

Product Factsheet

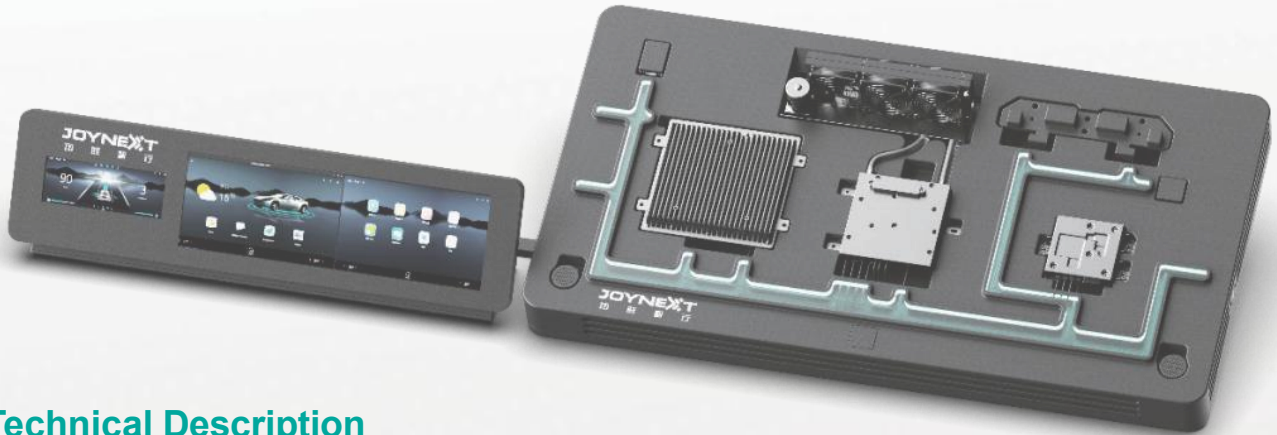
JOYNEXT nCCU – Central Computing Unit

Welcome!



► JOYNEXT nCCU – Central Computing Unit

Based on highly integrated and modular design, through a multi-core heterogeneous architecture, it deeply integrates functions such as cockpit, intelligent driving, regional controller, gateway, and interconnection, ensuring efficient collaboration between systems. At the same time, it provides dual guarantees of functional safety and data security, offering competitive solutions.



> Technical Description

High integration: high-performance computing units support cross-domain operations within the cabin, enabling dynamic allocation of computing resources

High cost-effectiveness: "integrated" solution reduces the number of controllers, vehicle wiring harnesses, and ECUs

Cab-in-control fusion: with an ASIL-D safety level, it supports L2+ autonomous driving through multiple cameras and ultrasonic radar inputs

Platform-based software and hardware design: supporting global mainstream chip design and SOA application architecture implementation

AI powered empathy cockpit: integrating local and cloud-based AI large models, it enhances user experience through multi-modal interaction, providing an empathetic, safe, and personalized "third space" tailored to each individual

Leading in 5G technology: initiating 3GPP R17 ahead of the industry, introducing satellite communication and RedCap lightweight 5G new products; integrating multi-functional RF, antenna, and digital signal processing capabilities to significantly enhance communication performance and antenna efficiency

Advanced positioning and scalability: based on AOA single-anchor positioning technology, it flexibly extends and combines BLE/Channel Sounding/Sparklink to adapt to different market demands

The zonal controller is equipped with rich I/O interfaces: it supports the signal access of different sensors within the physical area and supports multiple channels of CAN(FD)/ETH/LIN/FlexRay, etc

► JOYNEXT nCCU – Central Computing Unit

► Features

● A cost-effective solution for cross-domain integration

Assist OEMs in upgrading their electronic and electrical architecture and domain integration, providing more flexible, cost-effective, and efficient solutions

