



THE GLOBAL INNOVATOR & LEADER  
IN 5G WIRELESS TRANSPORT

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# CAPITALIZING ON THE 5G REVOLUTION

JAN 2023



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# INVESTMENT THESIS

CERAGON IS AN EXCELLENT CHOICE FOR INVESTORS

- ▶ **5G era needs create vast opportunities for wireless transport solution vendors**
- ▶ **Ceragon is in the best position to capitalize on these opportunities**
  - Strong reputation among Tier1 & Tier 2 operators around the globe
  - Healthy geographical diversification
- ▶ **Solid strategy to increase market share and penetrate new markets and domains**
  - Continue providing ahead-of-the-curve technology
  - Increase software and software led services
  - Increased focus on private networks and small operators primarily in North America

**POISED FOR SIGNIFICANT PROFITABLE GROWTH**

## OUR VISION

To create equal digital opportunities for people all around the world by delivering communication capabilities everywhere



## OUR MISSION

To take our customers further by providing cutting-edge wireless technologies and services for the networks of tomorrow



# CERAGON'S GROWTH PATH

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# 5G: A MASSIVE AND GROWING MARKET OPPORTUNITY

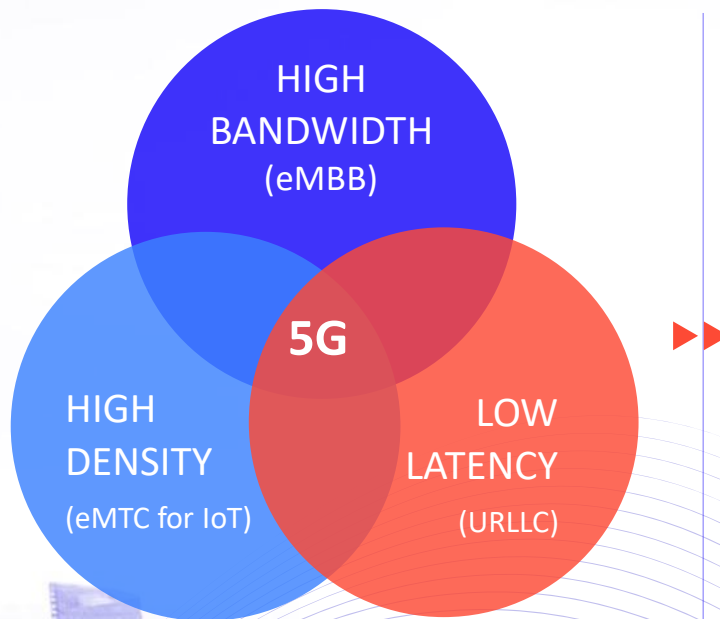
NEW TECH ENABLERS



LEAD TO NEW MARKET DEMAND



AND TO NEW MARKET DYNAMICS



Communications Service Providers rush to offload congested access points

WISPs and small SPs are pushing to meet increased rural broadband demand

Enterprise & Private Networks are on the rise

HUGE INVESTMENTS

- In 5G densified mobile networks
- In rural connectivity
- In enterprises and private networks

