Qualcomm

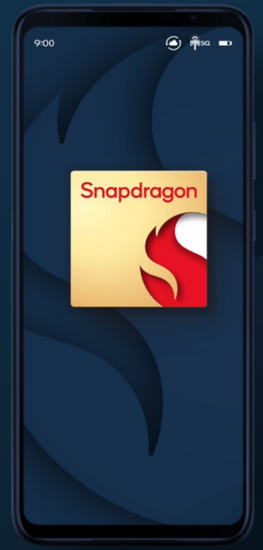
CES 2022 Press Conference

Cristiano Amon

President and Chief Executive Officer,
Qualcomm Incorporated

@cristianoamon

Mobile

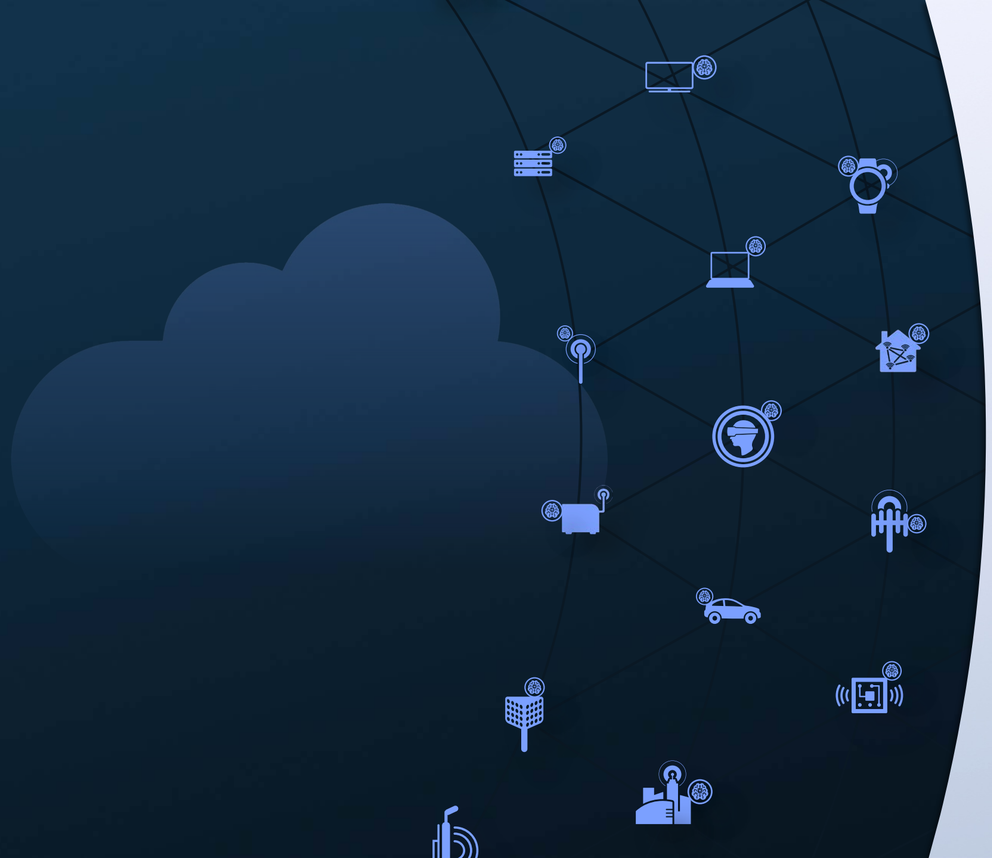


Connected intelligent edge

Snapdragon is a product of Qualcomm Technologies, Inc. and/or its subsidiaries

Cloud growth requires the connected intelligent edge

More data at the edge requires more local processing and intelligence



Cloud growing at

35%

year-over-year[1]

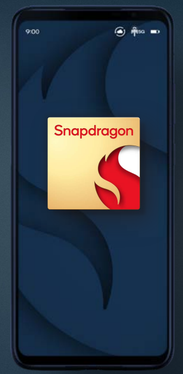
By 2025

64%

of data will be created outside of traditional data centers[2]

1. Canalys estimate of increase in cloud infrastructure spend for Q1 2021, April 2021; 2. IDC DataSphere Program, July 2021

