EDGEQ

SERIES-B PRESS MEDIA

→ APRIL 19, 2023

Telco Meets Enterprise.
Industry Lacks an Efficient Massive Market 5G Chip

Vertical Integration
Custom Chip

NOKIA ERICSSON SAMSUNG HUAWEI

Merchant Silicon
General Purpose Chips

intel NVIDIA AMD MARVELL

PHY, L2/L3 Stack

5G FEC

AI

Front-haul Networking

Mid-haul Networking

Timing Sync

CPU

EDGE Q

5G Small Cell   5G ORAN Macro Cell

Private and Macro 5G Networks

1/2 of the Cost • 1/2 of the Power • Open Architecture
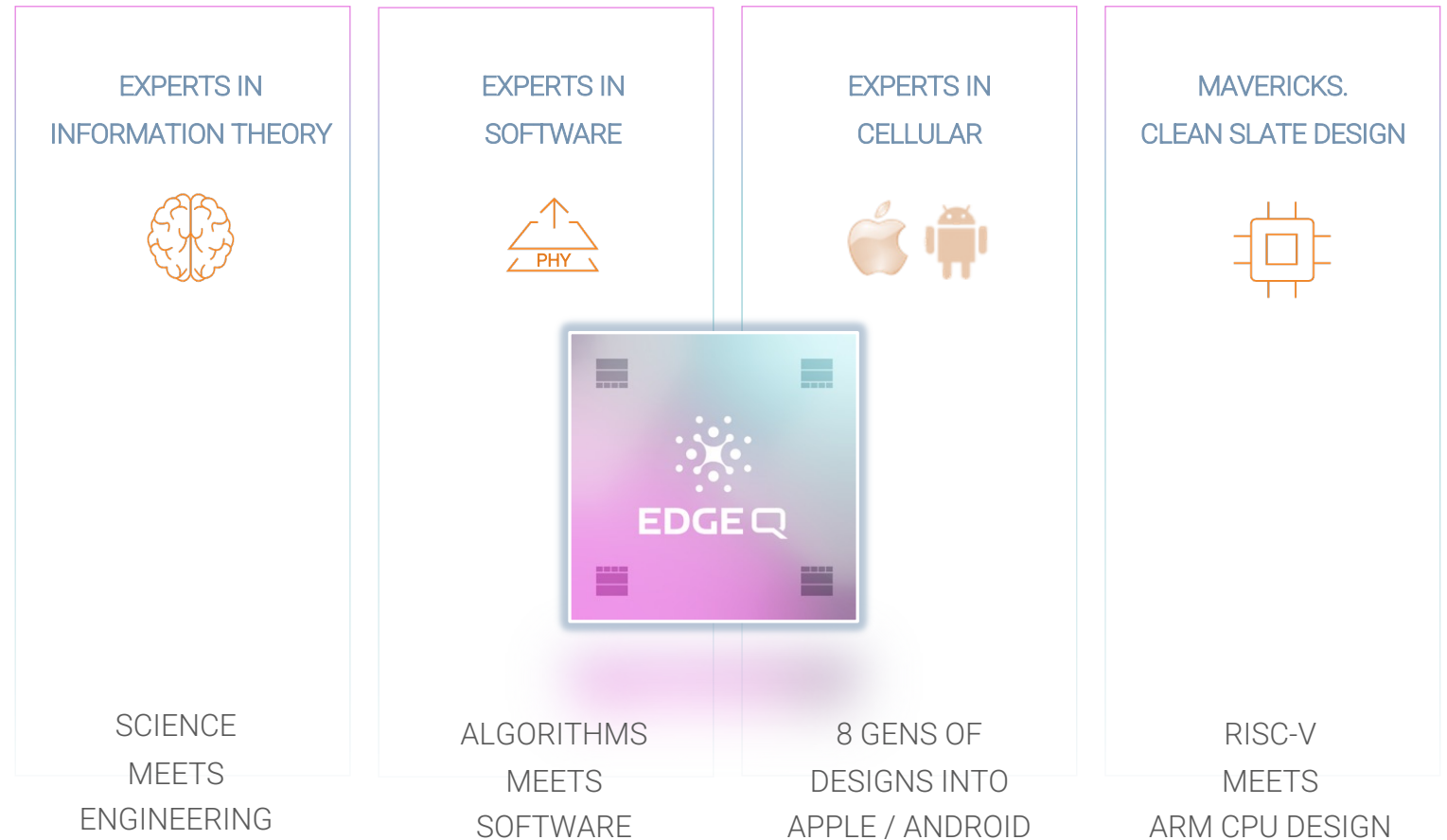
Built on Legacy Archtecture
Proprietary. Closed.
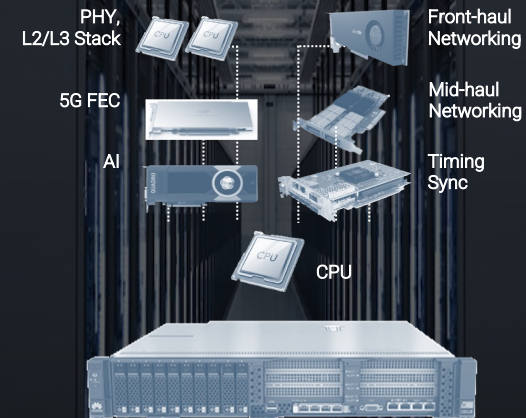
Built for Compute, Not 5G
High Cost. High Power.