MAJOR DISRUPTION – Open Networks

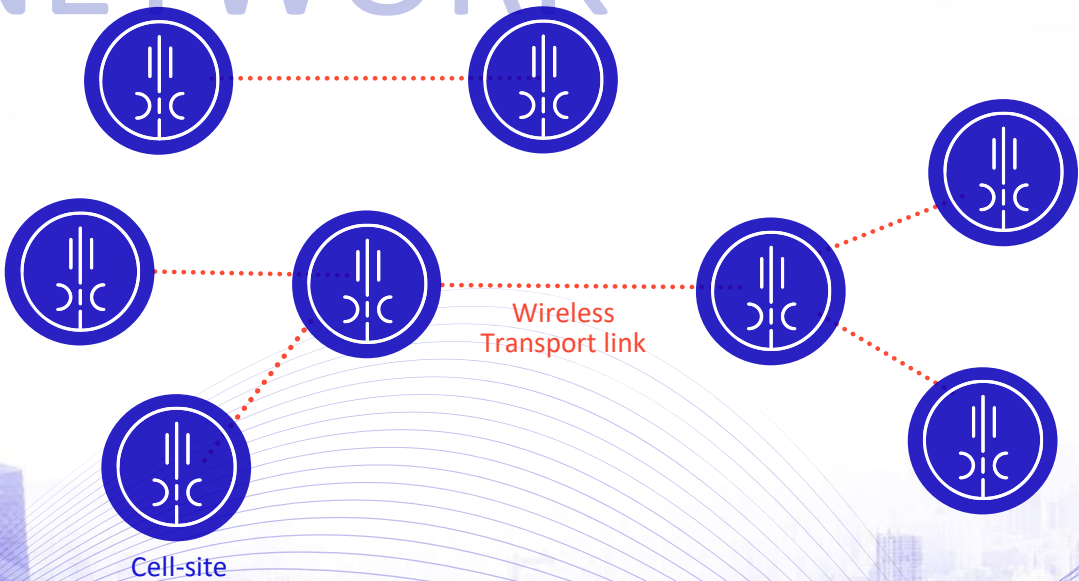
- Lower TCO
- No vendor lock-in



# WIRELESS TRANSPORT

A KEY AND CRITICAL TECHNOLOGY FOR 4G & 5G NETWORKS

5G  
NETWORK



5G  
APPLICATIONS



**WIRELESS TRANSPORT** - An essential part of any network evolution  
- An alternative to fiber deployment

# 5G DEPLOYMENTS RELY MORE ON WIRELESS TRANSPORT THAN FIBER

## WIRELESS TRANSPORT IN 5G ENABLES

- Faster 5G rollout
- More cost-effective deployments (better TCO)

## OPEN NETWORKS IN WIRELESS TRANSPORT 5G

Create a chance for specialists like Ceragon to grow, at the expense of generalists



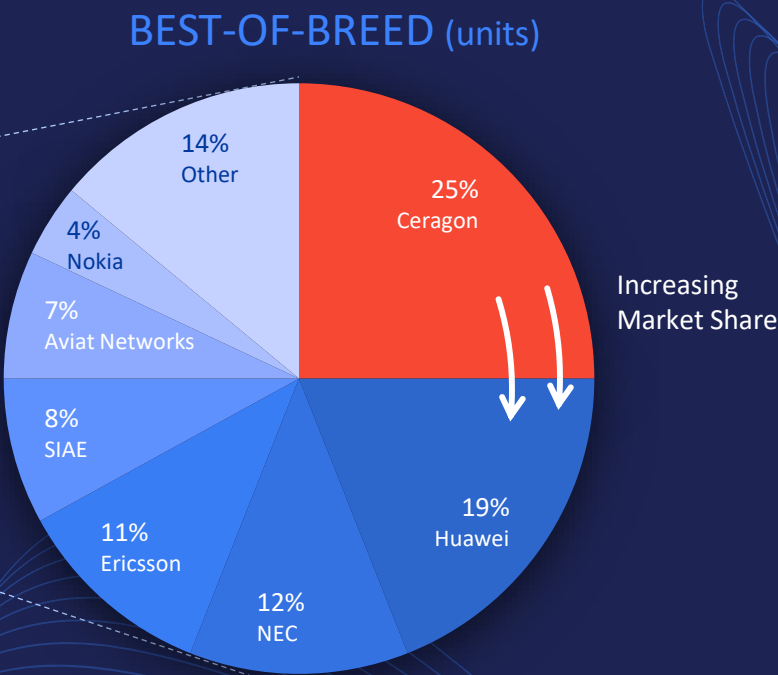
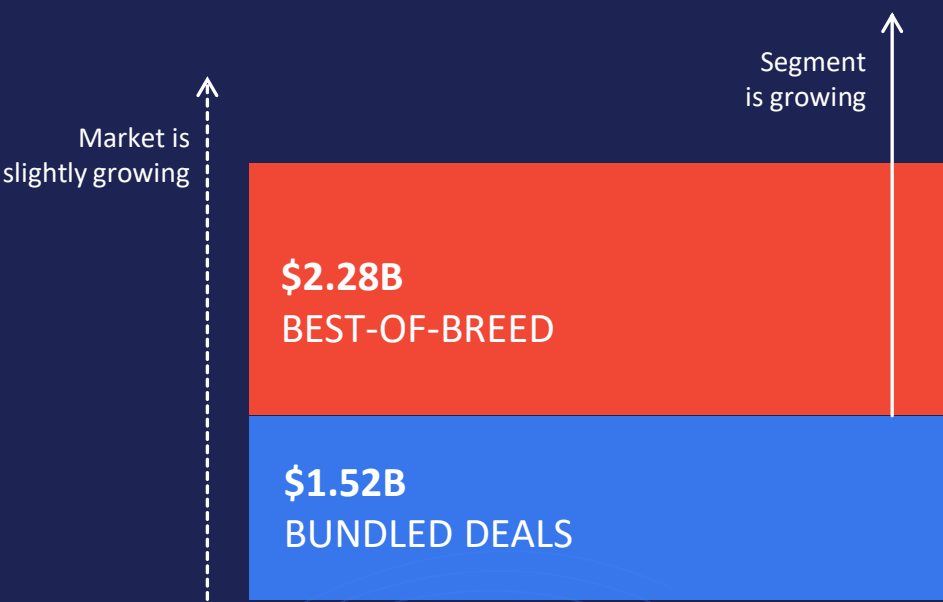
*Dell'Oro Group predicted demand for microwave transmission equipment would increase over the coming years due to 5G deployments which rely more on wireless backhaul than fibre.*

