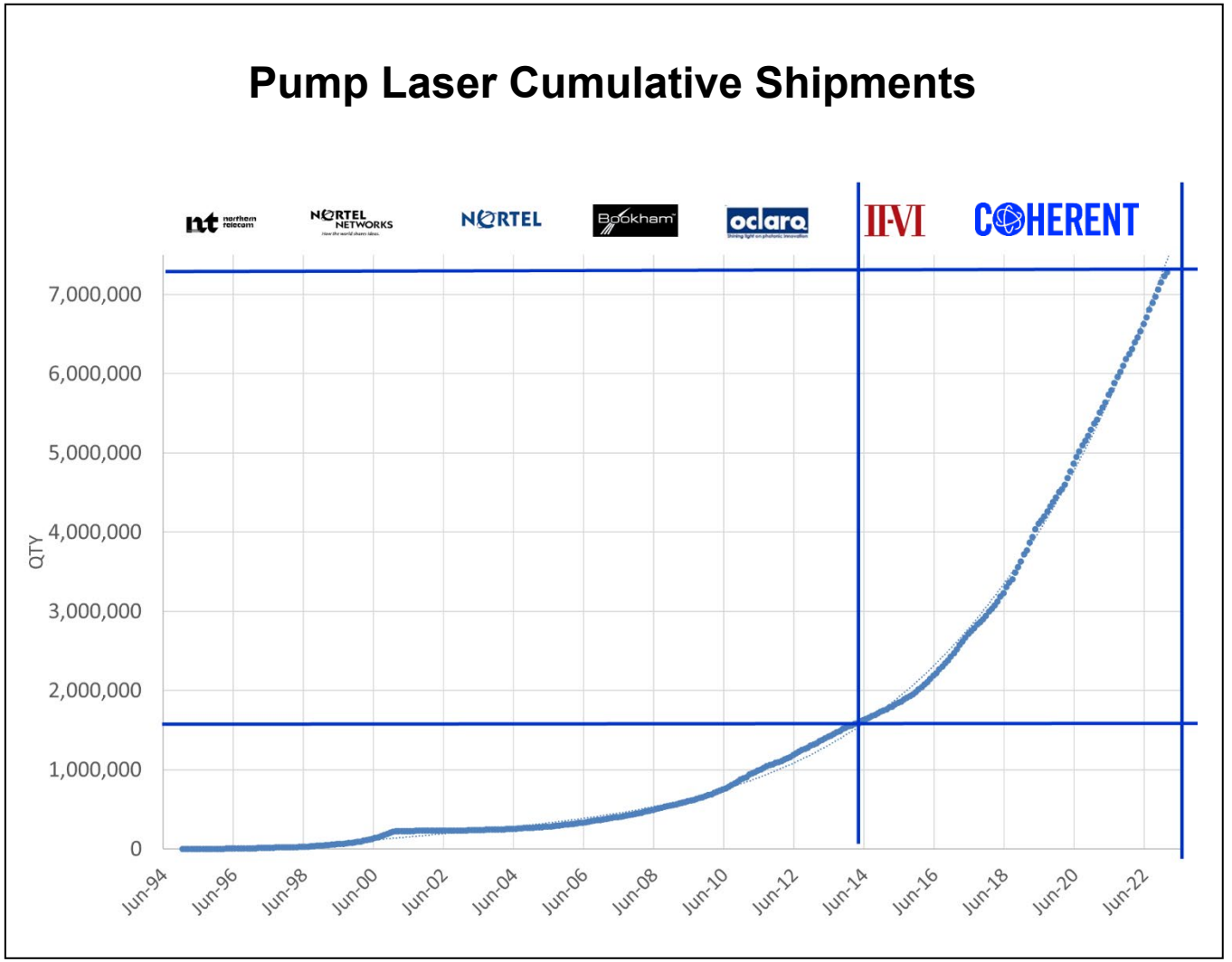
Enables a single device to cover both C&L bands together



