Automotive

Future-Proof the User Interface

The world's leading automotive manufacturers and OEMS rely on DiSTI to future-proof their User Interfaces and improve their training through DiSTI's virtual solutions. DiSTI products are currently powering millions of cars on the road today and helping to train technicians and dealers around the world.

Automotive manufacturers depend on **GL Studio®'s** award-winning automotive UI development software. **GL Studio®'s** unmatched performance, rapid support, and ability to produce feature-rich high-quality 3D embedded user interfaces fire the imagination of designers and excite engineers.

Virtual Training on a Global Scale

Virtual Reality Training and Development for Automotive is possible with DiSTI's **VE Studio®**. Our technology allows companies to train technicians on a scale like never before. Without the need for a physical model, virtual reality is an ongoing training tool that provides opportunities to learn new skills and to improve the maintenance and diagnostic process.

HMI Development Tool

GL Studio® produces the highest quality gauges and controls within the automotive industry through one convenient platform. **GL Studio®** allows designers and engineers to create cutting-edge digital clusters, HUDs and IVI solutions with an:

- **80% faster time to market**
- **60% less Central Processing Unit (CPU) utilization**
- **67% faster target deployment time**
- **500 milliseconds or less UI startup time**
- **First UI tool to achieve ISO 26262-8:2018 ASIL D**

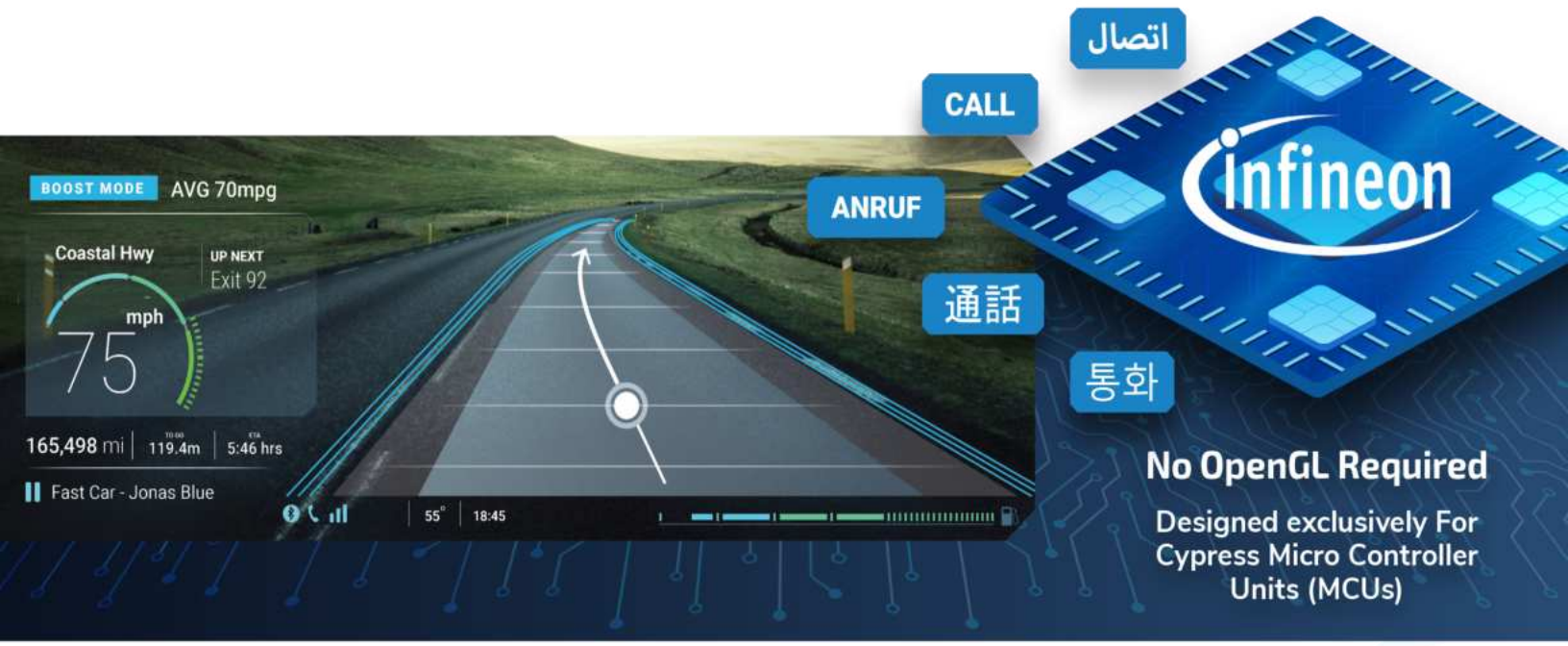
Industry Applications

- **Instrument Clusters**
- **Driver Information Modules (DIM)**
- **In-Vehicle Infotainment (IVI)**
- **Heads Up Displays (HUD)**
- **Augmented Reality HUDs**
- **Rear Seat Entertainment (RSE)**
- **Highest Quality and Performance Gauges and Controls**

The Safety-Critical Automotive Difference

Automotive manufacturers leverage **GL Studio®** for the automotive industry's first ISO 26262-8:2018 certified safety critical runtime libraries, to integrate out-of-the-box functional safety features in their UI at a minimal investment cost.

