

COMPANY PRODUCTS

GL Studio®



GL Studio Proven by Our Wide Network of Partners



HMI & UI Design Software



Gain advantage over your competition

Industry leaders seeking HMI development software tools that will give them a true advantage over their competition rely on The DiSTI Corporation's **GL Studio**®.

Our software makes it possible to upscale the user experience with high-quality design and high performance while simultaneously reducing production costs.



Solution Offerings

- » Cockpits Instrumentation
- » Instrument Clusters
- » Instructor Operator Stations
- » Heads Up Displays
- » Safety-Critical Avionics
- » Animated Schematics
- » In Vehicle Infotainment
- » Symbology Overlays

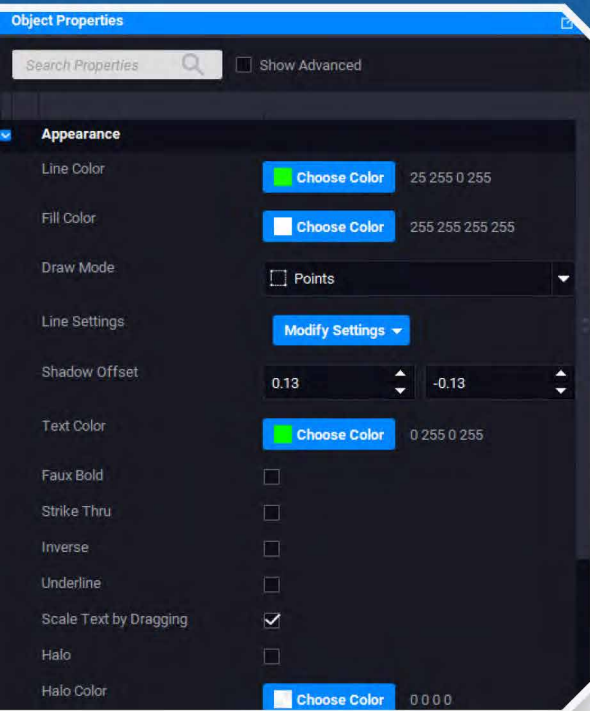
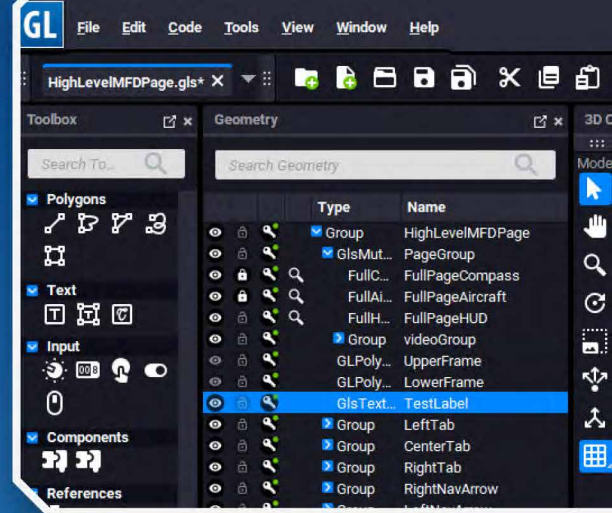


Simplicity

- » OneTouch Deployment™
- » Drag and Drop Assets w/ Built In Behaviors
- » Instantly preview and test UI
- » Maintain external asset linkage

Flexibility

- » Access to source code
- » Full control of generated code
- » Develop custom behaviors and features
- » Easily interface to third-party software



