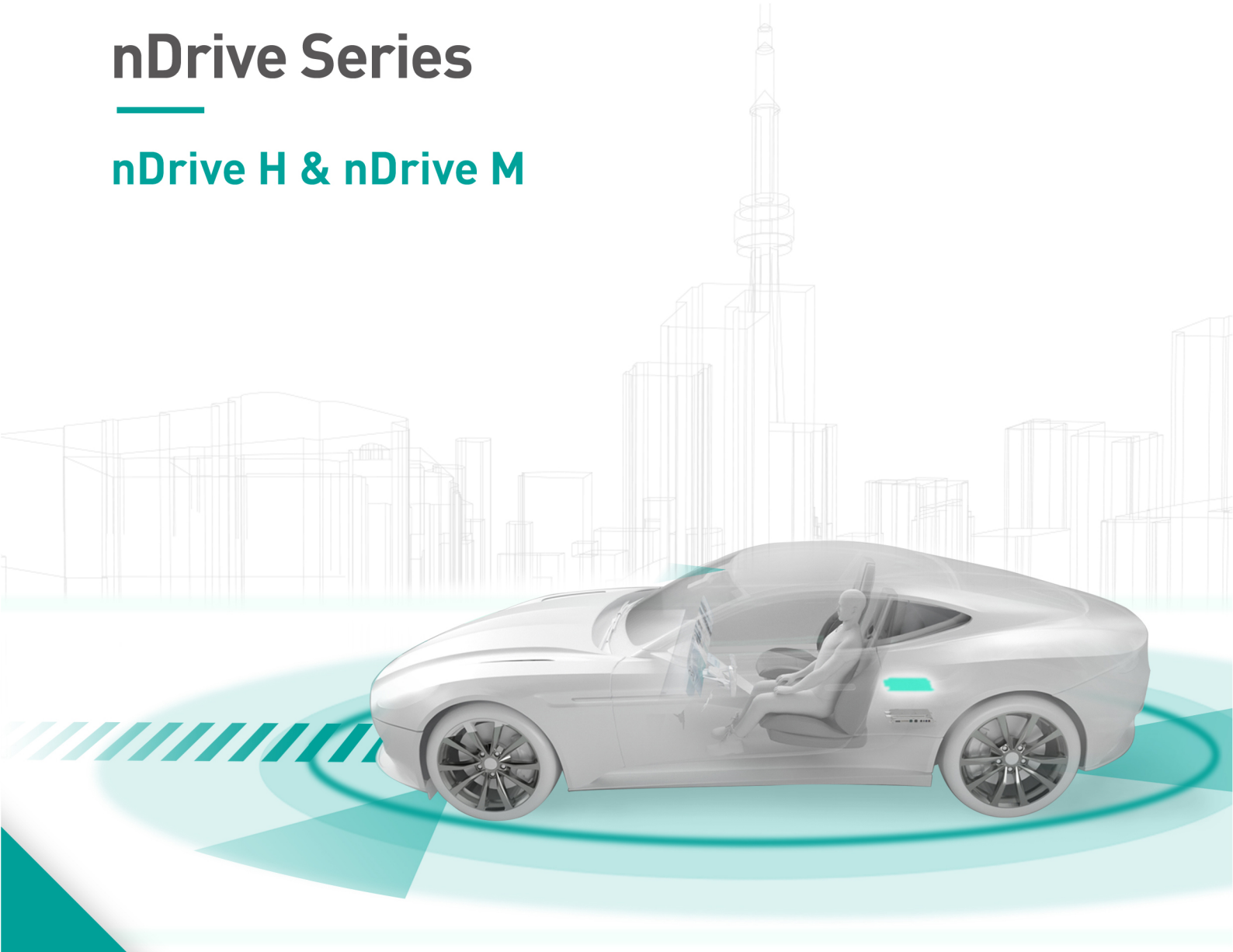
JOYNEXT ADAS Domain Controller nDrive Series

nDrive H & nDrive M



nDrive H – ADAS Domain Controller

One of the first in the world hardware solutions for autonomous driving based on Qualcomm's second-generation Snapdragon Ride platforms

Driving and parking integrated solution	Deep fusing solution for both HW and SW
High cost-effectiveness	Integrated driving and parking solution with deep fusion of hardware and software
Supercomputing power	More complicated planning algorithms and fusion capabilities for better human-machine co-pilot experience
Dual-chip design	Full-redundancy design; extensible functions
Safety compliance	ASIL-D certificate and independent safety island
Optimized product design	Lightweight design, ultra-low power consumption

Technical Details

- Computing power:
  -AI: 200TOPS
  -CPU: 480KDimps
  -GPU: 2600GFlops
- External sensor: Support up to 3L5R12V12U
- Structure design: Dual-chip configuration (Qualcomm 2nd generation Snapdragon Ride platform)
- Cooling solution: Patented liquid cooling design is adopted for high-end version

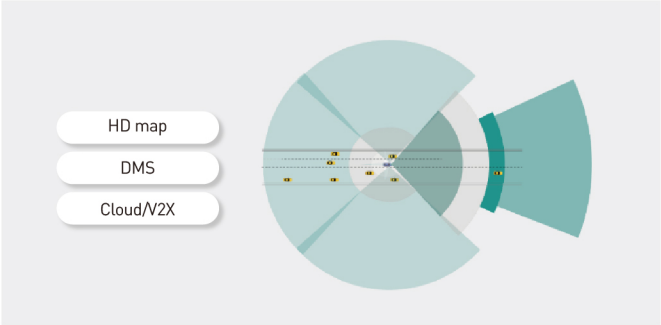
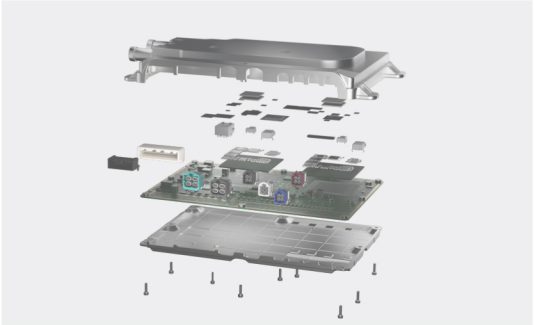