Source: GSMA, Mobile World Live, "[Dell'Oro tips 5G to fuel wireless backhaul demand](#)", July 27<sup>th</sup>, 2022



# CHANGING MARKET DYNAMICS

## BEST-OF-BREED VERSUS BUNDLED-DEALS SEGMENT



Best-of-breed is the larger segment <sup>1</sup>

Open networks architecture expected to drive growth of best-of-breed segment

CERAGON IS LEVERAGING THIS TREND

(1) Service providers seeking the best wireless transport solution as primary factor in their vendor selection; Open-RAN as a major driver. Source: Ceragon analysis based on Skylight research in Sept 2022

# CERAGON'S STORY & UNIQUE VALUE PROPOSITION

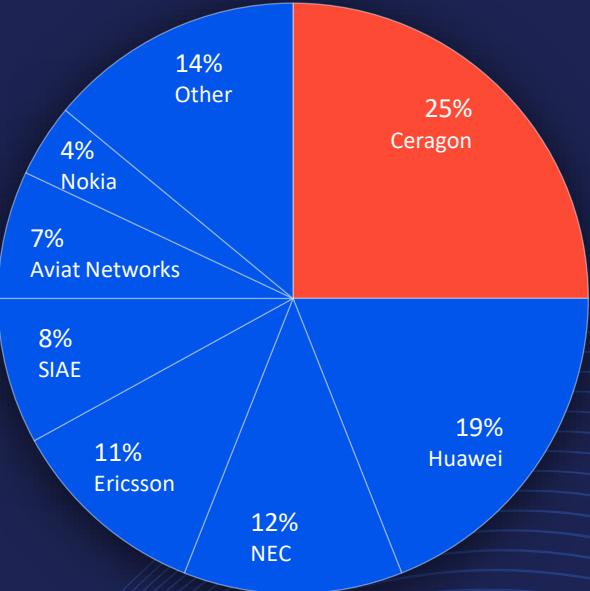
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# COMPANY SNAPSHOT - STRONG POSITION

## INNOVATIVE MARKET LEADER 4G & 5G NETWORK ENABLER

Customers who choose based on value of technology select Ceragon



(Q3'21-Q2'22) (UNITS)