Not Anyone Can Do 5G.

EDGEQ Had to Assemble a Team of 5G + Chip + SW Experts

EXPERTS IN INFORMATION THEORY	EXPERTS IN SOFTWARE	EXPERTS IN CELLULAR	MAVERICKS. CLEAN SLATE DESIGN
SCIENCE MEETS ENGINEERING	ALGORITHMS MEETS SOFTWARE	8 GENS OF DESIGNS INTO APPLE / ANDROID	RISC-V MEETS ARM CPU DESIGN

EDGE Q

4G + 5G + AI Chip

EDGE APPLICATIONS

EDGEQ AI

EDGEQ COMPUTE

EDGE 5G WIRELESS / WIRED CONNECTIVITY

enterprise — manufacturing — campus networks — warehousing
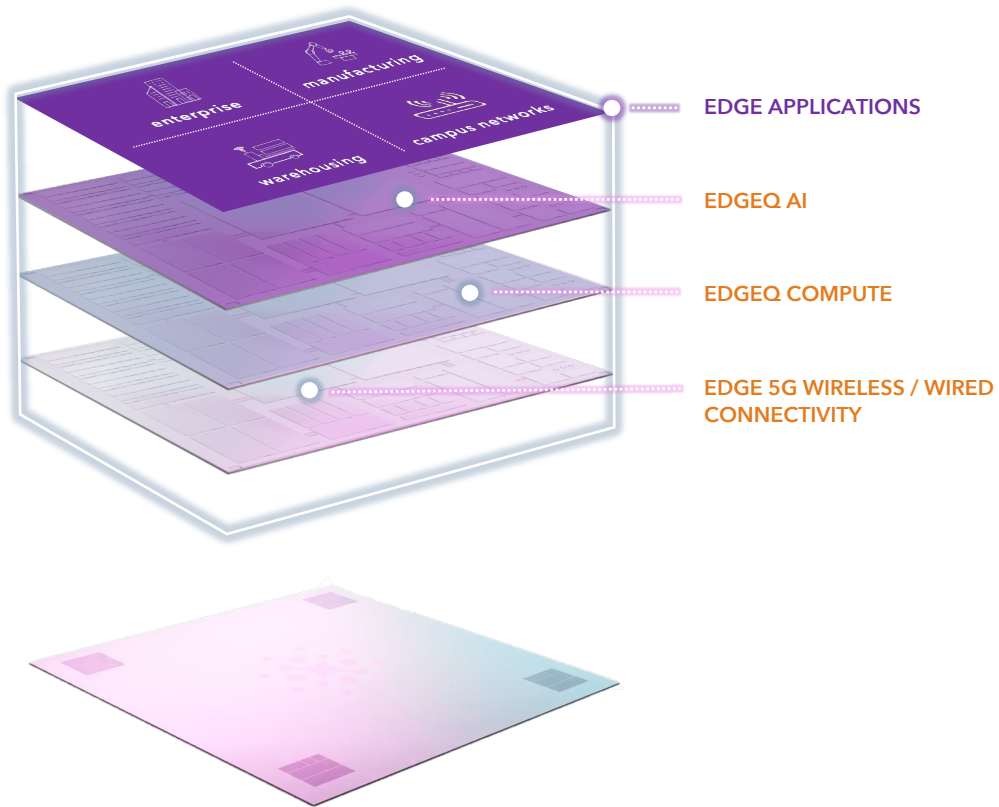
5G Made Easy.

