LVGL

Renesas Ready Ecosystem Partner Solution

LVGL Pro Embedded UI Editor

RENESAS PARTNER NETWORK READY

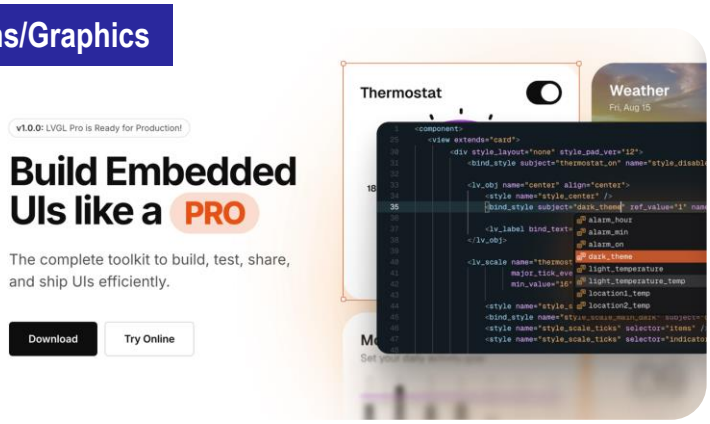
Solution Summary

LVGL Pro is the only official GUI editor for the LVGL graphics framework, developed by the core team at LVGL LLC. It provides a complete toolkit to design, test, share, and ship embedded user interfaces efficiently. It is a powerful XML editor with a real-time pixel-perfect preview, that supports creation and preview of modular UI designs via components and screens, UI tests, animations, translations, and more. It exports C code to be embedded into the firmware and can also recompile and provide preview from LVGL and C written custom widgets. Enterprise ready, it features Figma import, version control, online collaboration & sharing, CLI for CI/CD. Has built-in support for Renesas graphics accelerator and drawing engines HMI MCUs/MPUs, with support available for the RA8P1, RA8D1, RA8D2, RA6M3, RX72N MCU and the RZ/G2L, RZ/G2UL, RZ/A3M, RZ/G3E MPU evaluation kits and expanding to suitable RA, RX MCU Families and RZ MPU Family.

Features/Benefits

- Component-oriented for reusable UI components with custom API
- XML-based describes components in a human-readable, HTML-like syntax
- Runtime XML loading enables UI update at runtime with instant preview while editing
- Pixel-Perfect Preview & Inspector to view screens and components live in a pixel-perfect way and to visualize UI elements
- Enterprise ready with Figma integration, version control, online collaboration & sharing, CLI for CI/CD
- Services – Worry-free UI development via consulting, design and implementation services

Diagrams/Graphics



Target Markets and Applications

- Internet of Things (IoT) devices
- Wearables
- Home automation and smart devices
- Medical and healthcare applications
- Industrial control systems
- Consumer electronics
- Point-of-sale (PoS) terminals
- Kiosks

https://pro.lvgl.io

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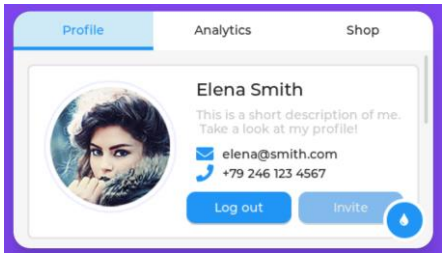
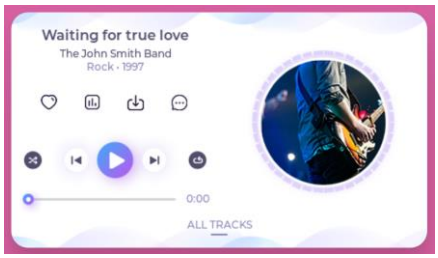
LVGL

Setting the standard for Embedded UI

Trusted by developers, chosen by chipmakers, and powering millions of devices worldwide, **Light and Versatile Graphics Library (LVGL)** is becoming the driving force for embedded UI. What started as a side project in 2016 has grown into the most widely adopted open-source UI framework for embedded systems. Unlike legacy solutions adapted from desktop frameworks, LVGL was designed for embedded from day one—lightweight, flexible, and efficient. Powering millions of devices worldwide, it is becoming the preferred choice for embedded UI in IoT, medical devices, automotive, and smart wearables.

- **Many Widgets**: 30+ built in widgets, such as Button, Label, Slider, Chart, Keyboard, Meter, Arc, Table, and many more..
- **Rendering features:** LVGL comes with powerful software render engine which can draw anti-aliased widgets, and vector graphics using minimal resources. GPUs are supported and can work together effectively with software rendering.
- **Powerful styles**: Choose from 100+ CSS inspired style properties to style the widgets run-time, change theme, or animate the style properties.
- **Responsive layouts**: Use web inspired Flexbox and Grid layout engines to position the widgets automatically in a responsive way.
- **Fonts and texts:** By supporting UTF-8 encoding, Right-to-Left writing systems, and translations, localizing the UI is not an issue.
- **Platform independent & portable**: LVGL UI code is fully platform-independent, has no external dependencies can compile on any modern target, unlocking use of the same UI code from small MCUs to multi-core Linux-based MPUs with 3D support.
- **Enterprise-grade UI development**: **LVGL Pro UI Editor** is the only official GUI editor for the LVGL graphics framework, developed by the core team at LVGL LLC. A complete toolkit to build, test, share, and ship embedded UIs efficiently.





Minimal requirements

- **Clock speed**: > 64MHz
- **RAM**: 4kB + 150byte / widget (~48kB for a UI with a few screens)
- **Flash**: ~100kB for LVGL (depends on the enabled features)
- **Draw buffer**: > 1/10 screen size buffer for rendering
- **Frame buffer**: at least 1 frame buffer in a display controller, internal- or external RAM
- **Compiler**: C99 or higher
- **Build system**: LVGL has no external dependencies. Just copy it into your project and compile it with the other files of your project

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