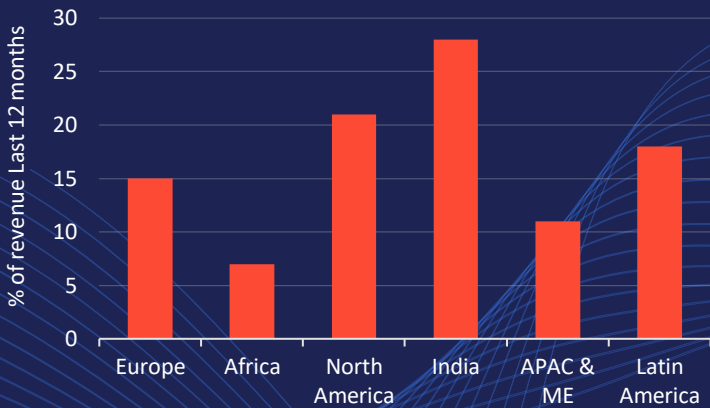
Source: Ceragon estimates based on SkyLight Research. Sept 2022

## GLOBAL COMPANY

Significant activity in each region



## BALANCED REVENUE MIX



## COMPANY SNAPSHOT

+2,000	TOTAL CUSTOMERS
+1M	SYSTEMS DEPLOYED
+140	COUNTRIES WITH SYSTEMS DEPLOYED
+460	SERVICE PROVIDERS
1,000+	EMPLOYEES GLOBALLY
\$1.53 - \$3.34	52 WEEK LOW/HIGH <sup>(A)</sup>

(A) Source: Nasdaq as of 7/11/2022

# CERAGON'S UNIQUE POSITION

## CHIPSET

UNIQUE MULTICORE TECHNOLOGY



### 4G | DUAL CORE



### 5G | OCTA CORE



In-house technology enables Ceragon to offer 100Gbps, lowest latency, cost efficiency & be 'ahead of the curve' by 2-3 years

## SYSTEMS

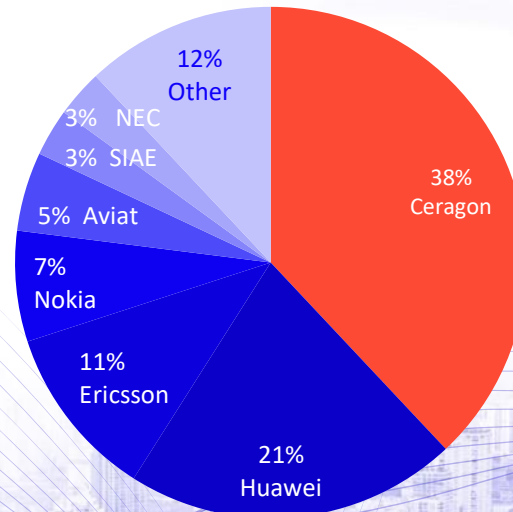
BEST-FIT FOR  
OUTDOOR NETWORK SOLUTIONS

FAST **DEPLOYMENT** | SIMPLE **SITE ACQUISITION**

ENABLER FOR **NETWORK DENSIFICATION**

LOWEST **TCO** | FAST **TIME TO REVENUE**

Q3'21-Q2'22 All-out-door unit market share<sup>(1)</sup>



Leading market share in the All-Outdoor market segment

## SOFTWARE

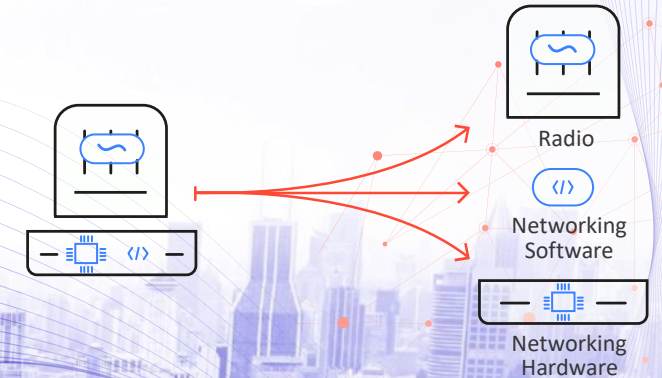
PIONEERING OPEN NETWORKS  
IN THE WIRELESS TRANSPORT DOMAIN

LOW TOTAL **NETWORK INVESTMENT**

FAST **NETWORK ROLLOUT**

SIMPLER **NETWORK EVOLUTION**

**NO VENDOR LOCK-IN**



(1) Skylight Research from Feb 2022



# CERAGON – IN A MARKET-READY POSITION

## 5G OPEN NETWORKS OFFERING

Ceragon is the only player that offers Open Wireless Transport IP-50FX

## MARKET SHARE EXPANSION

Expecting significant growth in core market

## MW/MMW PRODUCT PORTFOLIO

Designed to effectively deploy 5G networks and serve multiple use cases

## SYSTEM-ON-CHIP TECHNOLOGY

Inhouse. Ahead of the competition by 2-3 years.

