

Qualcomm

May 24, 2018

Beijing, China

@cristianoamon

The AI future

Cristiano Amon

President, Qualcomm Incorporated

Leading mobile innovation for over 30 years

Digitized mobile communications



Analog to digital

Redefined computing



Desktop to smartphones

Transforming industries



Connecting virtually everything

Transforming how the world connects, computes and communicates



\$3.3 Trillion

Business value from
AI augmentation by 2021

AI will be essential to powering
economic growth and industrial
transformation

Source: Gartner, Mar. '18

Reliable robotics

UHD
surveillance

Reliable,
autonomous
AGVs

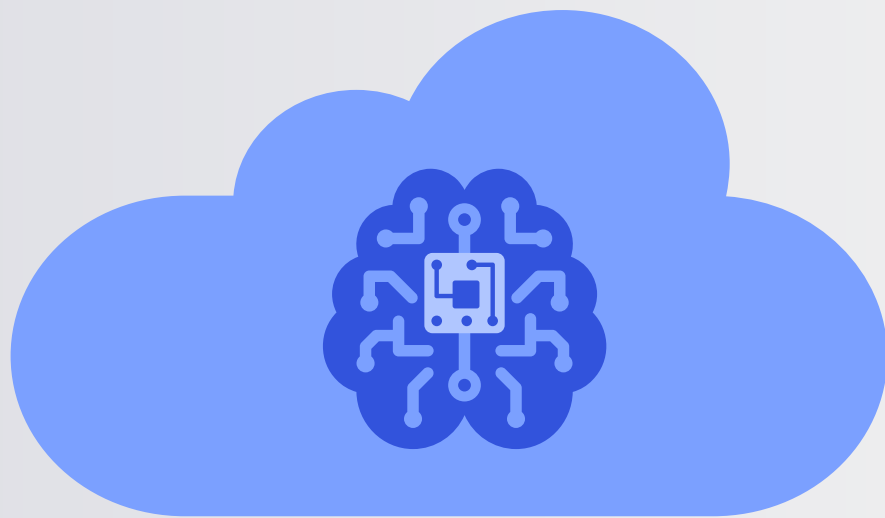
On-premise
compute and storage
Updating

Seamless interworking
with public network

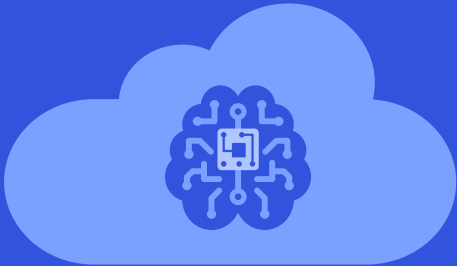


On-device
intelligence





Today,
intelligence is primarily associated with the cloud



To scale, intelligence must be distributed to the wireless edge

Trillions of connected things
Massive amount of data

Sensing

Immediacy

Data stays local

New experiences

Privacy

Autonomy

Security

Tailoring

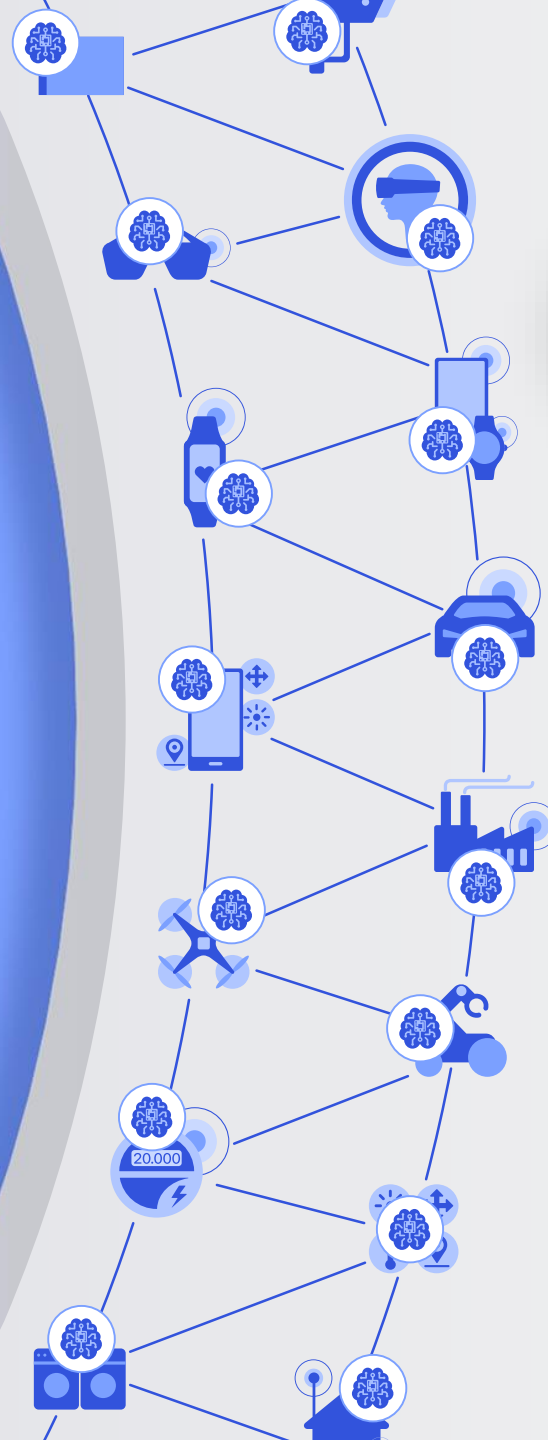
Extract local value

Personalization

The wireless edge realizes the full potential of 5G

Inventing technology at scale to realize the promise of AI on trillions of connected devices

5G



Perceive

Hear, see, monitor, and observe



Reason

Learn, infer context, and anticipate



Act

Act intuitively, interact naturally, and protect privacy

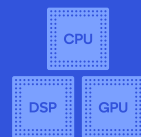
Our technology leadership is transforming the wireless edge