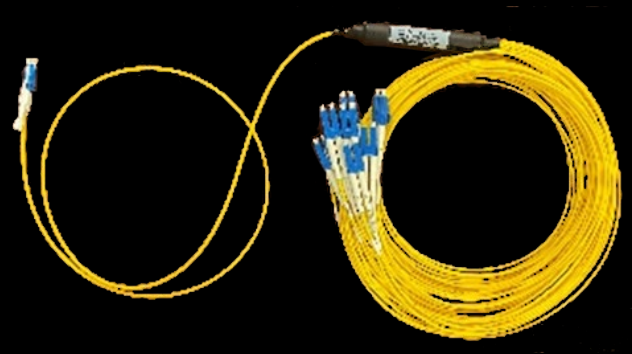
Pump Laser

The highest power per pump emitter

PUMP LASERS



QSFP Dual EDFA module



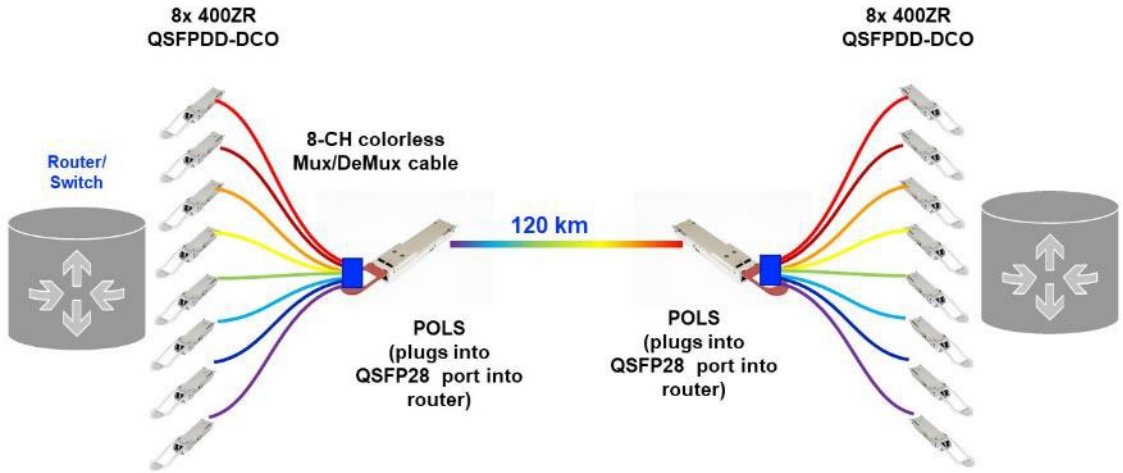
Mux/Demux cable assembly

PLUGGABLE OPTICAL LINE SUBSYSTEM (POLS)

- Bi-directional, dual erbium-doped fiber amplifier (EDFA) in QSFP pluggable module
  - Booster amplifier for transmit direction
  - Pre-amplifier for receive direction
- External DWDM Mux/Demux cable assembly.

Applications

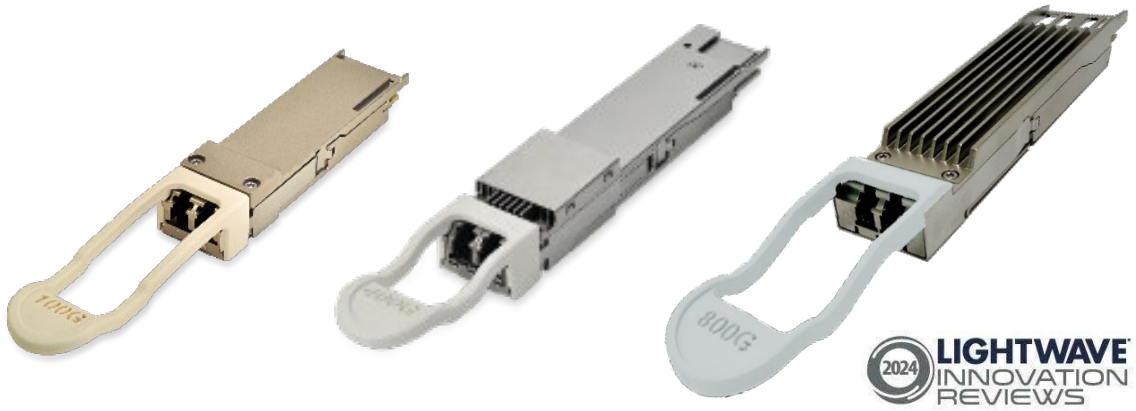
- IP-over-DWDM point-to-point
- Access networks