ALL-IN-ONE. CHIP + 4G/5G SOFTWARE STACK

EDGEQ
Making 5G Edge Cloud Possible

The Only Company Offering
4G+5G+AI Chip with Production Grade PHY Software

5 Years in the Making

EdgeQ Enters Growth Phase in 2023

Won Industry's Greatest Honor	Field Deployment	Completed Funding Raising	Production Ramp
EdgeQ Wins GLOMO Award	First EdgeQ-based 5G Networks	Series-B is Closed	Customer Deployments

EdgeQ Closes Series-B

$75M

Series-B Round Size

PHAISTOS INVESTMENT FUND

SDF · edbi · IRONGREY · ST Engineering · YALETOWN · ClearSky

Threshold · AME CLOUD VENTURES · Fusion Fund · + Strategics ...

Very Few Semiconductor Startups Successfully Raising Such Funds

Rich Mix of Institutional and Strategic Investors Worldwide

EdgeQ Well-Capitalized to Scale with Series-B

S-SERIES
(SMALL CELL)

M-SERIES
(O-RAN MACRO CELL)

Next Gen
Development

Q2 2023

S-SERIES / M-SERIES
PRODUCTION RAMP

Q3 2023

PRODUCT
REVENUE RAMP

2023 / 2024

REVENUE
SCALING
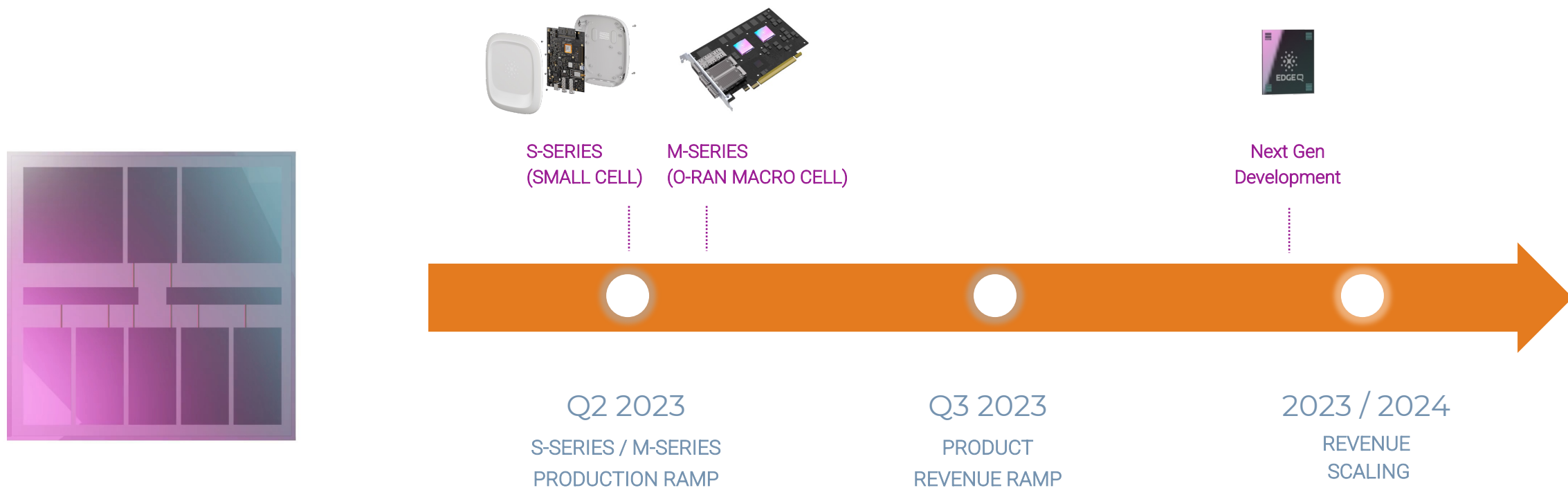
EDGEQ Enters into Customer Deployments of Private 5G and Open RAN Networks

