SNAPDRAGON RIDE™ ADAS PLATFORM

Full system that includes our SOC, perception stack, vehicle control and Tier 1 hardware and sensor ecosystem.

SNAPDRAGON RIDE DRIVING EXPERIENCES

L2 assistant driving point-to-point in all ODDs	L2+ hands-free driving on highway and highway-like roads	L3 driving on highways
		
L2 hands-on urban, suburban and highway	Allows hands-free driving ▼ Responsible: driver	Commute pilot ▼ Responsible: system
Eyes-on		Eyes-off
Hands-on	Hands-free	

Complete and mature ADAS technologies with different automation levels in all operational design domains

SoCs and AI accelerators

Autonomous driving stack

Vision stack

Open platforms

Scalable platforms

Flexible customer engagement strategy

Broad partner ecosystem

Cloud services

HIGHWAY DRIVING EXPERIENCES

Exit-to-exit, hands-free system with high availability and robustness in the market

Augmented reality to support intuitive interaction for the driver

Follow navigation route

Adapt trajectory to route geometry

- Keep lane without lane markings or leading vehicle
- Drive through constructions sites with longitudinal and lateral control
- Handle cut in
- Handle merging traffic
- Handle lane merge and lane split
- Active lane bias
- Build emergency lane

Lane change

- Suggest lane change for route guidance or ending lane
- Suggest lane change for overtaking slow vehicle
- Suggest lane change for max. availability, e.g. before construction site
- Perform lane change driver initiated
- Take exit lane system initiated

Hands-off

- Drive hands-off up to 130kph / 85 mph
- Drive confirmed lane changes

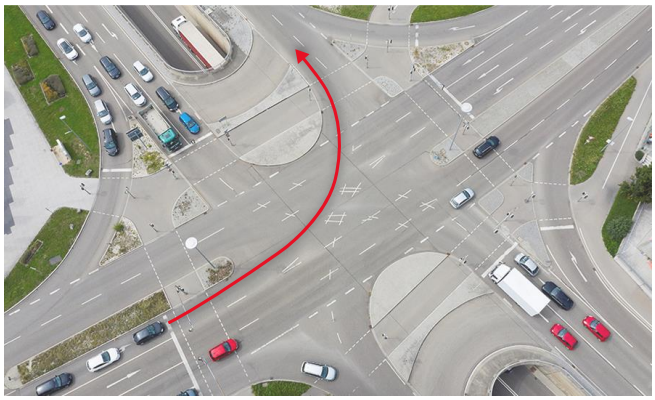
URBAN DRIVING EXPERIENCES

Address-to-address L2+ system with high availability and the highest robustness in the market

Augmented reality to support intuitive driver interaction

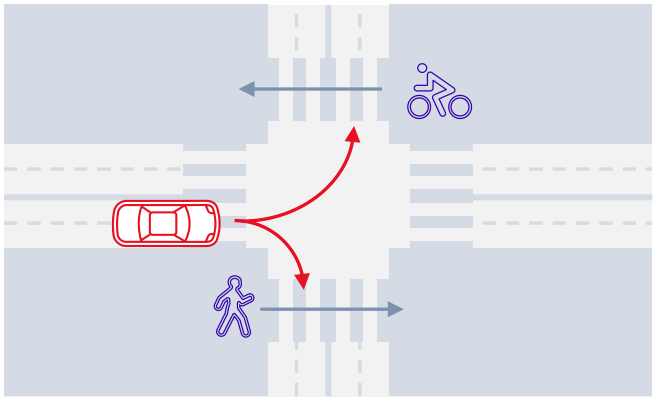
Roundabout

- Drive through single-lane roundabout
- Drive through multi-lane roundabout, exiting in second half
- Keep lane in roundabout



Intersections

- L2 lateral and longitudinal control on route sections with right-of-way
- Drive through intersections without leading vehicle



