Automotive

Future-Proof the User Interface

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

Industry Applications

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

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.

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™

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 its 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™ 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:

1. **Rapid Iteration**
2. **One Touch Deployment™**
3. **Hardware Target**

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.
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.

Benchmark Studies

<table>
<thead>
<tr>
<th>Software</th>
<th>Dev time</th>
<th>FPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>GL Studio</td>
<td>10 Hrs</td>
<td>278 Hz</td>
</tr>
<tr>
<td>QT</td>
<td>2 Wks</td>
<td>50 Hz</td>
</tr>
</tbody>
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*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

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.
Have questions?

Please reach out through the information below

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