Industry Leader Jim Anderson Joins EdgeQ's Board

Background and Career

Lattice Semiconductor President and Chief Executive Officer
- Serves on the company's Board of Directors.
- Joined Lattice in 2018 focusing the company to be the leader in low power programmable solutions.

Former SVP/GM of AMD's Computing and Graphics business group.

Former SVP/GM of LSI Corporation

Leadership positions at Intel, Broadcom (formerly Avago Technologies)

Serve on the Board of Directors of: Entegris, Semiconductor Industry Association, the MIT Sloan Americas Executive Board, the Electrical and Computer Engineering Advisory Board at Purdue University, and the Dean's Advisory Board for the College of Science and Engineering at the University of Minnesota.

MBA and MS in EECS from the Massachusetts Institute of Technology
MS in EE from Purdue University.   BS in EE from the University of Minnesota.

Highly Respected Semiconductor Leader | Great Addition to EdgeQ Board

5 Years in the Making

EdgeQ Enters Growth Phase in 2023

Won Industry's Greatest Honor

EdgeQ Wins GLOMO Award

Field Deployment
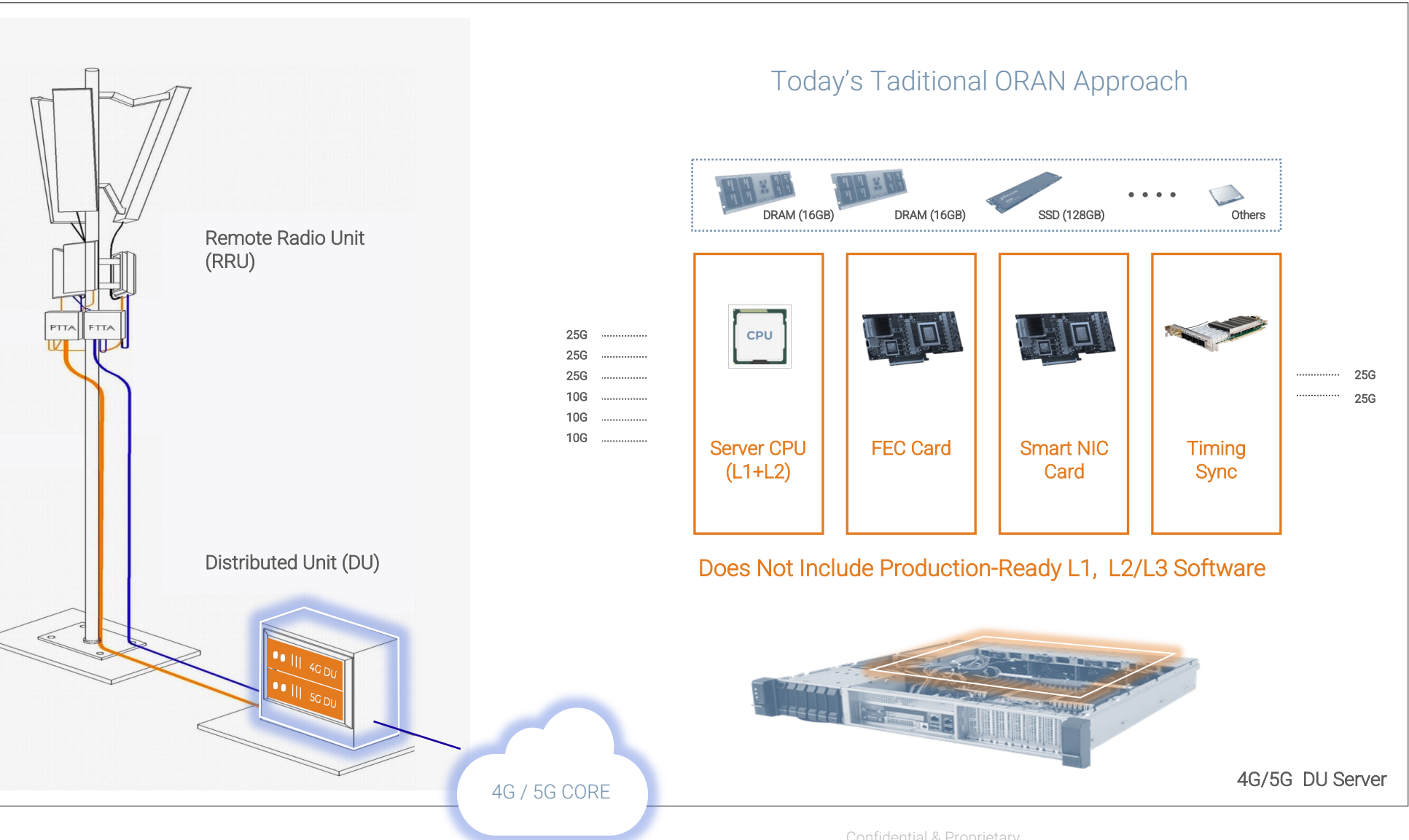
First EdgeQ-based 5GNetworks

Completed Funding Raising

Series-B is Closed

Production Ramp

Customer Deployments

Traditional ORAN Today: High Power. High Cost. Wrong Fit.