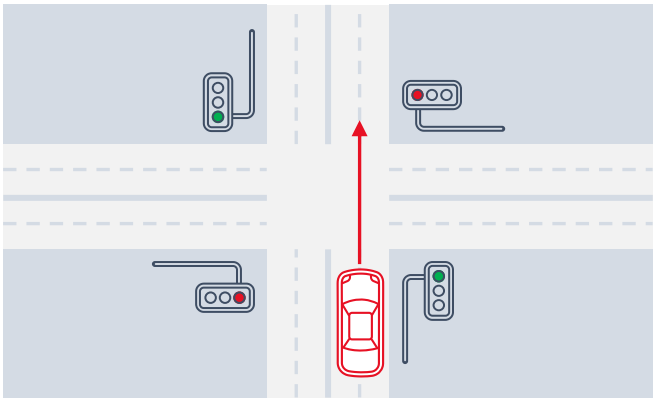
Give right-of-way

- Allow crossing traffic and vulnerable road users (VRUs) with right-of-way to pass at roundabouts
- Allow crossing traffic and VRUs with right-of-way to pass at intersections (e.g., bicycle from behind or crossing)
- Allow oncoming traffic with right-of-way to pass at turn situations (e.g., turn left)

URBAN DRIVING EXPERIENCES (continued)

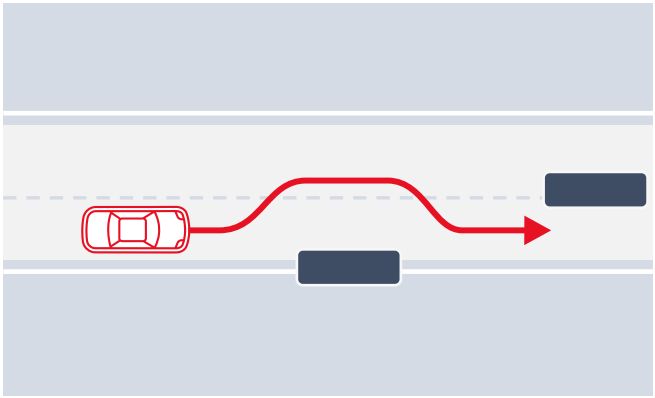
Address-to-address L2+ system with high availability and the highest robustness in the market

Augmented reality to support intuitive driver interaction



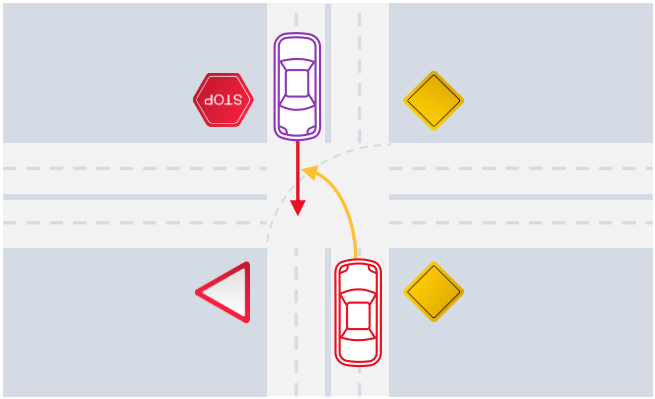
Traffic light and stop sign

- Stop-and-go at traffic light
- Drive off at green light (driver confirmed)



Handle static obstacles

- Stop in front or drive around static object
- Beacons within driving lane
- Parked vehicles on both sides



Stop and go at right-of-way situation

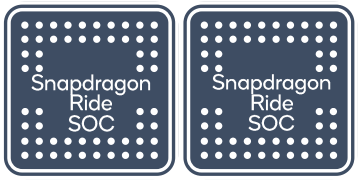
- Manage unprotected turns
- Stop at stop sign (unprotected)
- Stop at give way sign (unprotected)
- Stop in front of roundabout (unprotected)
- Stop at virtual stop location (e.g., within intersection)
- Stop at right-before-left situation (unprotected, in concept evaluation)
- Drive off with driver confirmation

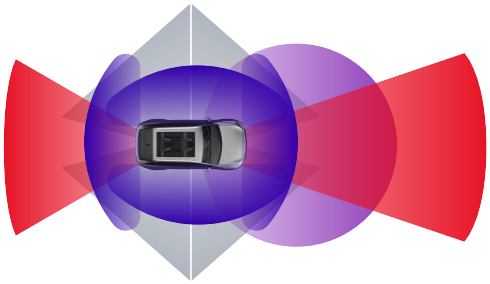
STANDARD PRODUCT CONFIGURATIONS: ACCELERATING TIME TO MARKET

Tier1 sample & development partners available!