● Flexible resource allocation meets the diverse needs of OEMs

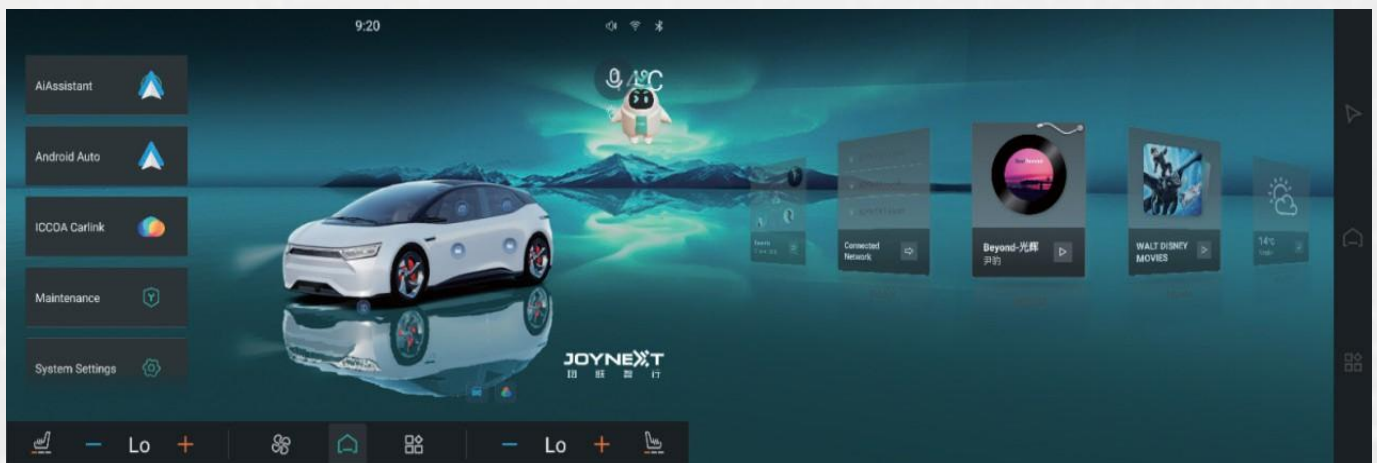
- Support cross-domain integration, extend L2+ autonomous driving, and support high-speed NOA, lane warning, AVP, etc
- Support AI cockpit: such as AI voice assistant, support vivid emotional expression, support natural semantics, context recognition, emotional & scene Q&A

● Immersive cockpit creates good user experience

Multi-screen display and interaction: Supports display on multiple screens, including a 30-inch entertainment screen and one 12.3-inch driving information screens (up to 8 screens supported)Immersive panoramic sound: Supports advanced noise reduction, multi-dimensional sound zones, Party Key scenes with light and sound rhythm, etc

● Stable and reliable touchless unlocking

Based on AOA single anchor points positioning technology, it achieves seamless unlocking/locking functionality



► Application Prospects

- Support multi-domain integration, achieve flexible computing power configuration, and provide diversified vehicle model adaptation solutions for OEMs

► About JOYNEXT

› Company introduction

JOYNEXT is a leading AutoTech company, the Automotive Connectivity BU of JOYSON Electronics. Headquartered in China, we have 1,700+ employees across 5 R&D centers, 3 global manufacturing locations, and 9 customer centers around the world.

We develop technologies for intelligent connected vehicles and provide a highly personalized mobility experience that is empathic, safe, and adaptable. With over two decades of experience as a Tier-1 supplier to the world's top automotive makers, we have established and maintained long-term partnerships with leading automotive brands, such as VOLKSWAGEN, Audi, BMW, NIO, BYD, Toyota, etc.

JOYNEXT intelligent cockpit and smart connectivity solutions have been applied in over 24 million vehicles globally. In response to the trend of transformation in the intelligent automotive industry, JOYNEXT continues to expand technological boundaries to facilitate industrial development. The company proactively develops cockpit-driving fusion solutions for central computing, embracing the future development trend of multi-domain integration.

With a dual focus on innovation and sustainable development, JOYNEXT actively work with several ecological partners such as HUAWEI, Qualcomm, Horizon Robotics, Black Sesame Technologies, Momenta, QNX, Elektrobit, and Baolong to jointly promote the transformation of the intelligent automobile industry and continue to shape the mode of travel for generations.

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