

HORIZON JOURNEY™ 5 Automotive Computing Solution

Built for performance and efficiency in automated driving computing

Optimized Computing Solution for Smart Driving Applications

Assisted and autonomous driving systems face real-time computation challenges to deliver high performance at low latency, while maintaining high energy efficiency and high-cost effectiveness for perception, fusion, localization, planning and control tasks.

Following Journey 3, Horizon Journey 5 solution harnesses the full potential of accelerated computing to meet this challenge, with Horizon Robotics' highly efficient, domain specific compute architecture.

Journey 5's accelerator consists of two cutting-edge Brain-Processing Unit cores, or BPU™. Enabled by fully optimized scenario-based algorithms and an easy-to-use toolkit, Journey 5 is built to deliver environmental perception, fusion, localization, mapping, prediction and planning in a multi-sensor environment.

Journey 5 offers over 20 different cores to meet automotive specific workload requirements, including the dual-core BPU, an Octa-core ARM Cortex CPU, two DSP cores, two ISP engines, a CV engine with Optical Flow and Pyramid, a video encoder/decoder, a crypto engine and two lockstep MCUs in a safety island. Journey 5's heterogenous architecture delivers an optimal mix of flexibility and efficiency.

To meet automotive quality and safety requirements, Journey 5 was designed under certified standards and processes of AEC-Q100 Grade 2, ASPICE CL2 and received ISO-26262 ASIL B certification.

128 Performance TOPS	A55 Octa-Core CPU
1,718 FPS FCOS EffNet	2x GbE CAN FD
Open SW Toolkit	DSP Software Flexibility
ASIL-B	In volume Production