Today's Taditional ORAN Approach

DRAM (16GB) DRAM (16GB) SSD (128GB) • • • • Others

| 25G | Server CPU (L1+L2) | FEC Card | Smart NIC Card | Timing Sync |

25G
25G
25G
10G
10G
10G

25G
25G

Does Not Include Production-Ready L1, L2/L3 Software

Remote Radio Unit (RRU)

Distributed Unit (DU)

PTTA FTTA

4G DU
5G DU

4G/5G DU Server

4G / 5G CORE

EdgeQ Delivers at

< **50%** of Cost

< **50%** of Power

Traditional 5G Approach High Cost – High Power

POWER: 300W

USER RATE: ~ 15Gbps

DU COST: ~ $5k

FORM FACTOR: Server

One Chip. Numerous Market Play

One Stop Shop: 4G + 5G. All Software Programmable

Other 3rd Party L2/L3

EDGE Q

3rd Party SW Stacks

EdgeQ L2/L3

nFAPI - L2/L3 Stack

MASSIVE MIMO BEAMFORMING

FFT / iFFT MATRIX DECOMPOSITION

CHANNEL ESTIMATION / EQUALIZATION

EdgeQ L1 Software

ARM Host CPU

DDR

RSIC-V Complex

BOOT

IO

FEC

RF

EDGE Q

EdgeQ Base Station on a Chip

Small Cell

Open RAN

UE Clients

Scales from Enterprise 5G to Telco 5G & Beyond

Highest Capacity | 50% the Power | 50% the Cost

EdgeQ Unique 5G+4G Engine: Tensor Execution Unit

Unique Hybrid Architecture of RISC-V + ARM Cores

EdgeQ (chip block diagram):
- ARM Neoverse MULTICORE CPU
- DDR SUBSYSTEM
- TXU Complex RISC-V COMPLEX
- BOOT SUBSYSTEM
- IO SUBSYSTEM
- PROTOCOL SUBSYSTEM
- FEC ACCELERATION
- RF INTERFACE

