Introducing The
Ultimate Automotive Deployment
Safety Stack

As the automotive industry continues its rapid evolution towards enhanced safety, efficiency, and performance, the demand for robust and reliable solutions is paramount. The synergy between DiSTI Corporation's GL Studio Safety-Critical HMI software, SYSGO's PikeOS, NXP Semiconductor's i.MX 8 applications processor, and CoreAVI's VkCore® SC graphics and compute software suite forms the pinnacle of innovation and functionality in automotive technology.

Components That Put The Focus on Safety

GL Studio Safety-Critical HMI Software by **DiSTI Corporation** offers unparalleled capabilities in creating intuitive, visually appealing human-machine interfaces (HMIs) crucial for automotive applications. GL Studio SC offers the only arbitrary 3D Safety Critical Solution for functional safety. Its advanced features ensure compliance with safety standards while delivering an immersive user experience.
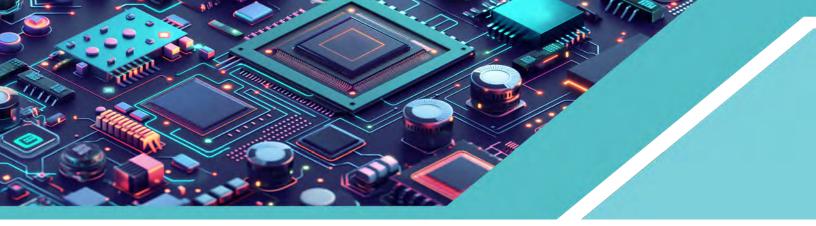
SYSGO's real-time operating system and hypervisor PikeOS serves as the robust foundation for applications that require the highest level of functional safety and security. PikeOS ensures determinism through an advanced scheduling mechanism, reducing jitter and is certified according to ISO 26262 at ASIL D. It allows safe and secure partitioning and virtualization essential for consolidated automotive systems. Its comprehensive functionalities ensure optimal performance and reliability in complex automotive environments.

NXP's i.MX 8 applications processor provides the processing power and versatility required for cutting-edge automotive applications. With its advanced media processing capabilities, secure domain partitioning, innovative vision processing and extensive connectivity options, it empowers developers to innovate and support a wide array of applications without compromise.

CoreAVI's VkCore SC suite of tools and libraries that enable the development and runtime deployment of accelerated GPU compute and graphics applications completes the deployment stack with its high-performance Vulkan SC-based GPU acceleration capabilities tailored for safety-critical systems. Its robustness and reliability make it the ideal choice for demanding automotive applications.

Why Choose This Deployment Stack?

This meticulously curated deployment stack offers a comprehensive solution tailored to the unique requirements of the automotive industry. By seamlessly integrating industry-leading software and hardware components, it ensures unmatched performance, reliability, and safety. From advanced HMIs to secure real-time operating systems, powerful processors, and optimized graphics drivers, every element is designed to deliver superior results. By choosing this deployment stack, automotive manufacturers can accelerate their innovation, enhance safety, and stay ahead in today's competitive landscape.

The DiSTI Corporation's GL Studio HMI software tools stand out as the premier choice for automotive applications. GL Studio's comprehensive suite of tools facilitates rapid prototyping, iterative design processes, and seamless integration with existing workflows, resulting in accelerated time-to-market and reduced development costs. Most importantly, GL Studio's adherence to top industry standards ensures compatibility with diverse hardware configurations and compliance with stringent automotive safety regulations, further solidifying its position as the preferred solution for automotive HMI development. **www.disti.com**

The Automotive industry is currently under a heavy change process. Coming from an engineered mechanic vehicle, automobiles nowadays become more and more rolling networked devices: Software-defined vehicles. Innovation is driven by software while the need for safety is constantly high and security is becoming mandatory. The real-time operating system & hypervisor PikeOS addresses the highest demands on safety and security according to ISO 26262 and ISO 21434 and delivers a comprehensive base for the next generation's mobility. **www.sysgo.com**

NXP Semiconductors is where the future of automotive begins. Designed to scale and evolve, NXP's system platforms are the foundation for every vehicle architecture. Building on top of this foundation, our i.MX series of applications processors offer advanced neural network processing, graphics, machine vision, video, audio and voice to support safety-critical applications. A part of NXP's Product Longevity program, a steady supply of i.MX applications processors are ensured to support development today, tomorrow and beyond. Let's redefine automotive together - for a future that's dynamic, safe, intelligent and electrified. **www.nxp.com**

CoreAVI is the global leader in architecting and delivering a safety critical software suite of tools and libraries as well as embedded 'system on chip' and discrete graphics processor components. CoreAVI's comprehensive software suite enables development and deployment of complete safety critical solutions for automotive industry applications requiring ISO 26262 certification to the highest integrity levels coupled with full lifecycle support. CoreAVI's solutions support next-gen GPU acceleration applications including machine vision and SafeAI. **www.coreavi.com**