One technology roadmap that scales to address growth vectors



Edge AI

Camera

GPU

Graphics

CPU

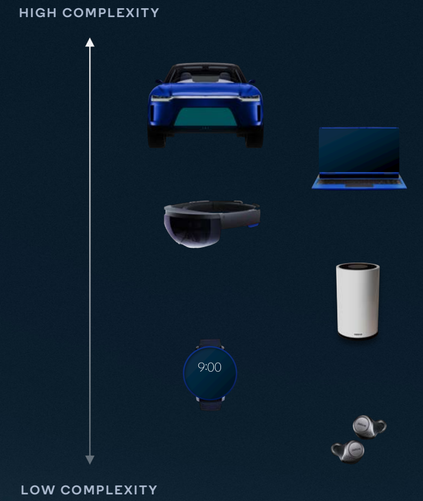
Processing

Connectivity

On-device intelligence

High performance, low power

Everything wireless



Snapdragon sets the bar for premium-tier Android smartphones

#1 Connectivity
Fastest 5G and Wi-Fi speeds[1]

#1 Qualcomm® AI Engine
Leading on-device AI use cases and performance per watt[2]

#1 Snapdragon Sound™
CD Lossless and LE Audio for Bluetooth[3]

#1 Snapdragon Sight™
Leading with mobile-first camera features[4]

#1 Security
Leading security features for mobile[5]

#1 Snapdragon Elite Gaming™
Leading in desktop-level features on mobile[6]

1. First-announced 10 Gigabit 5G and 3GPP Release 16 Modem-RF System, fastest Wi-Fi peak speeds in commercially available device and access point chipsets; 2. Internal competitive analysis; 3. First announced audio codec for CD Lossless quality over Bluetooth; 4. First 8K HDR Video Capture and 18-bit ISP; 5. First announced support for Android-ready SE standard, always-on camera; 6. Internal competitive analysis; Snapdragon Elite Gaming, Snapdragon Sight, Snapdragon Sound and Qualcomm AI Engine are products of Qualcomm Technologies, Inc. and/or its subsidiaries

>7x

Addressable market expansion in the next decade

1. SAM: Servicable Addressable Opportunity; 2. TAM: Total Addressable Opportunity. A combination of internal and third-party estimates

Continued momentum across key opportunities

Next-gen Arm PCs

Driving convergence of PC and mobile

Arm transition + Next-gen CPU leadership with Nuvia team

The ticket to the metaverse

Building the next computing platform with XR

50+ Snapdragon AR/VR devices launched

Wireless fiber

5G makes Fixed Wireless Access a global reality

ADAS

Powering 21st century vehicles

Arriver[1] software and Snapdragon Ride™ Platform

1. Acquisition expected to close in 2022, subject to regulatory approval and other closing conditions. Snapdragon Ride is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.

Announcement

Shift to PC on Arm is gaining ecosystem momentum with Snapdragon

acer

"Leveraging the cutting-edge Arm-based Snapdragon compute platforms from Qualcomm Technologies, Inc., we can deliver more best-in-class Windows 11 experiences ..."

JAMES LIN
GENERAL MANAGER, NOTEBOOKS, IT PRODUCTS BUSINESS

Microsoft

"... we are excited to continue our incredible collaboration with Qualcomm on Windows on Arm, creating innovative products and experiences to empower people."

PANOS PANAY
CHIEF PRODUCT OFFICER

Lenovo

"... Lenovo is proud of our close collaboration with Qualcomm. Together we're engineering new Windows on Snapdragon devices for everyone ..."

LUCA ROSSI
PRESIDENT OF INTELLIGENT DEVICES GROUP

hp

"... we are excited about the power efficiency opportunity of the advanced Arm architecture to enable breakthrough experiences on lightweight, fanless devices. We look forward to our ongoing collaboration with Qualcomm ..."

MIKE NASH
CHIEF TECHNOLOGIST AND GLOBAL HEAD, CUSTOMER EXPERIENCE AND PORTFOLIO STRATEGY, PERSONAL SYSTEMS, HP INC.

ASUS

"... Qualcomm Technologies, Inc. continues to transform the Windows PC industry with an impressive portfolio of Arm-based Snapdragon compute platforms ..."

ALVIN CHOU
GENERAL MANAGER OF COMMERCIAL COMPUTER BU

Announcement

Powering the enterprise transition to Arm PCs

200 enterprises either testing or deploying Windows on devices with Snapdragon

BLACK & VEATCH

c spire

cisco

Lenovo

verizon

T-Mobile

Source: Internal data

Announcement

Microsoft

Microsoft Mesh

Snapdragon

Qualcomm

Snapdragon spaces

Snapdragon Spaces is a product of Qualcomm Technologies, Inc. and/or its subsidiaries.