TXU BLOCK DIAGRAM

ARITHMETIC UNIT (AU)
: EdgeQ Custom-Extended RISC-V Instructions for 4G/5G Protocols

SCALAR UNIT (SU)
: Standard RISC-V Instructions
: PLIC, Debug, TMR, STMR, L2CTL

memory interconnect

Group 0 | Group N | DMA

EDGEQ UNIQUE APPROACH

Open Architecture + Open Ecosystem
(Market Can Now Access Open Dev Tool Sets)

Converged 4G+5G + AI in One Elastic Chip

High Performance (10Gbps) @ Low Power (<15W)

Complete with Deployable 5G Software (L1, L2/L3)

A Compute Complex of 60 RISC-V based Cores. Fully Programmable. Fully Configurable.

Connectivity + Compute in a Chip
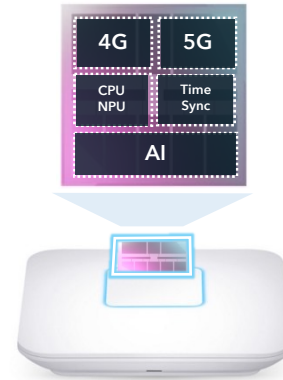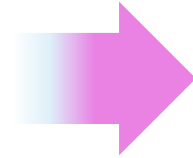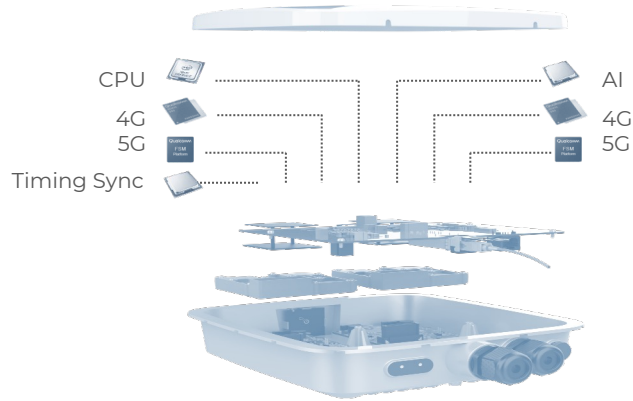
EDGEQ

EDGEQ 5G
ACCESS POINT

Industry's First Concurrent 4G+5G Small Cell
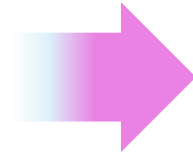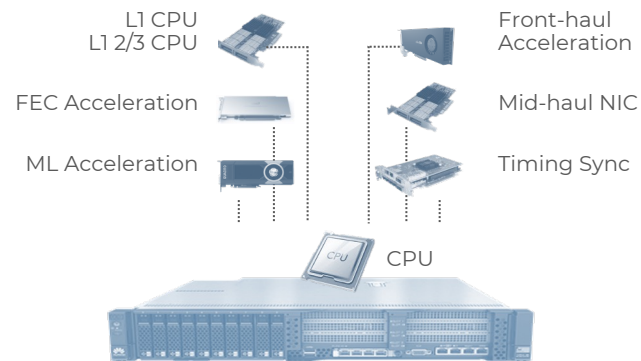
EDGEQ 5G OPEN-RAN
DISTRIBUTED UNIT