Security



Sensing



Processing



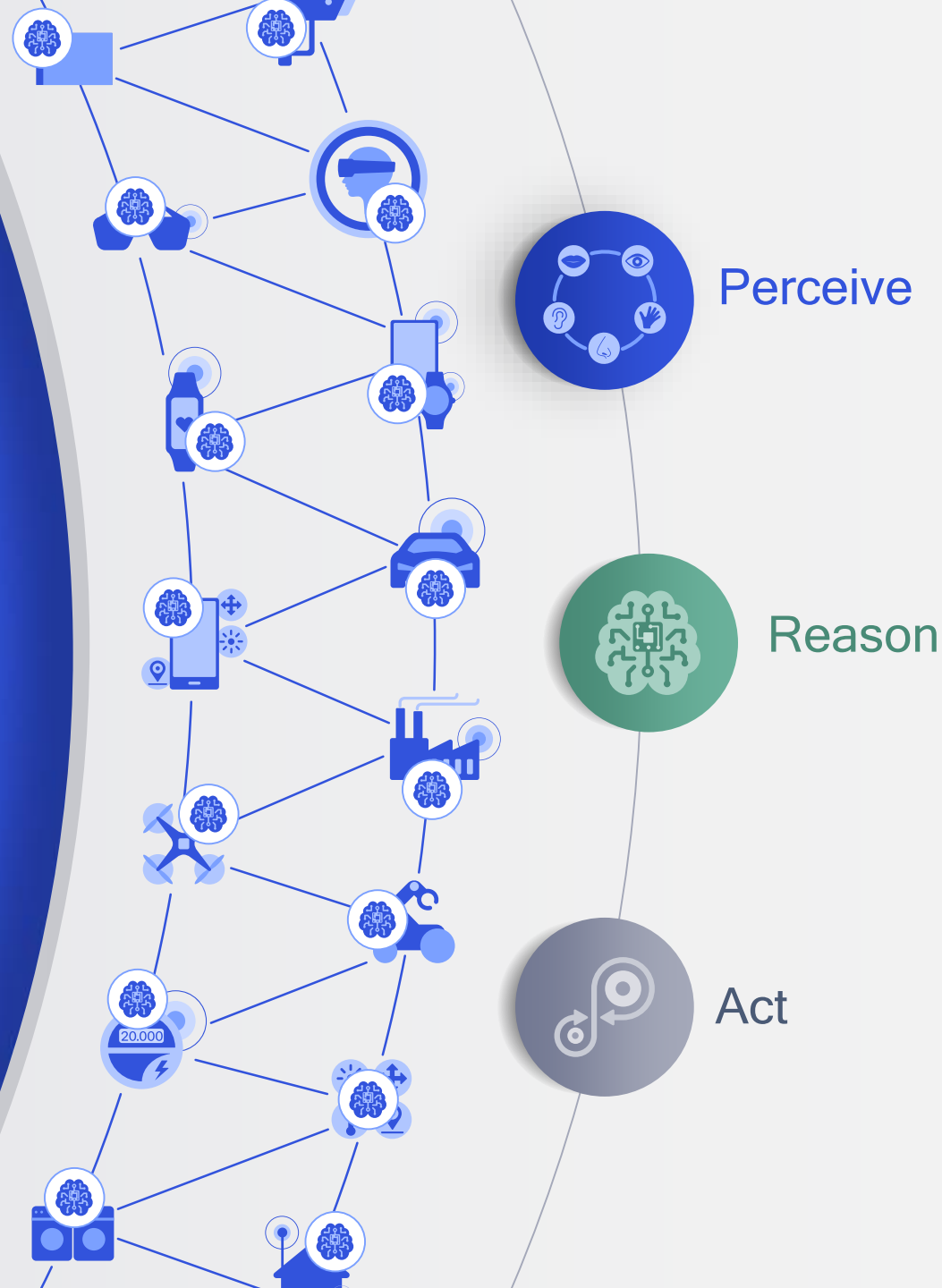
Connectivity



Edge services



On-device intelligence





Mobile is THE