Productivity

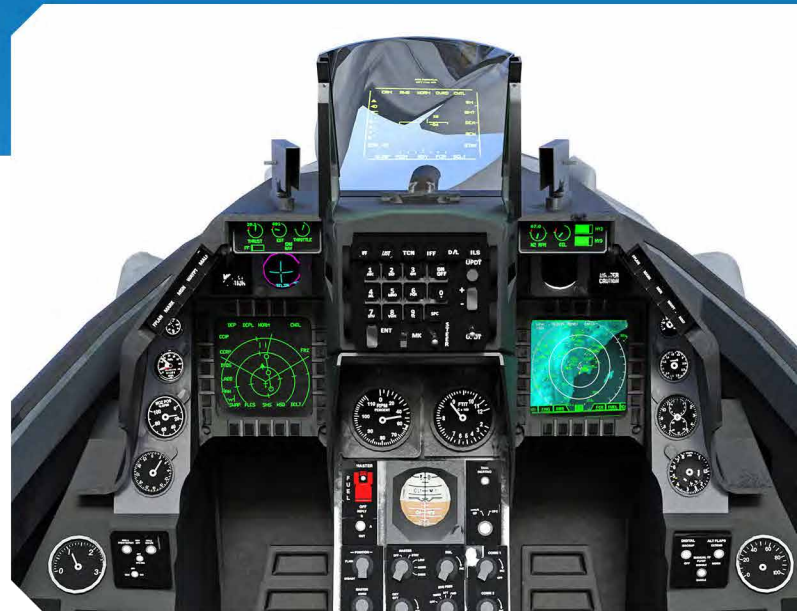
- » Code-free UI Designer workflow
- » Reusable package based system
- » Built-in animation system
- » Work with most any graphics tools
- » Automatic interfaces from Photoshop

Performance

- » Native C++ code
- » Fast application start time
- » Eliminate UI lag
- » Highly efficient and reliable runtime code base

Conceptualize, Develop, and Deploy

Deliver a full 3D user experience without compromising flexibility and performance. **GL Studio®** natively supports numerous file formats, including 3ds Max, Photoshop, and .svg, delivering 100% correlation between concept and reality.



GL Studio® versus the Competition

- » 80% faster time to market
- » 60% less Central Processing Unit (CPU) utilization
- » 67% faster target deployment time
- » Ten Times better runtime performance
- » 500 milliseconds or less UI startup time
- » First UI tool to achieve ISO 26262-8:2018 ASIL D for safety critical runtime libraries
- » Highest code reliability
- » Lower lifetime program costs.

GL Studio® vs. Qt		
	GL Studio®	QT*
Avionics	2004	
Medical	2008	
ISO 26262-8:2018 ASIL D	2015	2018

*2016 - 2018 Benchmark Study Comparison
*metrics based on an independent industry study.

Safety-Critical Expertise

GL Studio® meets and exceeds the ever-increasing safety requirements

GL Studio® has a built-in Safety-Critical Code Generator for use in Avionics, Aerospace, Agriculture, Medical, and Automotive applications. DiSTI also offers source code for testing, validation, and verification.

Designed for:

Avionics: FAA safety-critical Avionics in Aerospace, Defense and Space

- » DO-178C up to DAL A
- » Flying in aircraft and spacecraft

Automotive: Instrument Clusters and HUDs

- » ISO 26262-8:2018 up to ASIL D



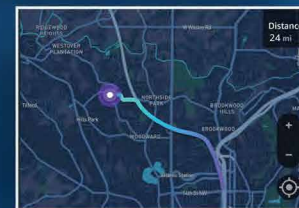
Patented Process

Patented Process

Pure Safety Critical Layer

Complex 3D Animations ES Layer

Compositing



Medical: FDA approved for medical devices

- » IEC 62304
- » Approved and in production for Class II Medical Devices

Nuclear: Facilities Controls

- » NQA-1 / IEC 60880
- » Nuclear HMI

Safety-Critical Focus

Organizations seeking the highest possible functional safety need to look no further than GL Studio®.

With close to 20 years of avionics safety-critical expertise, our software is currently flying in spacecraft and aircraft around the world, used in life critical medical devices and agriculture and automotive displays that demand high reliability. GL Studio® also offers the automotive industry's first ISO 26262-8:2018 ASIL D certified safety critical runtime libraries to integrate out-of-the box functional safety features into your UI, sooner than your competitor and at minimal investment costs.





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.



