



# Swell Software PEG Product Line

Any LCD. Anywhere. *PEG Software.*

Swell Software provides graphical user interface (GUI) solutions for embedded devices. Swell's PEG Pro, PEG+ and C/PEG product offering includes a GUI library for embedded development that works tightly with real-time operating systems. The development tool allows developers to layout user interface screens and controls using the PEG library and external resources to generate C/C++ code.

The PEG product family of tools is designed to meet widely varying power, performance and memory requirements, helping to:

- Reduce product development risk
- Lower in-house development costs
- Accelerate time to market

PEG software accelerates GUI design for embedded devices by allowing developers to create prototypes on a Windows® or Linux® based PC by providing a complete visual layout and design tool to enable GUI design to take place in parallel to the embedded software/hardware development.

The PEG WindowBuilder automatically generates C++ source code that is ready to be compiled and linked into any application, further accelerating the deployment of the final product.

Swell's GUI software products work hand in hand with Freescale customers' real-time operating systems to incorporate LCD screens and display interfaces

into future products. The GUI development tools address a variety of embedded systems, including consumer electronics, industrial, medical and communications markets.

## GUI Interface—Three Basic Drivers

### LCD Driver

- The LCD driver interfaces between the PEG Library and the LCD panel either through an onboard or external controller

### RTOS Driver

- The driver interfaces between the PEG Library and the RTOS installed on the microprocessor. If an RTOS has not been selected, use the stand alone driver to jump start your development process

### Input Drivers

- Inputs drivers available in multiple forms, including, but not limited to, a touch screen, keypad or from other sources within the system
- Input drivers compatible with Freescale **Xtrinsic** software and hardware solutions

PEG also provides custom drivers for most LCD panels and controllers, RTOS systems, touch screens and other input devices

PEG Pro	PEG+	C/PEG
<ul style="list-style-type: none"> <li>• Screen transitions</li> <li>• Multiple alpha-blended windows</li> <li>• True anti-aliasing</li> <li>• Gradient manager</li> <li>• Open GL support</li> <li>• Written in C++</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple window updates</li> <li>• Alpha-blended images</li> <li>• Run-time image decoders and language resources</li> <li>• Custom widget integration</li> <li>• Dynamic themes</li> <li>• Written in C++</li> </ul>	<ul style="list-style-type: none"> <li>• Designed for small LCDs (QVGA)</li> <li>• Low color-depth</li> <li>• Very small footprint</li> <li>• Single window update</li> <li>• Multi-language capable</li> <li>• Written in ANSI C</li> </ul>
<b>One of the smallest footprints and most efficient code bases available.</b>		
Starting 225 KB Typical 225–250 KB	Starting at 160 KB Typical 160–175 KB	Starting at 90 KB Typical 90–110 KB

Professional Services team provides custom consulting and software development: driver development, UI development, graphic design.

Pricing starts as low as \$4995 for a developer project license with three seats.



## Target Applications

Appliance	Consumer	General Purpose	Medical	Factory Automation
Human-Machine Interface	Digital TV and Set-Top Box Applications	Connected Multimedia Devices	Blood Glucose Monitors	Industrial Automation
Small Home Appliances	Hand-Held GPS Units	Automotive Infotainment	Electro Cardiogram	Human Machine Interface
Large Appliances	Printers	Home Security Systems	Ventilators	
	Smart Phones	Test and Measurement Devices	Patient Monitors	
	Digital Cameras	POS Kiosks	Defibrillators	

## PEG WindowBuilder for Rapid Development

WindowBuilder allows a designer to layout each of the screens for a project through a simple-to-use interface, providing a “What You See Is What You Get” display.

- Full WYSIWYG development
  - Simulation environment for PEG+ and PEG Pro
  - Runs on PC/Linux/X11 to allow proof of concept development
  - Enables hardware/software development to happen in parallel
  - Made available for free evaluation



## Licensing and Support Options Using Freescale Silicon

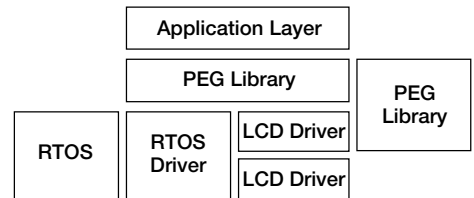
License				
	Part Number	Developer project license*	Part Number	Runtime License **
C/PEG	F-PEGC-LICDL-F	\$4,995	F-PEGC-LICRL-F	\$9,990
PEG+	F-PEG-LICDL-F	\$6,995	F-PEG-LICRL-F	\$13,990
PEG Pro	F-PEGP-LICDL-F	\$7,495	F-PEGP-LICRL-F	\$14,990
Additional Seat	F-PEGA-LICDL-F	\$1,495		

\*10,000+ and includes three developer seats \*\* 10,000+

Support				
	Part Number	Developer project support and renewal	Part Number	Runtime support and renewal
C/PEG	F-PEGC-SUPDS-F	\$1,249	F-PEGC-SUPRS-F	\$2,498
PEG+	F-PEG-SUPDS-F	\$1,749	F-PEG-SUPRS-F	\$3,498
PEG Pro	F-PEGP-SUPDS-F	\$1,874	F-PEGP-SUPRS-F	\$3,748

**Learn More:** [swellsoftware.com](http://swellsoftware.com)  
Send inquiries to [Swellhelp@freescale.com](mailto:Swellhelp@freescale.com)

## GUI Interface Technology



## GUI Interface Technology

PEG's modular form enables a rapid development process

- The core library interfaces to different RTOSs, input devices and LCD controllers by replacing the underlining driver

## Features and Benefits

Features	Benefits
Highly customizable	Reduce development time and costs
Multi-lingual support, including UNICODE	Rapid user interface development
High color, including true anti-alias line and font drawing support and per-pixel alpha blending	Resolve product usability issues before committing to a physical design
Small footprint for cost-sensitive applications	Standardize on graphics software solutions across products
Designed for cross platform application development, highly portable across OS and CPUs	Differentiate your product with a sophisticated user experience
Screen transition effects—slide-in, wipe, fade	Flexibility in selecting the processor/graphics controller
Touch screen support	
Support for multiple graphics layers	
Run-time “theme” support	
Fast execution speed	

## Supported Ecosystems and Partners



**MQX**



**CodeWarrior**



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