pervasive AI platform

> **8.6 Billion**

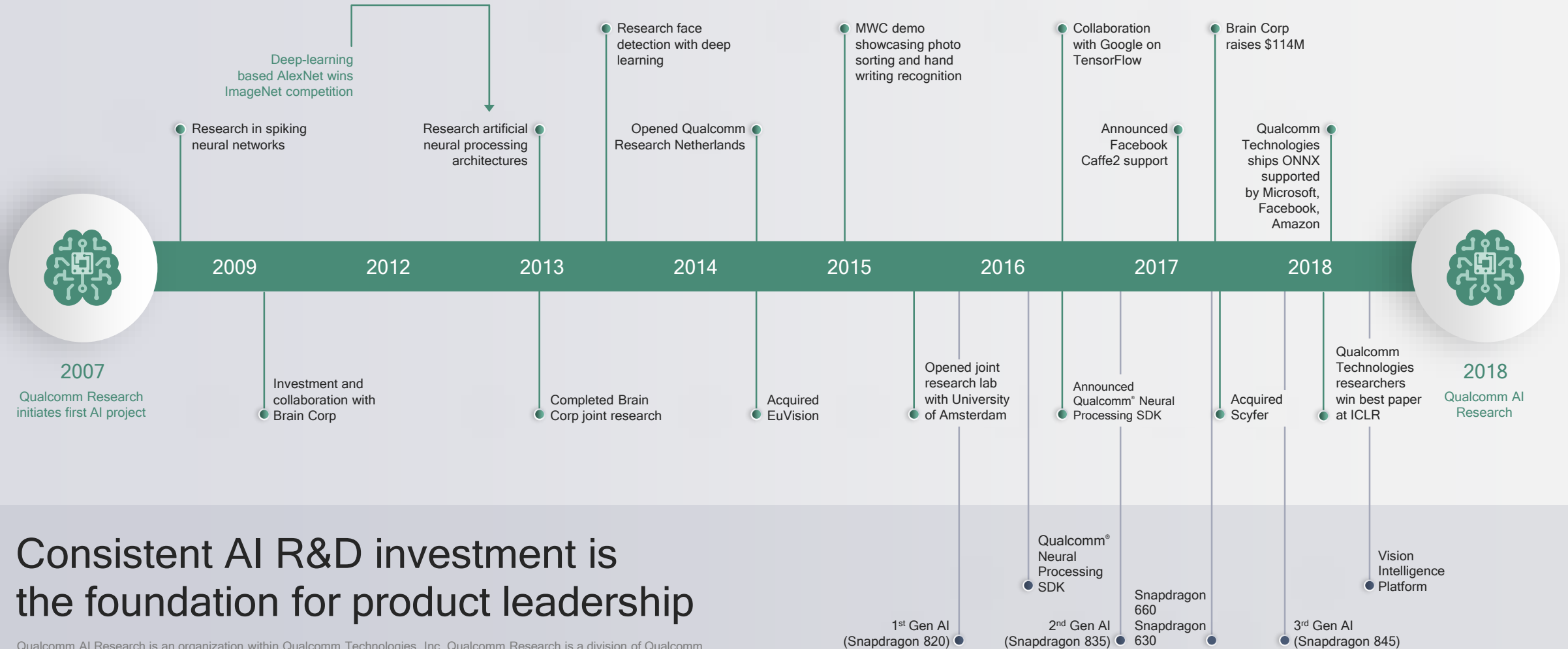
Cumulative smartphone unit shipments
forecast between 2018-2022