COHERENT TRANSCEIVER TECHNOLOGY

- Fully automated high volume manufacturing
- Module design including embedded FW development
- Optical subassembly design and manufacturing
- High speed IC and coherent DSP development
- Photonic chip design in InP and SiP and high volume manufacturing

SCALING CAPACITY AND REACH



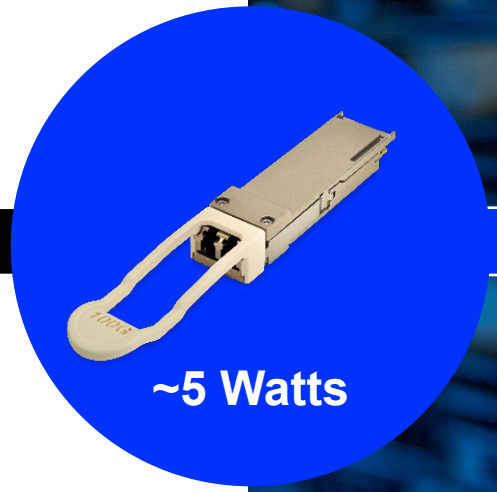
- Coherent DCO modules enable scaling from 100 to 800G per wavelength
- With reaches from 120km out to > 2000km
- Supports Metro, Regional and DCI

COHERENT

REDUCING SIZE AND POWER

~18 Watts

~15 Watts

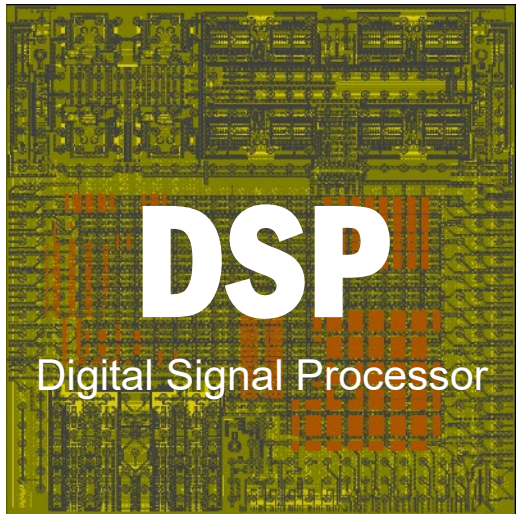


~5 Watts

Three generations of Coherent modules
shrinking size and reducing power dissipation

COHERENT

DSPs: KEY BUILDING BLOCKS IN COHERENT TRANSCEIVERS



- DSP converts digital data from a switch or router into the complex analog modulation signals
- Converts the received signal at the other end of the link back into digital data and compensates for any signal impairments

COHERENT

DSP INVESTMENTS

Steelerton 100G
7nm - 2W 17M Gates

Silverton 400-800G
3nm - 10W 300M Gates

Nickleton 1.6T
2nm - XX Gates

COHERENT

100G COHERENT TRANSCEIVERS

100ZR QSFP28 DCO

- World's first Digital Coherent Optics (DCO) module in QSFP28 form factor
- 100G capacity, 300 km reach
- Based on Coherent 7 nm digital signal processor (DSP), silicon photonics transmitter/receiver, and tunable laser
- Serves metro-edge and high-volume edge access markets