## END-TO-END SOLUTIONS

Providing end-to-end solutions & services which create value and market power

## SOFTWARE TOOLS

And capabilities (SDN Applications)

## SOFTWARE-LED SERVICES

For network management and optimization

# UNIQUE OPPORTUNITY FOR GROWTH IN THE US

FEDERAL FUNDING SUPPORTING CONNECTIVITY & 5G EXPANSION

## BROADBAND RELATED FUNDING

**\$77,300,000,000+**

<https://connectednation.org/current-broadband-funding/>

## CURRENT FUNDING

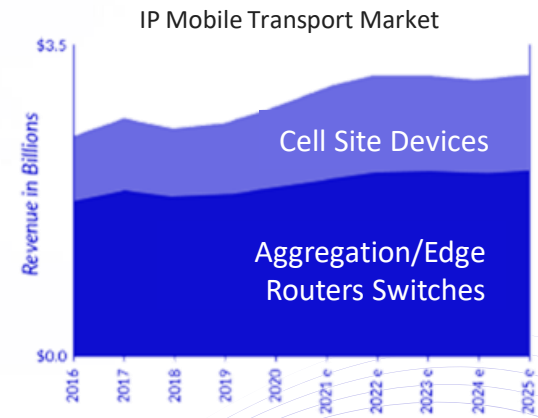
▶ Infrastructure Bill and American Jobs Act	\$65 billion for broadband
▶ Affordable Connectivity Program	\$14 billion available
▶ ReConnect Loan and Grant Program	\$700 million annually; \$1.3 billion in 2021
▶ Coronavirus State and Local Fiscal Recovery Funds	A portion of \$350 billion available. This is subject to state, county, and local leadership discretion
▶ Coronavirus Capital Projects Fund (CCPF)	\$10 billion available
▶ Build Back Better Regional Challenge	\$1 billion available



# ADJACENT MARKET PENETRATION OPPORTUNITY

## CELL SITE IP TRANSPORT

5G requires densification & simplification, leading to increase in IP cell site devices



Source: Dell'Oro Group SP Router 5-Year Forecast, January 2021

Cell site routers become disaggregated allowing the separation of functional components