5G, including mmWave, is a universal last mile technology

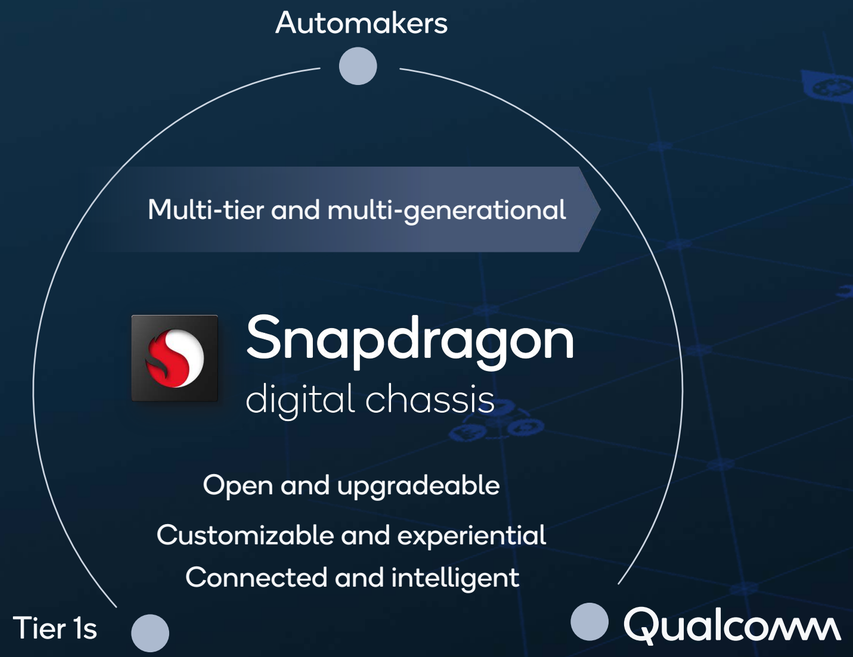
Wireless fiber

"All around us at home, work and on the go, customer demand for connectivity is accelerating. To stay ahead of it, we're focused on **5G as a core technology** for both **backhaul and direct broadband access** connecting **homes and businesses.** What we're seeing from Qualcomm Technologies around Fixed Wireless Access gives us confidence we'll have the products to keep delivering for our customers."

JEFF McELFRESH
CEO, AT&T COMMUNICATIONS

Redefining vehicles for the 21st century

Helping automakers and Tier 1s to create differentiated experiences



Snapdragon
digital chassis

A platform for the future of automotive

Snapdragon
car-to-cloud

Software and services platforms to drive new monetization models

Snapdragon
cockpit platform

In-car experiences that integrate instrument clusters, navigation, premium audio, cameras and multiple displays with app ecosystems

Snapdragon
ride platform

L2+ / L3 Driver Assistance and Automated Driving SoC Platforms with Arriver Vision and Drive Policy stacks[1]

Snapdragon
auto connectivity platform

5G connectivity to cloud, C-V2X, Wi-Fi and Bluetooth within and around the vehicle, precise positioning and PLC for EV charging

1. Arriver expected to close in 2022, subject to regulatory approval and other closing conditions; Snapdragon digital chassis, Snapdragon car-to-cloud, Snapdragon ride platform, Snapdragon cockpit platform, and Snapdragon auto connectivity platform are products of Qualcomm Technologies, Inc. and/or its subsidiaries