COHERENT

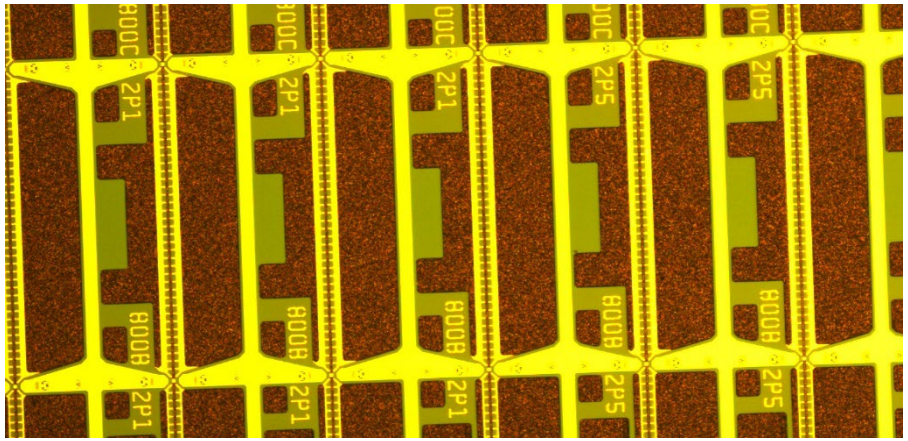
IP-OVER-DWDM

- **Coherent “colored” pluggable transceivers plug directly into routers**
- **Enabler: coherent technology has shrunk in size and power dissipation to fit into small form-factor pluggable modules**
- **Two network applications:**
  - Metro / Regional Networks with ROADMs
    - Ring/mesh architectures that require higher performance solutions
  - Data Center Interconnects
    - Point-to-point architecture which require efficient power optimized solutions

COHERENT

PHOTONIC DEVICES

- **State of the art wafer III-V wafer fabs in:**
  - Zurich Switzerland
  - Jarfalla Sweden
  - Sherman Texas
- **Enable our leading edge GaAs and InP photonic devices for Telecom and Datacom**



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MANUFACTURING ADVANTAGE

Shenzhen China	Wuxi China	Fuzhou China
Ipoh Malaysia	**Geographic Diversity**	Philippines
Vietnam	Thailand	Others

Pump Laser · Photonic components · Transceiver
Passive optics · Amplifiers line cards · Other subsystem

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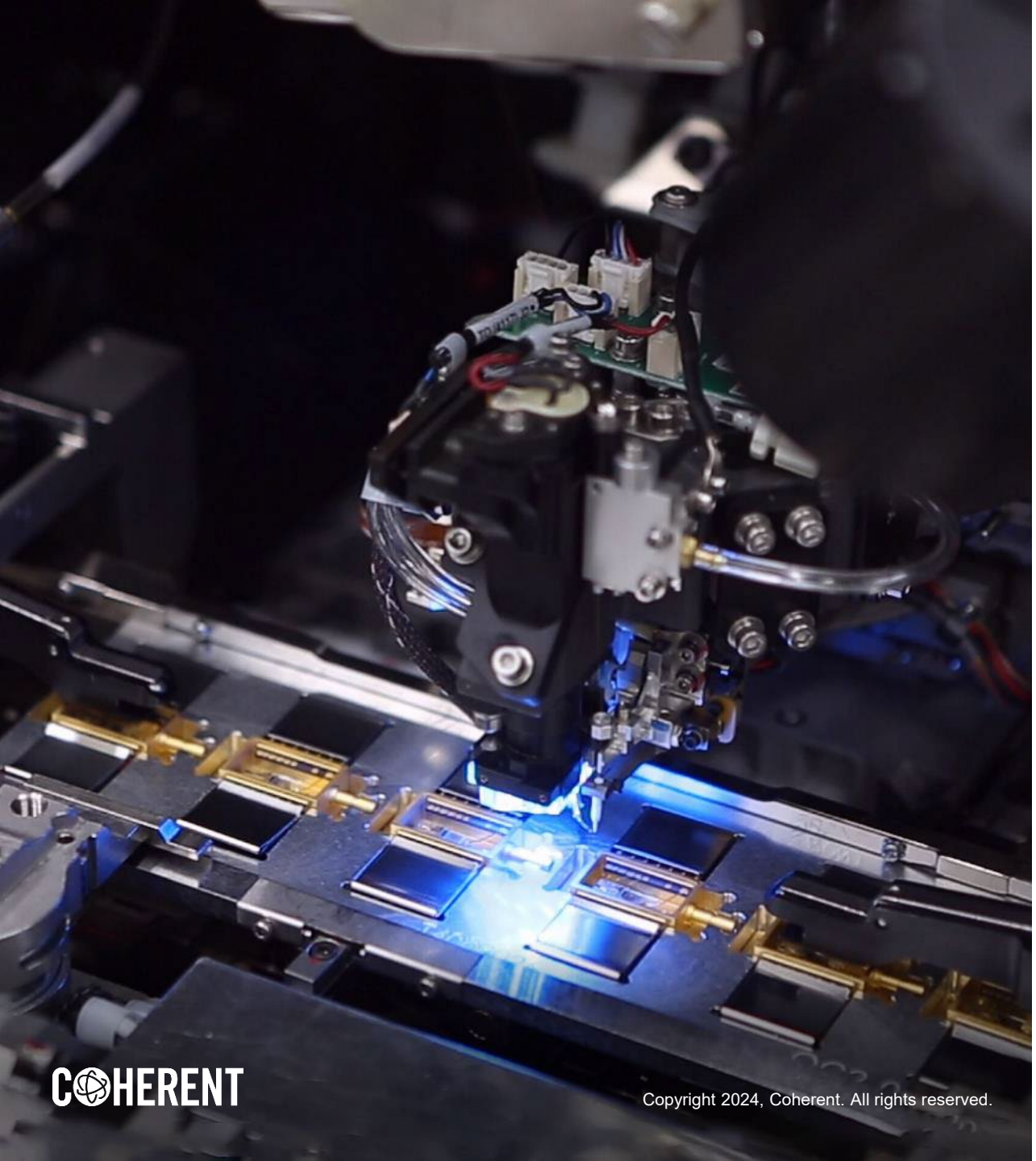
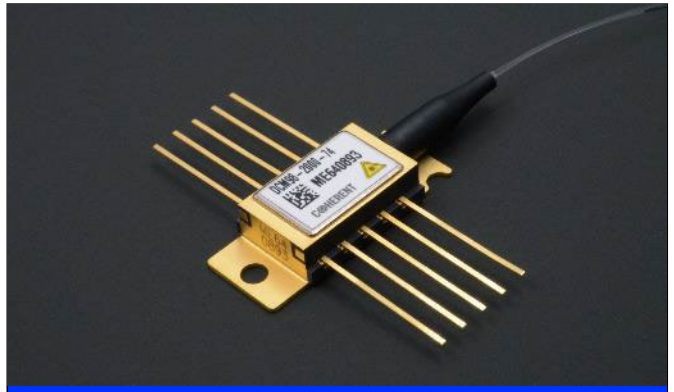