Industry's First RISC-V based Massive MIMO In-line Acceleration

6:1 Integration at Fraction of the Power and Cost

2x
LOWER THE POWER

2x
LOWER THE COST

10x
LESS THE SPACE

EdgeQ Scales from Small Cell to Macro Cell

Home	Enterprise	Outdoor	Outdoor Macro	Cell Site	Pre-Aggregation
(Femto Cell))	(Factory 4.0)	(Fixed Wireless)	(Remote Areas)	(O-RAN Base Station)	(Cloud Data Center)

SOFTWARE DEFINED L1, L2/L3 • 50% of the POWER & COST

Up to 1K Users • Up to 64 Antenna • Up to 10Gbps • Up to 15W

Enterprise 5G Use Cases

HOTEL / HOSPITALITY

LAPTOP · **CCTV** · **STAFF WEARABLES** · **PHONE**

Applications

- Keyless Entry
- Auto-Registration/Check-out
- Digital Signage
- Internet Access
- Concierge Services

MANUFACTURING

CCTV · **DEFECT DETECTION** · **AGV** · **INTERNET**

Applications

- Video Surveillance
- Defect Detection
- Automated Guided Vehicles
- Internet Connectivity

LOGISTIC WAREHOUSE

LAPTOP · **CCTV** · **RF SCANNER** · **INTERNET** · **AGV**

Applications

- Video Surveillance
- Scanners for Inventory Management
- Internet Connectivity

EDUCATION

LAPTOP · **CCTV** · **PHONE** · **TABLET** · **PBX**

Applications

- Digital Class Room
- General Office Connectivity
- Internet Access

EdgeQ Wins Multiple 2023 Global Mobile Awards

INDUSTRY'S MOST PRESTIGIOUS ACCOLADE – The "Oscars" of Wireless Technology

CTO CHOICE AWARD: OUTSTANDING MOBILE TECHNOLOGY

Voted by 20+ CTO Worldwide

EdgeQ Beats Out Finalists: Huawei, Rakuten, Ericsson, Nokia, ZTE, Mavenir, Juniper, Apple

Previous winner include Samsung, Rakuten, Ericsson, Huawei,

BEST DIGITAL TECH BREAKTHROUGH
(for companies <$10m revenue)

This Award Represents the Best Startup of 2023

It is designed to capture breakthrough technology enhancement in the entire mobile ecosystem.

THE ONLY SEMICONDUCTOR AND STARTUP WINNER

EdgeQ LIVE.

Open-RAN Compliant. Small Cell. O-RAN DU.
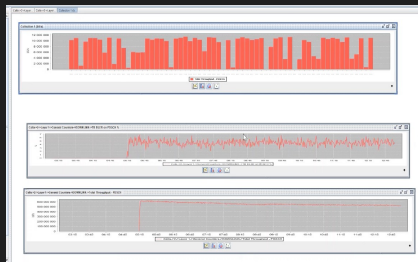
World's First All-in-One 4G+5G gNB
(4x4, 100MHz, 100+ Users, 2 Gbps)

100+ Active Users Running on Small Cell
(AN INDUSTRY FIRST !)
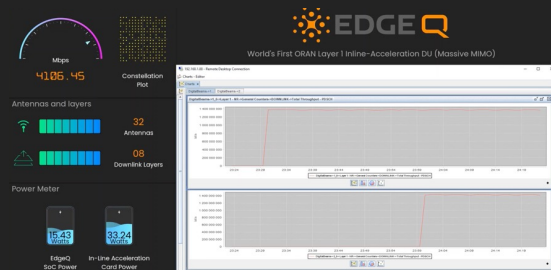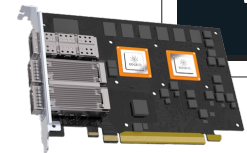
World's First O-RAN Massive MIMO
(32 Antennas, ~4Gbps, 8 Layers, <50 Watts)

Samsung Galaxy   OnePlus   Apple iPhone

**Mobile Phones
Interoperate with EdgeQ**

Thank You

✉ info@edgeq.io   💻 www.edgeq.io   📍 2550 Great America Way, Ste 325
Santa Clara, CA 95054

about Vinay Ravuri

Vinay Ravuri

CEO | Founder

Vinay has 25+ years of experience as a distinguished industry executive and general manager for high-tech corporations in compute, communications, and networking. As an executive, he has navigated companies to key strategic inflections in areas of cloud computing, machine learning, and 5G. As Vice President at Qualcomm, Vinay played an integral part in the establishment of its Data Center server and Machine-Learning technology, and drove their advanced mobile software product management.