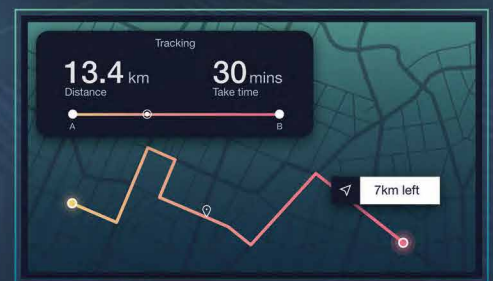
Key Features and Benefits:



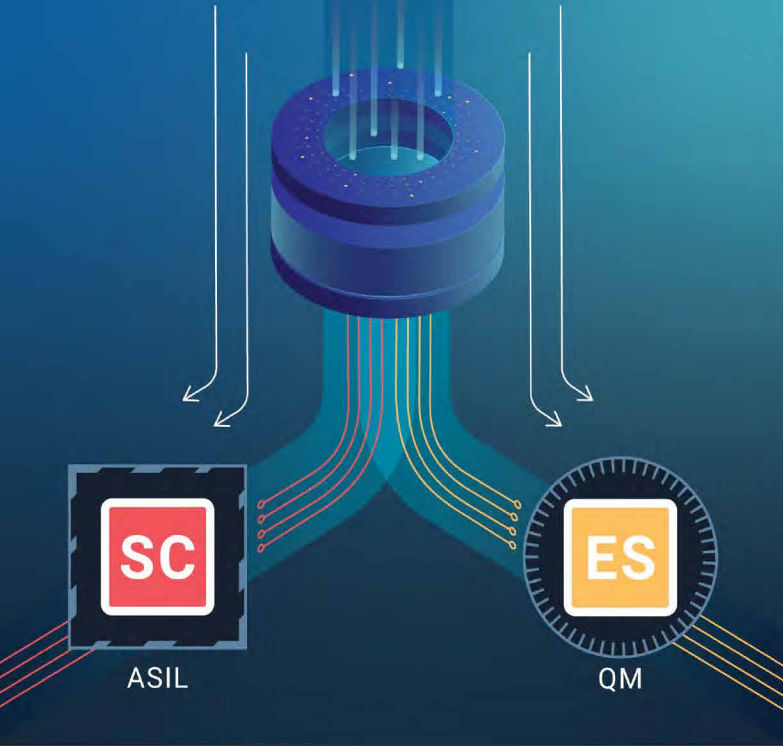
Both GL Studio Safety-Critical (ASIL) and Embedded Systems (QM) content in the same design.



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

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



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.

Supported Platforms Table

Partial list of the hardware and operating system combinations supported by **GL Studio**. If you do not see the combination you need for your project, please contact us for porting information.

AS OF 12-MAR-2020

	AGL Linux	Android	Angstrom Linux	Bare Metal (No OS)	eSOL eT-Kernel	GHS INTEGRITY	Intel Linux	iOS	Linux	Kendrick Canyon Linux	Peta Linux	QNX	Raspbian Linux	Wind VxWorks	YOCTO Linux
Android Devices		●													
Apple Devices								●							
Fujitsu Coral						●			●						
Fujitsu Triton					●										●
Intel Apollo Lake MRB						●	●					●			●
Intel Atom E3845														●	●
Intel Gordon Ridge							●								
Infineon Traveo II				●											
Intel Bay Trail										●					
Intel VTC 1010									●			●			
NXP i.MX6 Solo															●
NXP i.MX6 Dual						●								●	●
NXP i.MX6 Quad						●						●		●	●
NXP i.MX8 QuadMax						●						●			●
NXP i.MX8 QuadMax MEK						●						●			●
NXP i.MX8 QuadPlus						●						●			●
Qualcomm 802A	●					●						●			
Qualcomm Snapdragon	●								●						
Raspberry Pi2													●		
Raspberry Pi3													●		
Renesas R-Car M2						●						●			●
Renesas R-Car H2						●						●			●
Renesas R-Car M3						●								●	●
Renesas R-Car M3 SK														●	●
Renesas R-Car H3	●					●									●
Renesas R-Car H3 SK															●
ST Micro Accordo 5															●
Telechips TCC8022															●
Telechips TCC8971															●
Telechips TCC803x Dolphin+															●
Texas Instruments Jacinto J6												●			●
Toradex NVIDIA Tegra			●												●
Toradex i.MX6			●												●
XILINX Z702											●				
XILINX ZCU102											●				

DiSTI[®]

Have questions?

Please reach out through the information below



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