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.

① **Rapid Iteration**

② **One Touch Deployment™**

③ **Hardware Target**

ES
SC

CLUSTER

55

HUD

MENU 12:00

MUSIC

INFOTAINMENT

Key Features and Benefits:

SC **ASIL**   ES **QM**

DEPLOY

Tracking
13.4 km **30** mins
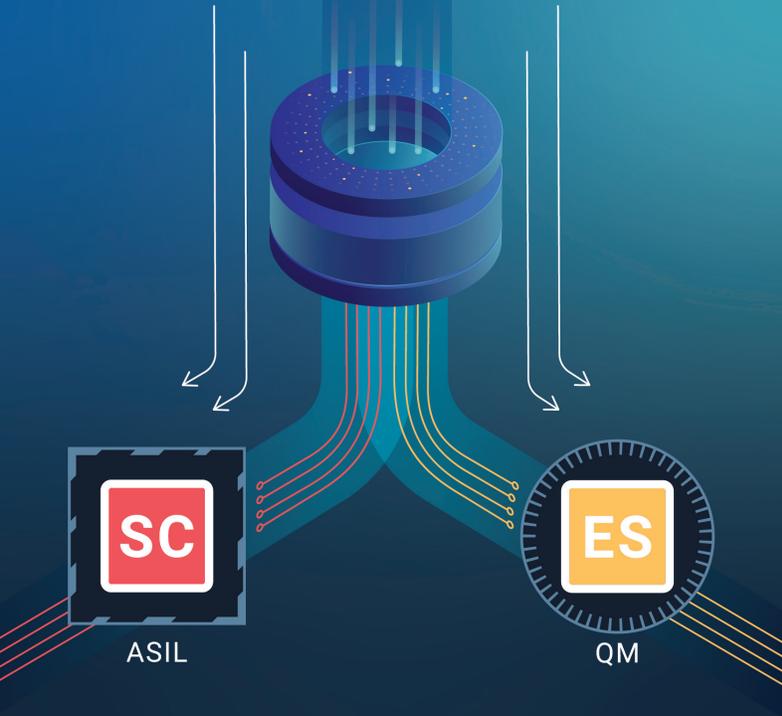Distance Take time
A B

7km left

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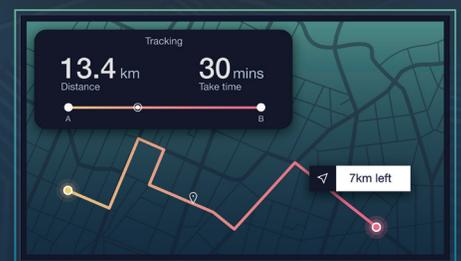
**Visualize User Interface
content on hardware target
without the need for
complex programming.**

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.

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.

ASIL   QM

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