Diagram of supported external sensors

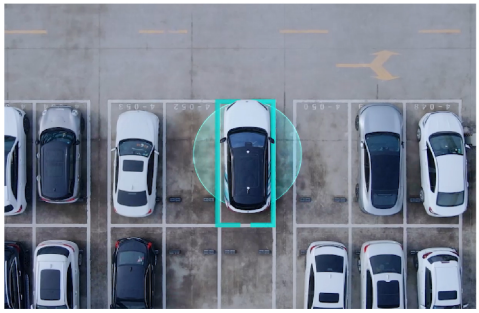


Exploded-view diagram of hardware

Applications

- Support L2++ to L4 multi scenarios of autonomous driving

*Autonomous driving scenarios example



HPA

NOP

HWA

nDrive M – ADAS Domain Controller

High-efficiency AI engine	The new generation of BPU architecture, high utilization of computing power and highly optimized DDR bandwidth
Powerful heterogeneous computing capability	The heterogeneous multicore processing architecture with high efficiency and versatility, supporting computing power redundancy and feature extension
Remarkable design on functional safety and cyber security	ISO26262 compliant product design, and built-in security engine

Technical Details

- Computing power:
  -CPU: 26KDmips
  -BPU: 128TOPS
- External sensor: Support up to 1L6R12V12U
- Rich interfaces: Up to 12 ports for camera, 10 ports for CAN FD, and 4 ports for Ethernet
- Structure design: Dual- or triple-chip configuration on MCU and SoC
- Cooling solution: Liquid cooling design is adopted for the high-end version (air cooling for the low-end version)

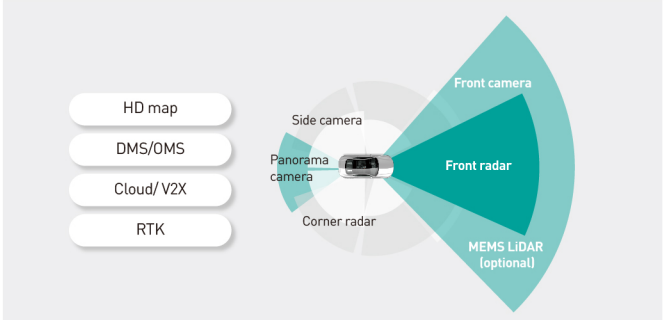


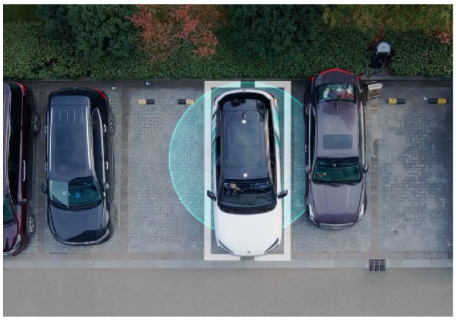
Diagram of supported external sensors

Hardware diagram

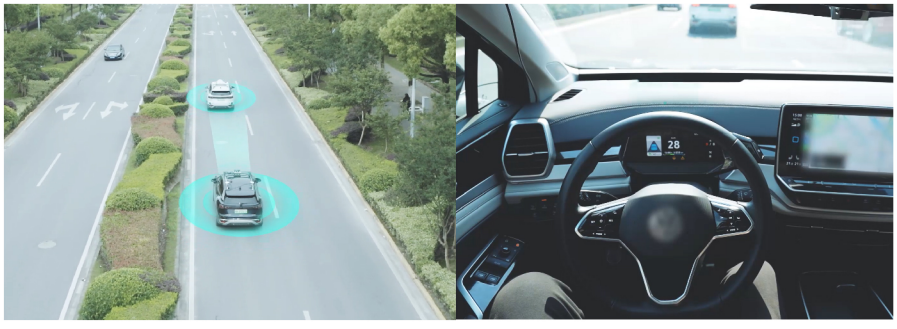
Applications

- Support all scenarios of L2++ autonomous driving

*Autonomous driving scenarios example



Home AVP



NOP

About JOYNEXT

JOYNEXT is the Automotive Connectivity BU of Joyson Electronics. Headquartered in Ningbo, China. We have around 1,500 employees, including over 900 R&D engineers, working across 7 R&D centers, 3 global manufacturing locations, and 5 customer centers around the world.

With more than 20 years of experience as a premier supplier to the world's leading automakers, JOYNEXT is one of the few providers that can develop safe and reliable intelligent solutions for customers through the synergy of software and hardware. Our intelligent cockpit and smart connectivity technology can now be found in more than 10 million vehicles worldwide, while 5G+C-V2X has become one of the world's first products across the segment to go into mass production.

As a long-established partner of VOLKSWAGEN, Audi, BMW, NIO, and HiPhi, among other world-famous car brands, JOYNEXT has accumulated rich experience in delivering smart connectivity solutions through the global platforms, complemented by our capabilities in developing autonomous driving technologies and software products. We are committed to developing integrated intelligent solutions for connected vehicles and delivering a highly personalized mobility experience that is empathic, safe, and adaptable.

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