APPS  
SOFTWARE OS  
HW

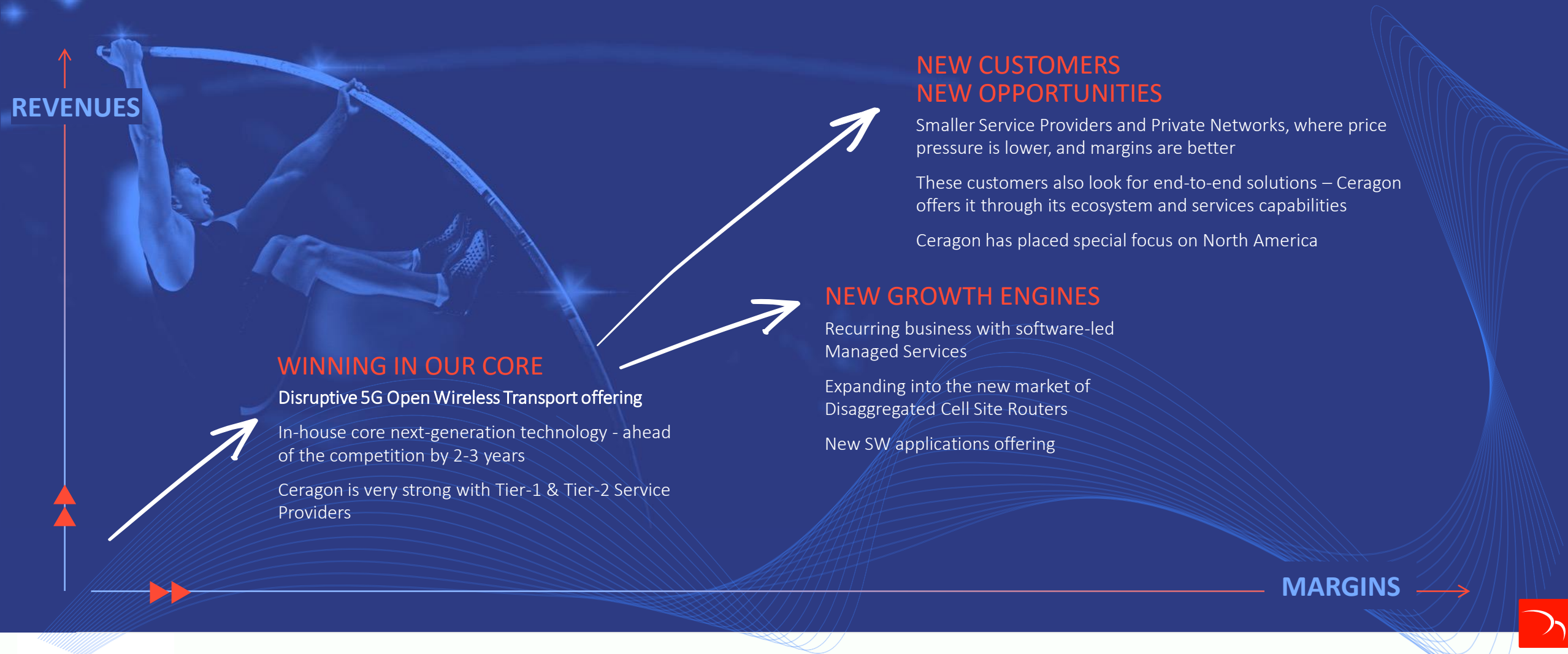
Disaggregation enables faster adoption of 5G

- REDUCED COST
- NO VENDOR LOCK-IN
- FASTER INNOVATION

**MARKET OPPORTUNITY** ▶ **\$1.6B** (Current TAM)  
Source: Dell'Oro Group SP Router 5-Year Forecast, January 2021

\* Product only; with services the mark is >\$2B

# CERAGON STRATEGY





# FINANCIALS

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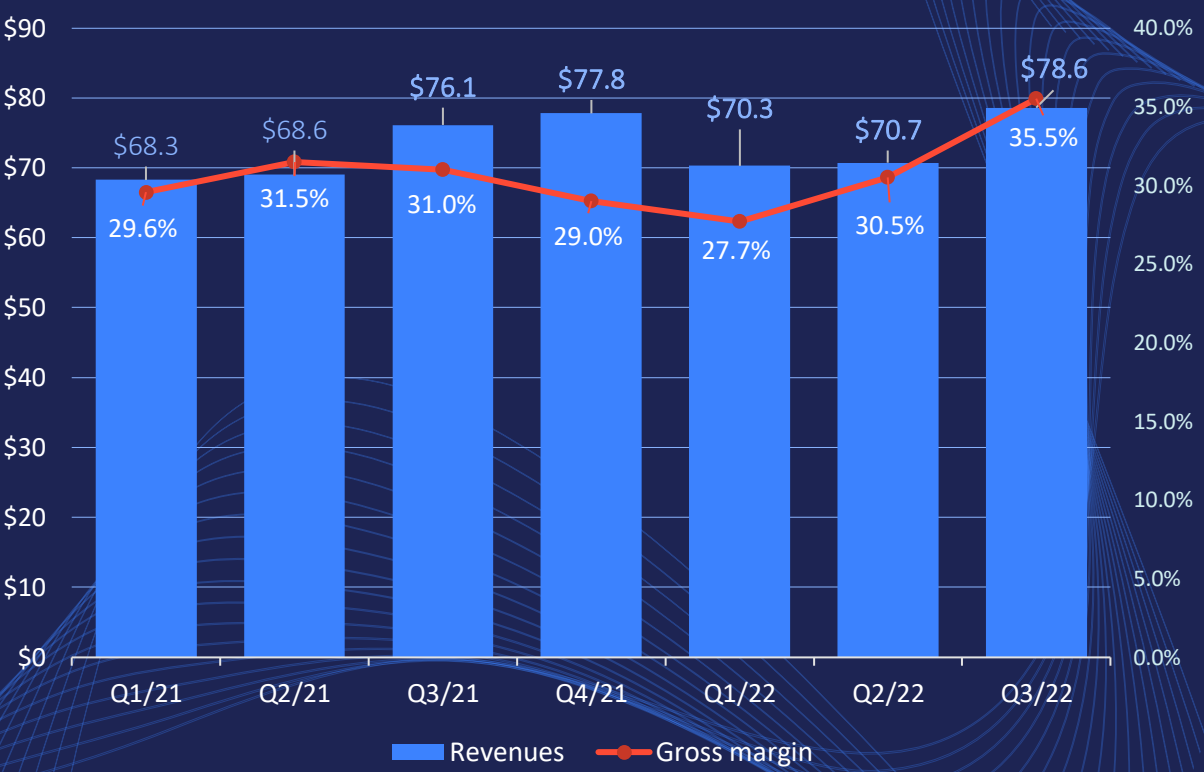
# COMPANY SNAPSHOT