Qualcomm is leading
in mobile



Qualcomm® Artificial Intelligence Research



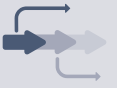


Consolidating long term, cutting-edge AI research efforts



Consistent AI R&D investment is the foundation for product leadership




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The challenge of AI workloads

-  Compute intensive
-  Large, complicated models
-  Complex concurrencies
-  Real-time
-  Always-on



Constrained mobile environment

-  Thermally efficient for sleek designs
-  Requires long battery life for all-day use
-  Storage/memory bandwidth limitations

Power and thermal efficiency
Essential to bring on-device AI into everyday life

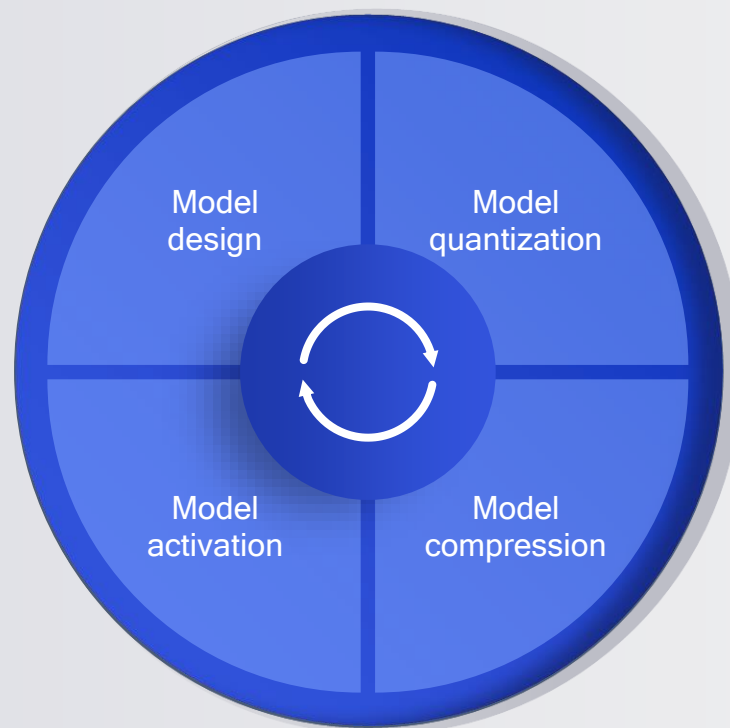
Qualcomm Technologies is making on-device AI ubiquitous

Efficient hardware

Algorithmic advancements

Software tools

Power efficient AI



Personalized AI



Qualcomm® Snapdragon™

Artificial Intelligence Engine

Harnessing the power efficient
performance of the Snapdragon
heterogeneous hardware and
software architecture



