The NVIDIA DRIVE® autonomous vehicle (AV) platform is a full-stack solution for highly automated, supervised driving through fully autonomous operation. It includes active safety, automated driving, and parking—plus AI cockpit capabilities—scaling from Level 2+ to Level 5.

**SYSTEM HARDWARE AND ARCHITECTURE:**

**NVIDIA DRIVE Orin™ SoC:**
- Integrated next-generation GPU architecture and Arm Cortex-A78AE CPU cores
- 254 TOPS—more than 8X the performance of the previous-generation SoC
- Adherence to systematic safety standards such as ISO 26262 ASIL-D
- Architecture that scales from ADAS to Level 5

The NVIDIA DRIVE Level 2+ solution is powered by two NVIDIA DRIVE Orin systems-on-a-chip—one for active safety, automated driving, and parking applications, and one for AI cockpit capabilities. It also includes the NVIDIA DRIVE Hyperion™ sensor suite for developers to evaluate their AV platform. DRIVE Hyperion includes:
- Eight cameras, five radars, and twelve ultrasonic sensors that interpret scenes with 360-degree awareness to produce a comprehensive environmental model.
- Three interior sensing cameras for driver and occupant monitoring.
The NVIDIA DRIVE Level 2+ solution is trained and validated on NVIDIA DRIVE Infrastructure—a true end-to-end development process based on a unified computing architecture. It starts with NVIDIA DGX™ systems, which enable streamlined, large-scale DNN training and optimization. Using the power of GPUs and AI, developers can comprehensively train DNNs for autonomous vehicle perception, planning, control, and more. The NVIDIA DRIVE Constellation™ and NVIDIA DRIVE Sim™ platforms provide a virtual proving ground with a near-infinite variety of driving conditions to test and validate DNNs on the same hardware as in the vehicle. Combined with the DRIVE AV solution, DRIVE Infrastructure creates a continuous development cycle for constant improvement.

This software-defined vehicle platform delivers continual enhancements for the end consumer as well. With over-the-air updates, automakers can deliver new features and capabilities throughout the life of the car, extending joy to the customer and creating new, transformative business models.