GL Studio® micro™



GL Studio® Micro™

Big Things Really Do Come In Small Packages

The robust power, reliability and agility you have come to expect from **GL Studio®** functionality tailored to meet the requirements of smaller embedded MCUs. With **GL Studio®**: Micro™, customers can streamline their power consumption, heat signature and costs without compromising the fidelity you expect from the world's top User Interface development tool.

Designed Exclusively For Micro Controller Units (MCUs)

GL Studio® Micro™ goes beyond what customers have come to think possible from an HMI tool specialized for microcontrollers. **GL Studio®** gives developers the freedom to tailor their designs, even on the smallest scale. That is because we understand the importance of giving customers the very best, while ensuring a safe and reliable foundation.

GL Studio® was the first User Interface (UI) tool to achieve ISO 26262-8:2018 ASIL D for it's safety critical runtime libraries, making its runtime engine one of the only solutions on the market that delivers the entire embedded user interface runtime library source that is certified up to Automotive Safety Integrity Level D; the highest classification of safety criticality defined by the ISO 26262 standard.

Functional Safety at Its Core

The **GL Studio®** Micro™ technology is based on this award-winning Safety-Critical runtime, providing customers with a safe and reliable development foundation, allowing OEM's and Tier 1's to use **GL Studio®** to completely certify their entire display framework.

- **GL Studio®: Micro™ has ligatures support built-in for Arabic, Hindi, and Thai yet still supports all other languages such as Korean, Chinese, Japanese, German, English, and more.**
- **GL Studio®: Micro™ is based on DiSTI's award-winning Safety-Critical runtime**
- **As a C++ code generator and runtime library, GL Studio®: Micro™ provides a smaller footprint compared to the leading competitor tools, while offering more features and capabilities in development.**

GL Studio® Mixed-Criticality™

GL Studio® Mixed-Criticality™ Workflow

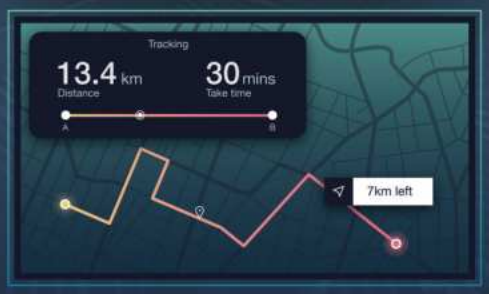
Develop QM and ASIL content in the same GL Studio Design

The DiSTI Corporation's **GL Studio** Mixed-Criticality™ Workflow facilitates both Safe and Non-Safe User Interface content in the same design file with a unified development workflow process.

Key Features and Benefits:

Both GL Studio Safety-Critical (ASIL) and Embedded Systems (QM) content in the same design.

OneTouch Deployment™ for single button rapid generation, compilation, content transfer, and application launch.



Visualize User Interface content on hardware target without the need for complex programming.

Benchmark Studies

Software	Dev time	FPS
GL Studio	10 Hrs	278 Hz
QT	2 Wks	50 Hz

*metrics based on independent industry studies

Features

» Faster iteration time

» Prototype directly on the hardware target

» Automated partition of SC and ES content

» Convenient, automated OneTouch Deployment™

» Workflow source code available for customization throughout project lifecycle

10x Runtime Performance

*metrics based on independent industry studies

Benefits

» 80% faster time to market

» 67% faster target deployment time

» 60% less CPU utilization

» Ten times better runtime performance

» Lower lifetime program costs

One UI Design, Two Approaches

As a C++ code generator and runtime library, the **GL Studio** HMI/UI software development tool provides for both Safety-Critical (SC) and Embedded Systems (ES) content in the same design. This is made possible by our Mixed-Criticality™ Workflow.

At code generation time, when **GL Studio** encounters ASIL content, it uses the SC code generator and runtime library for that code. In the next step, **GL Studio** checks for all non-ASIL content and uses the ES code generator and runtime library for that content. All of this content is then transferred to the hardware target and composited together at runtime.

60 Seconds or Less - Iteration on Target

This process uses **GL Studio**'s OneTouch Deployment™ to handle the generation, content transfer, and application launch that takes less than 60 seconds to iterate. This feature allows for a very rapid iteration cycle. It lets UI design teams visualize their content on the hardware target without the need for complex programming and gives a common platform for implementation engineers to work seamlessly with UI designers.

Why Engineers Prefer GL Studio

Independent industry studies have proven that the **GL Studio** development workflow yields up to 80% faster development time. **GL Studio**'s C++ code generation and runtime library method of development boasts up to 10x runtime performance and 60% less central processing unit (CPU) utilization. **GL Studio** application sizes out of the box are already highly optimized, showing just 10% of the application footprint compared to the leading competitor tools.

DISTI®

Have questions?

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