Moving toward immersive driving experiences

Announcement

Snapdragon
cockpit platform

Henrik Green

Chief Product Officer, Volvo Cars

Announcement

Snapdragon
cockpit platform

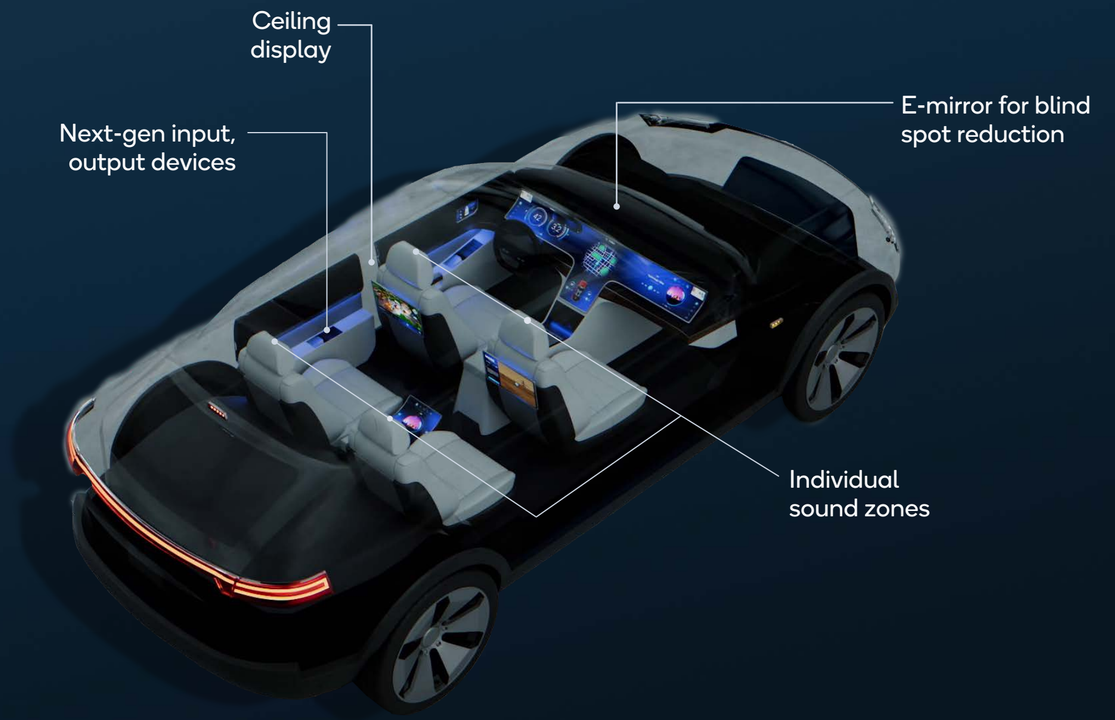
HONDA

Announcement

Qualcomm | ALPSALPINE

Working together to bring advanced automotive in-cabin capabilities

New Digital Cabin designed to deliver unmatched, next-generation experiences



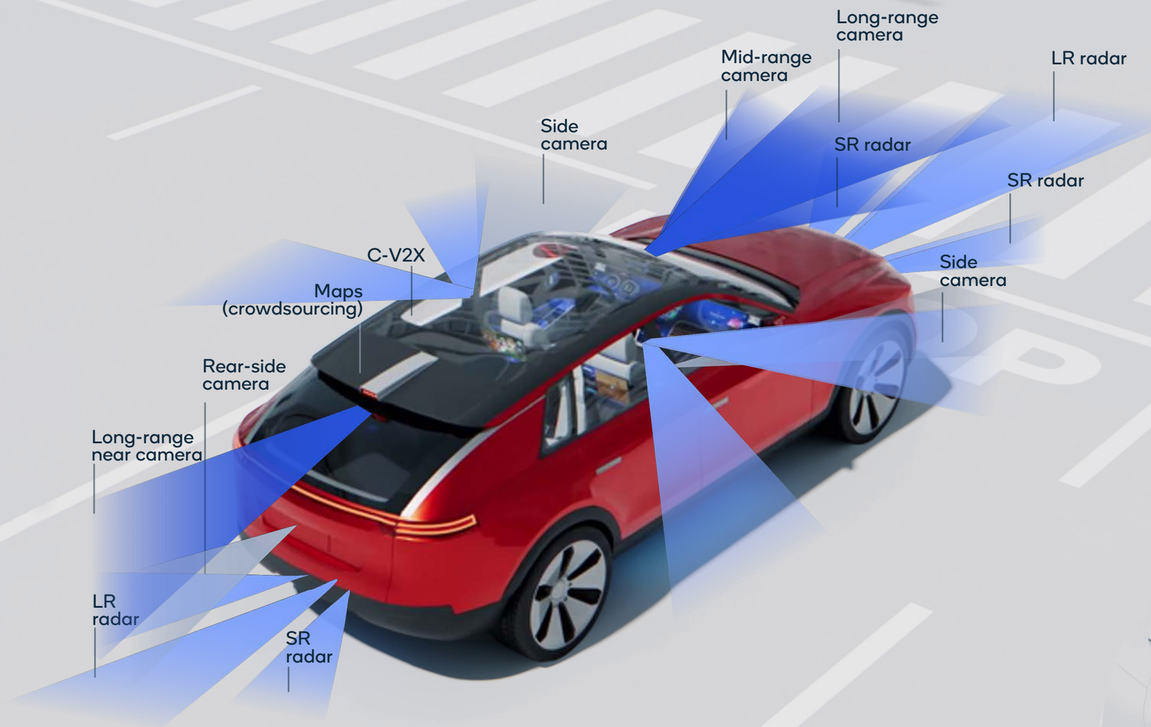
The Digital Chassis powers real-time engagement with vehicle surroundings