## STRONG BOOKINGS AND A VERY HEALTHY BACKLOG

India is the strongest region in terms of revenues; followed by North America

Strong bookings in North America (record quarter), India, and Latin America

In North America long standing large customer becomes the Company’s second customer above 10% revenue, marking the first time a North American company achieves this milestone

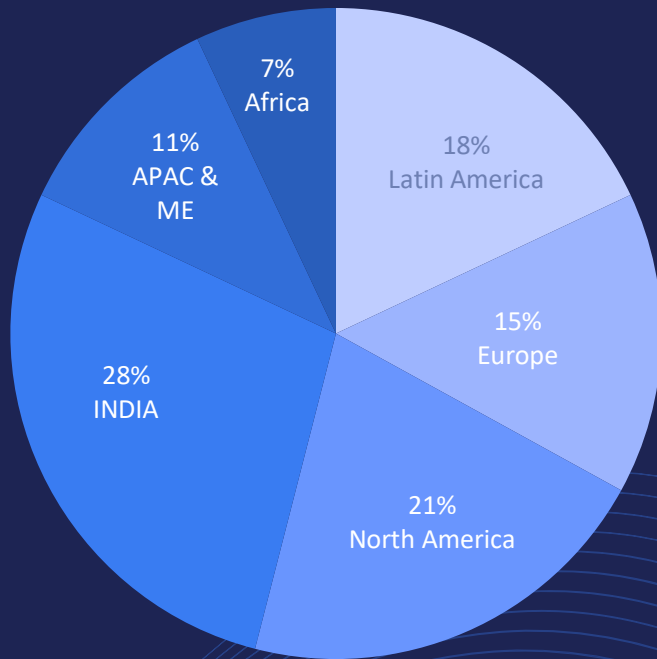


Non-GAAP Figures



# SELECTED FINANCIAL METRICS

Q4 2021 – Q3 2022  
GEOGRAPHIC REVENUE MIX



BALANCE SHEET  
(\$ Millions)

FINANCIAL METRICS	Q3'20	Q4'20	Q1'21	Q2'21	Q3'21	Q4'21	Q1'22	Q2'22	Q3'22
Revenue	\$70.6	\$74.0	\$68.3	\$68.6	\$76.1	\$77.8	\$70.3	\$70.7	\$78.6
Cash <sup>(1)</sup>	\$29.2	\$27.1	\$33.0	\$28.7	\$27.2	\$17.1	\$25.0	\$23.6	\$26.0
Debt	\$17.9	\$6.0	\$12.0	\$11.0	\$11.9	\$14.8	\$27.0	\$31.9	\$29.9
Net Cash	\$11.3	\$21.1	\$21.0	\$17.7	\$15.3	\$2.3	\$(2.0)	\$(8.3)	\$(3.9)
Shareholder Equity Ratio	55%	54%	50%	50%	50%	47%	45%	43%	44%

(1) Cash includes cash equivalents. Source: Company filings.

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—  
THANK YOU