Creating a Hyper connected world

How 5G is creating an inflection point for new semiconductor startups to emerge

The future of 5G

Global chip shortage sparks record investment in US semiconductor sector

COMPANY ANNOUNCEMENTS

EdgeQ Recent Press Releases

01 EdgeQ, Vodafone, and Dell Debut State-of-the-Art, Software-Defined, maMIMO Open RAN Solution

Bloomberg | February 27, 2023

02 WNC's Newest Small Cell Leverages EdgeQ's Base Station-on-a Chip to Scale Enterprise Networks at Breakthrough Economics and Performance Throughput

Wistron | February 27, 2023

03 MWC 2023: EdgeQ ORAN DU Demo

TIRIAS RESEARCH | March 3, 2023

04 EdgeQ to Debut Single Chip for 5G Private Networks

EE Times | February 24, 2023

EdgeQ at a Glance

THE ONLY AMERICAN CHIP STARTUP TO EMERGE FOCUSING ON 5G

EDGEQ INC.   (HEADQUARTER)
2550 Great America Way, Ste 325
Santa Clara, CA 95054

DESIGN CENTER: Bangalore, India

200+

TOTAL HEADCOUNT

$100M+

FUNDS RAISED

3G/4G/5G DESIGNS INTO APPLE/ANDROID

DISTINGUISHED PEDIGREE

$10B+

WIRELESS INFRASTRUCTURE

5G ENTERPRISE / TELCO / CLOUD

EdgeQ: Major Press, Awards, Recognitions

7 HOT 5G STARTUPS	TOP 10 STARTUP	2022 WINNER	FEATURED	FEATURED	FEATURED
Investors Are Betting On In 2022	Recognized 3 Years Straight	Selected Over 2700 Nominations	ex-FCC Chairman Joins EdgeQ Board	Vinay on 5G Emerging Chip Startups	Vodafone Partnership Announcement

EDGEQ Mobile World Ccongress 2023 SHOWCASE

3GPP COMPLIANT. SMALL CELL. O-RAN DU

World's First All-in-One, Multi-Mode 4G+5G gNB

Single User.
4x4, 100MHz

Multi User.
4x4, 100MHz

- 2x2, 100MHz, Single User
  4x4, 100MHz, 64 Users,
- DU + RU + CU Running on a Single Chip
- All-in-One L1 + L2/L3 Running on 1 Chip
- Ultra-Low Power (<12 W)
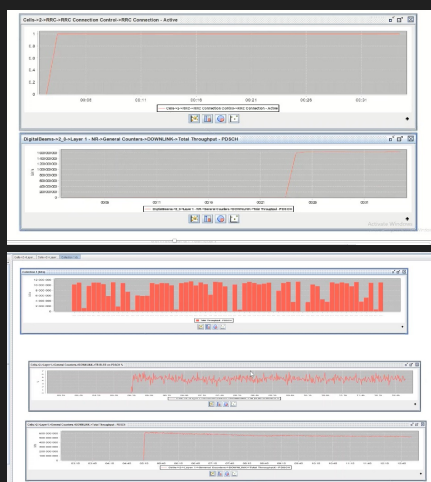
World's First End-to-End
ORAN Massive MIMO Operationalized!

- 32 Antennas Running!
- Industry Defining Throughput (5 Gbps)
- Industry's Only 4T4R and maMIMO
  Combination
- Industry Defining Throughput (5 Gbps)
- Ultra-Low Power (<50W)