ASSEMBLY OPERATIONS AND AUTOMATION

- Internally developed automation
- Assembly and test automation
- Consistent product quality
- Better manufacturing efficiency and cost

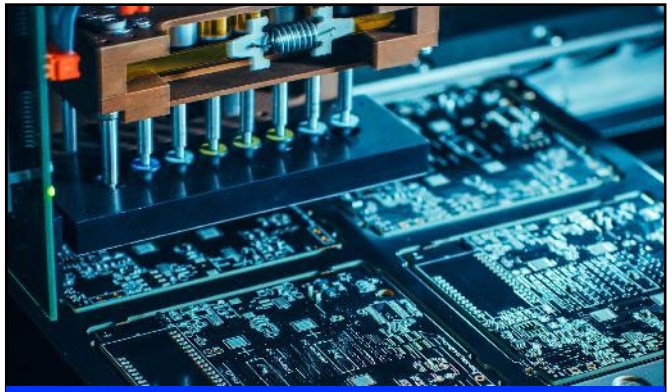
COHERENT

HOW WE WIN



Telecom components

Broadest and deepest portfolio of fundamental technologies and components for networking



Telecom Modules

Wide array of engineered module solutions to meet any network need

Telecom Subsystems

Strong systems and integration capability to provide complete customer solutions

Q&A

Paul Silverstein
Vice President,
Investor Relations

Dr. Chuck Mattera
Chair and CEO

Dr. Giovanni Barbarossa
Chief Strategy Officer and
President, Materials Segment

Sunny Sun
President, Networking
Segment

Dr. Sanjai Parthasarathi
Chief Marketing Officer

Dr. Julie Sheridan Eng
Chief Technology Officer

Dr. Lee Xu
Executive Vice President,
Datacom Transceivers

Dr. Beck Mason
Executive Vice President,
Telecommunications

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