Advanced automated driving

Highway / urban
L2++ / L3 / L4



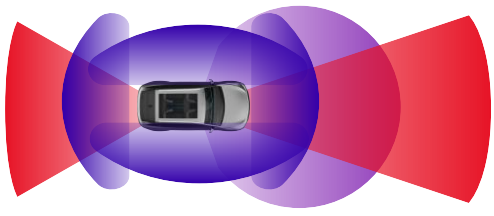


Advanced. urban + L3 highway pilot sensor configuration

	Type		Mounting position	Resolution/ field of view
Cameras (12x)	FWC	Front camera wide	Behind windshield with heating	8MP/120°
	FCT	Front camera tele	Windshield	8MP/28°
	SCF	Side camera front	Exterior mirrors	8MP/100°
	SCB	Side camera back	Exterior mirrors or side panel	8MP/100°
	RC	Rear camera	Roof or spoiler	3-8MP/60°
	SVC	Surround view camera	Rear, side (2x), front	3MP/196°
	OMS	Occupant monitoring system	In-cabin	TBD
Radars (9x)	FRR (replaces MRR)	Full range radar	Front, behind radom (incl. heating)	120°
	FRR rear	2x full range radar	Rear bumper	120°
	SRR (front, rear, side)	Short range radar	Mounted behind colored bumper / side sills (below B-pillar)	150°
Lidar	LI	Lidar	Front (main path) or roof	0.1°/120°
Ultrasonic sensors (12x)	USS	Ultrasonic sensors	In front/rear bumper around vehicle	Standard

Automated driving

Advanced highway
L2+/L3



L2+ sensor configuration

	Type		Mounting position	Resolution/ field of view
Camera (7x)	FWC	Front camera wide	Behind windshield with heating	8MP/120°
	OMS	Occupant monitoring camera	In-cabin	TBD
	RC	Rear camera	Roof or spoiler	3-8MP/60°
	SVC	Surround view camera	Rear, side (2x), front	3MP/196°
Radar (5x)	MRR	Mid range radar	Front, behind radome (incl. heating)	120°
	SRR (front, rear, side)	Short range radars	Mounted behind colored bumper / side sills (below B-pillar)	150°
Ultrasonic sensors (12x)	USS	Ultrasonic sensors	In front/rear bumper around vehicle	Standard

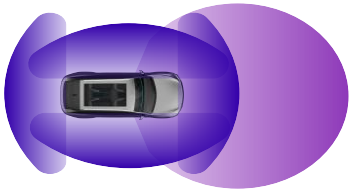
Snapdragon Ride

STANDARD PRODUCT CONFIGURATIONS: ACCELERATING TIME TO MARKET (continued)

Tier 1 sample & development partners available!

Assisted driving

Convenience
L2 - L2+



Base sensor configuration

	Type		Mounting position	Resolution/ field of view
Camera (6x)	FWC	Front camera wide	Behind windshield with heating	8MP/120°
	OMS	Occupant monitoring camera	In-cabin	TBD
	SVC	Surround view camera	Rear, side (2x), front	3MP/196°
Radar (5x)	MRR	Mid range radar	Front, behind radome (incl. heating)	120°.
	SRR (front, rear, side)	Short range radar	Mounted behind colored bumper / Side sills (below B-pillar)	150°.
Ultrasonic sensors (12x)	USS	Ultrasonic sensors	In front/rear bumper around vehicle	Standard

Turnkey package:

- ✓ **Snapdragon Ride SOCs & accelerators**
- ✓ **Reference electronic control unit (ECU)**
  - Standard implementation pre-validated with Tier1s
- ✓ **Production qualified sensors** camera, radar, lidar
- ✓ **Optimized AD stacks –** perception, localization, maps, environment model, planner, function master
- ✓ **Pre-integrated 3rd party stacks –** driver monitoring system, parking
- ✓ **Cloud workbench for AD development and deployment**
- ✓ **Flexible business and development models**
  - Option for OEM to use our foundational models to extend features
  - Options for white box models

Snapdragon Ride