Snapdragon
Mobile Platforms

845

835

821

820

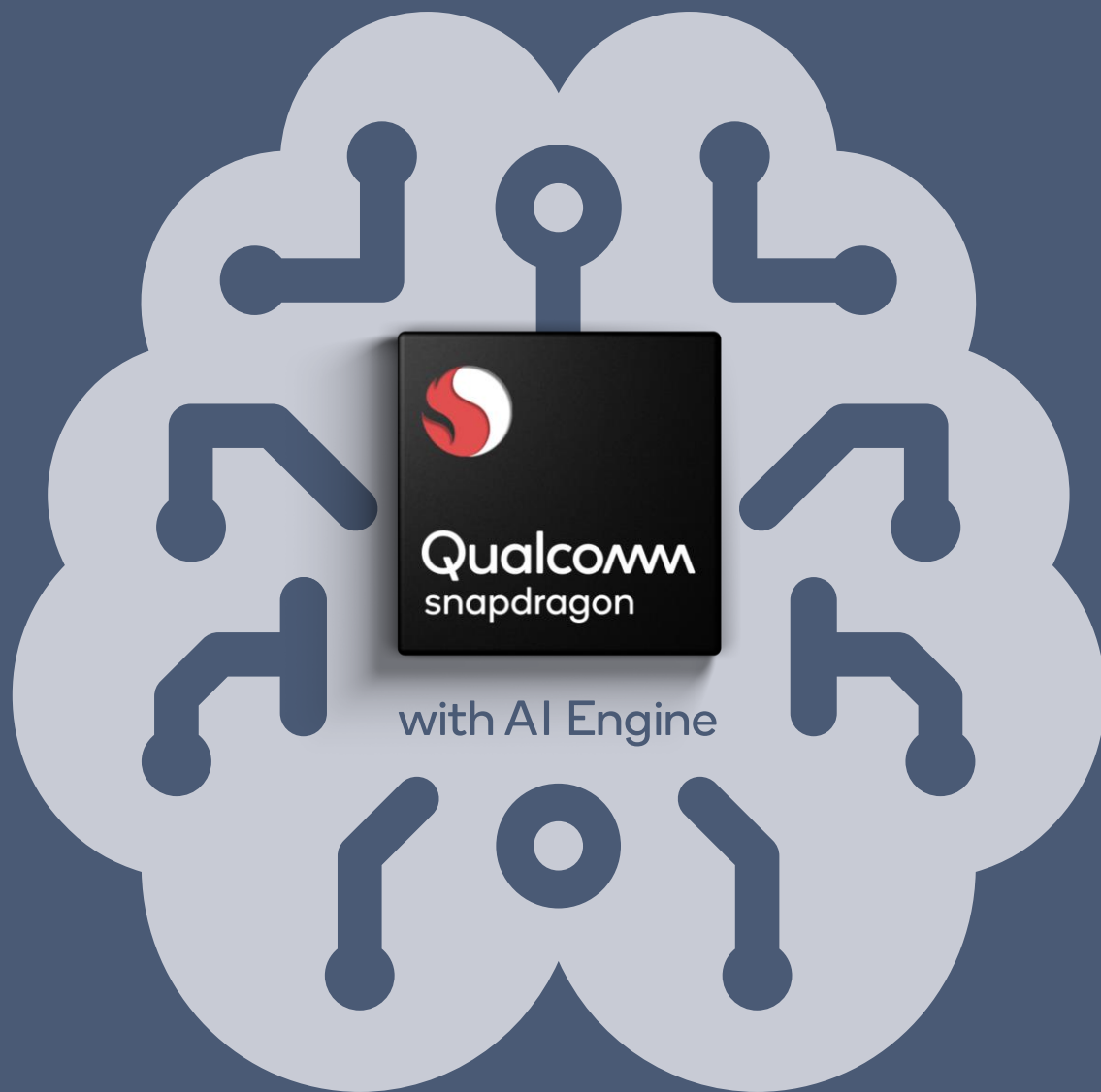
700 series

660

Qualcomm® Vision
Intelligence Platforms

QCS605

QCS603



Enhancing user experience

200%

Improvement in AI performance
over the last 12 months

Announcing Thundercomm Turbo X



Accelerating the
next-generation
of AI-enabled
devices

Qualcomm AI Engine

Reference AI apps
and models

Modularized design for
extending AI capabilities

Video



Introducing in-demand premium experiences for a new tier of smartphones



AI



Connectivity

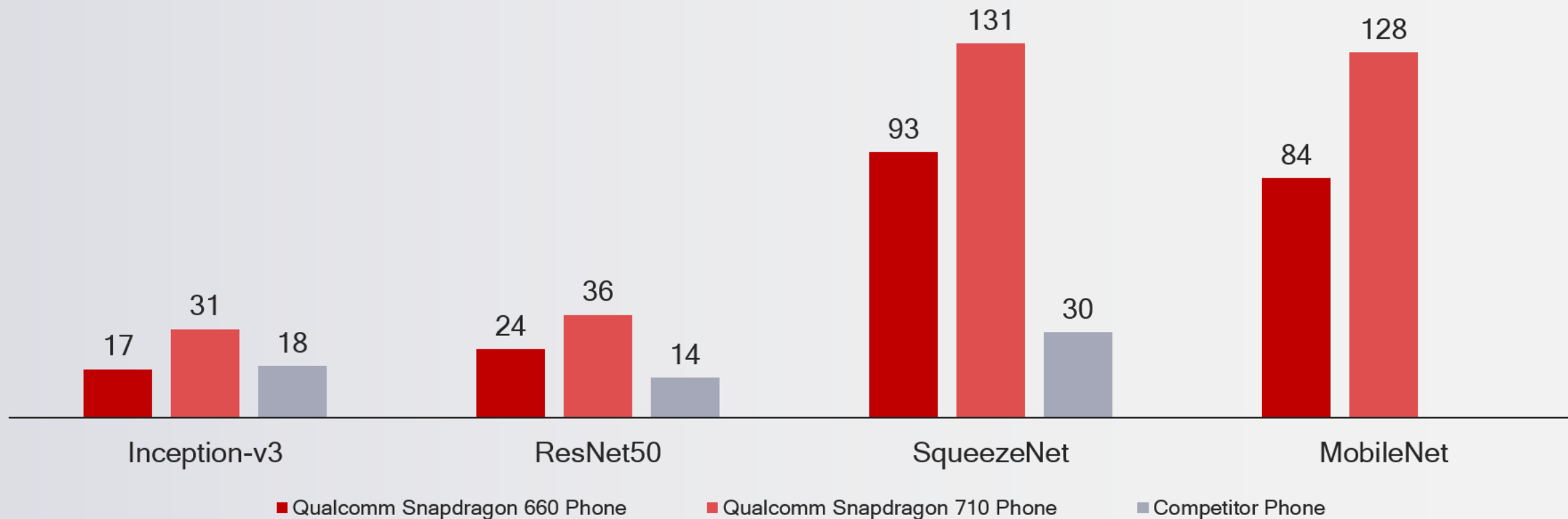


Performance

Qualcomm
snapdragon
710 mobile platform



AI Image Classification Performance (inf/sec)



Source: 3rd Party and Qualcomm Technologies internal testing/data.

Snapdragon AI – Performance

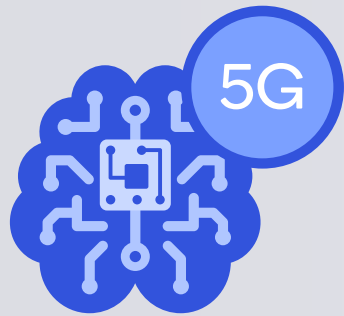
Dr. Cui Baoqiu

Vice President of AI and Cloud Platform
Xiaomi

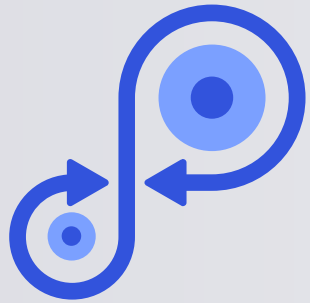


The future of AI

Is being built by Qualcomm Technologies with our customers



5G + AI
leadership



Multi-industry systems
design expertise



Leader in wireless
edge development



with AI Engine

10+ years of AI
research







Broad industry
collaboration

Uniquely positioned to make the intelligent wireless edge a reality



Thank you

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