ALERT
Emergency vehicle approaching
3.25 m
Crosswalk at Stafford
TRIP 124 km
42
KM/H
P R N D
3:05pm
Emergency vehicle approaching.
Signal light changing.
Assisted braking active.
Hazard lights activated.
POP
Technology Vibes
The Connection
-1:32 | 3:27
23°
19°

Snapdragon ride platform

Qualcomm + Arriver™ [1]

Scalable **Open** **Proven**[2]



1. Acquisition expected to close in 2022, subject to regulatory approval and other closing conditions
2. Commercially proven independent of Qualcomm solutions

Announcement

Snapdragon ride platform

Snapdragon Ride Vision System

Open, scalable and modular computer vision platform
Front and surround vision for ADAS / AD
Expected in commercial vehicles starting in 2024

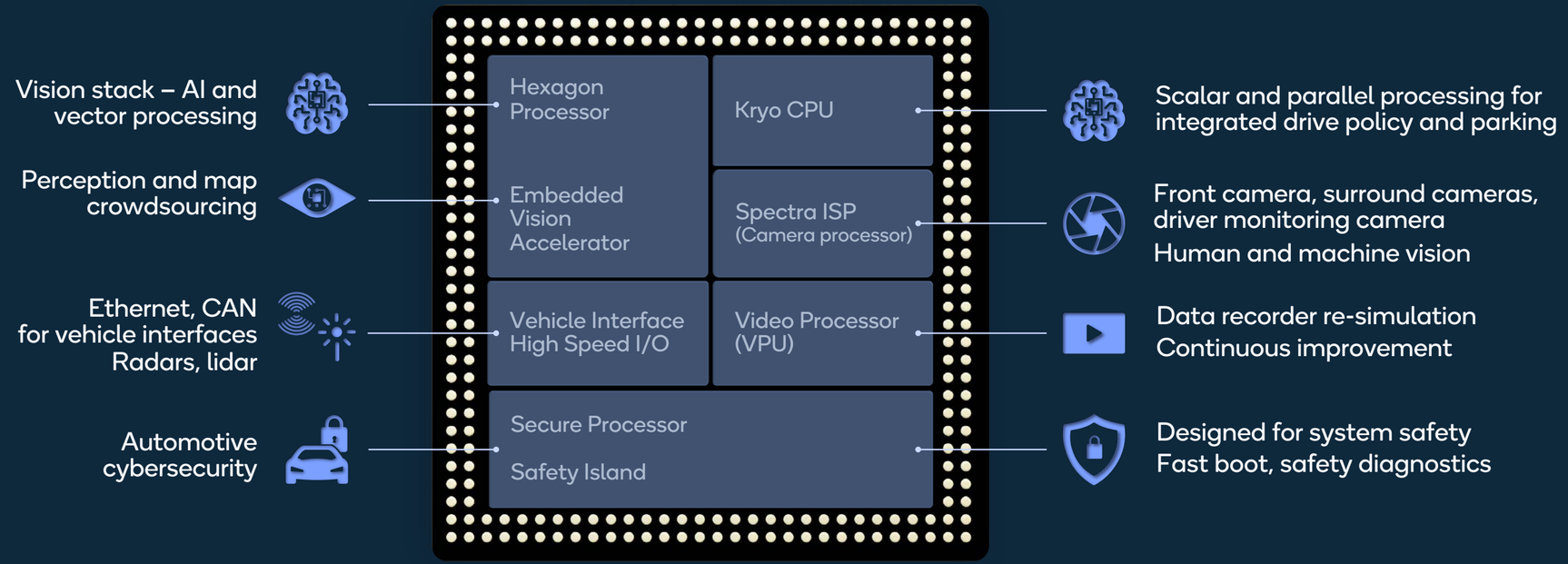
NCAP Drive Policy	Driver monitoring	Parking systems	Map crowdsourcing

Integrated with Snapdragon Digital Chassis

Acquisition expected to close in 2022, subject to regulatory approval and other closing conditions

Snapdragon Ride Vision SoC

Industry-leading 4nm SoC for vision applications



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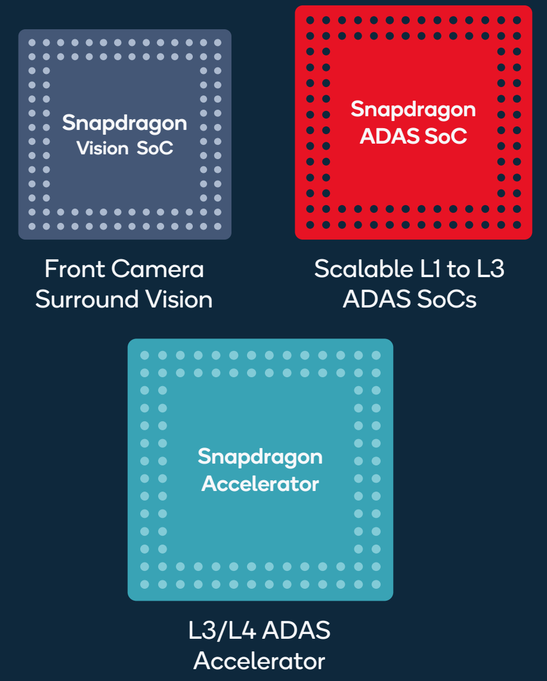
Snapdragon ride platform

A comprehensive solution for advanced driver assistance and autonomous driving

Drive Policy	Qualcomm, ARRIVER or OEM
Front and surround vision	Qualcomm, ARRIVER
Maps	TOMTOM, here
Parking	Pre-integrated partner: Valeo, BOSCH, ZongMu or OEM
Driver monitoring	Pre-integrated partner: seeingmachines or OEM
Ride SDK: Middleware, tools and libraries	Qualcomm
Safe OS | Drivers | Hypervisors	Qualcomm, QNX, Red Hat



Acquisition expected to close in 2022, subject to regulatory approval and other closing conditions

Announcement

Broad industry support

Snapdragon
digital chassis

Snapdragon
car-to-cloud

Snapdragon
ride platform

Snapdragon
cockpit platform

Snapdragon
auto connectivity platform

BMW · GM · JIDU · JETOUR Drive Your Future · Mahindra · NIO · RENAULT · SAIC · VOLVO · WELTMEISTER 威马汽车 · XPENG Start smart . Drive smarter

1. Arriver expected to close in 2022, subject to regulatory approval and other closing conditions

Announcement

Snapdragon
digital chassis

RENAULT

Luca de Meo

Chief Executive Officer, Renault S.A.

RENAULT

Working with all leading automakers

#1 in telematics, automotive connectivity and premium next-gen infotainment[1]

All major global automakers
have selected Snapdragon Cockpit platforms

Digital Chassis gaining momentum
with telematics, cockpit, car-to-cloud, driver assistance & automated driving, and pending Arriver[2] acquisition

$13B
design win pipeline[3]

1. Internal sales data, infotainment for production cars starting in 2020; 2. Arriver expected to close in 2022, subject to regulatory approval and other closing conditions;
3. Includes Arriver/ADAS Software (Arriver expected to close in 2022, subject to regulatory approval and other closing conditions). As of 11/16/2021. Snapdragon Automotive Cockpit Platforms are products of Qualcomm Technologies, Inc. and/or its subsidiaries

Source: Internal data

Q&A

Broad support from ecosystem partners for the PC industry's transition to Arm-based computing

Collaboration with Microsoft to expand and accelerate AR to usher in new gateways to the metaverse

Qualcomm and Volvo cars enable Snapdragon-powered premium infotainment experiences for upcoming electric vehicles

Qualcomm works with Honda to bring digitally advanced in-cabin capabilities to new vehicles

Qualcomm and Alps Alpine work together to deliver advanced automotive in-cabin capabilities

Snapdragon Ride Vision System, an open and scalable platform for automated driving

Momentum around Snapdragon Digital Chassis to define the future of automotive

Qualcomm and Renault Group to extend collaboration and bring the latest digital advancements to next generation vehicles with the Snapdragon Digital Chassis

Desay SV and Qualcomm build premium in-vehicle experience based on the 4th Generation Snapdragon Cockpit Platforms

Thank you

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