ELinOS
Embedded Linux

ELinOS 7.2

Industrial-Grade Embedded Linux

ELinOS is an industrial-grade Linux designed to streamline development with user-friendly IDE and essential software packages. Security is ensured with containerized applications and it includes tools for embedded systems. With a long-term maintained kernel, ELinOS adapts to diverse platforms and I/O facilities. Developers can work in C, C++, and Rust, backed by world-class technical support.

- ☑ Feature Configurator
- ☑ Open SSH / Open VPN
- ☑ Application Debugging
- ☑ LTS Linux Kernel
- ☑ Eclipse-based IDE
- ☑ Integrated Firewall
- ☑ Qt Embedded
- ☑ QEMU HW Emulators
- ☑ Docker Support

At a Glance

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Free ELinOS Test Version
→ **www.sysgo.com/get-elinos**

Key Features

- **Pre-Configured Embedded Linux:** Out-of-the-box embedded Linux environment optimized for industrial applications
- **Integrated Development Environment (IDE):** CODEO provides graphical tools for configuration, debugging, and monitoring
- **Security & Hardening:** Supports secure boot, integrity checks, and containerized applications
- **Real-Time Capabilities:** Supports real-time Linux extensions for deterministic performance and runs on PikeOS with Para-Virt and HwVirt
- **Secure, Real-Time Extensions:** Low-latency, deterministic performance with advanced Security features
- **Hardware Support:** Optimized for multi-core and heterogeneous computing incl. Board Support Packages (BSPs) for major embedded boards and chip vendors
- **Development Languages:** C, C++ and Rust

Available for*

x86, ARM, RISC-V, and PowerPC, and RISC-V

* Please check availability with a Sales representative

Safe & Secure Embedded Linux

In today's rapidly evolving embedded systems landscape, Security, reliability, and efficiency are paramount. ELinOS is tailored for embedded systems, reducing complexity while ensuring long-term stability. Moreover, ELinOS enables seamless development and deployment for industries demanding high-performance and Security.

Customer Benefits

- **Accelerated Time-to-Market:** Pre-integrated components simplify system design
- **Enhanced Security:** Kernel hardening and containerized deployments for robust Security
- **Optimized Performance:** Lightweight Linux for embedded use, reducing overhead
- **Customization:** Modular architecture to tailor configurations to specific embedded needs
- **Seamless Integration:** Supports a wide range of embedded hardware and software ecosystems
- **Long-Term Support:** 5-year standard support included, more possible on request

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ELinOS
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Trusted Platform & Services

CODEO IDE for SYSGO Products
→ **www.sysgo.com/codeo**

More Product Features
- **Advanced Security:** Immutable OS, SELinux (Security-Enhanced Linux), secure boot, Trusted Platform Module (TPM) support, integrated rule-based firewall, secure remote shell access, VPN
- **Container Support:** Enables modular and secure application deployment
- **Cross-Platform Development:** Supports Linux and Windows hosts for embedded development
- **Industrial-Grade Stability:** Designed for Safety-critical applications in Automotive, Railway, Medical, or Industrial Automation

Kernel
ELinOS 7.2 features Linux kernel 6.1 LTS, optimized for embedded and real-time use. Other versions are available for select BSPs. The kernel is auto-configured in CODEO IDE and built with gcc-12.2, binutils 2.40, and glibc 2.36. Yocto BSP vendor kernels can be imported, and SPDX v2.3 licensing is supported.

Supported Boards
AMD, Intel, Raspberry Pi, NXP, Phytec, Renesas, TQ Systems, Texas Instruments, Xilinx, and others

Project Templates & Customizable Features
Networking, web servers, Qt Embedded, GTK & X11, Wayland/Weston, minimal footprint Linux, and many more customizable options

Embedded File Systems
Ext4/3/2, UBIFS, btrfs, JFFS2, SquashFS, FAT, NTFS, RAM file systems, NFS, F2FS

Industrial Automation
Support for industrial needs with CAN, VME, IPv6, USB 3.0, WLAN, and more (e.g., EtherCAT, …)

250+ Pre-Compiled Apps & Libraries
BusyBox, Qt, GTK+, XOrg-Server, OpenSSH, OpenVPN, Lighttpd, Apache, network manager, Wayland, MariaDB, Perl, and many more.

Industries & Applications
ELinOS is trusted across various domains where Safety and Security are paramount:
- **Industrial Automation:** Smart manufacturing, IoT, and Edge Computing
- **Railway & Transportation:** Embedded control systems for Safety-critical applications
- **Automotive:** Infotainment, ADAS, and vehicle control systems
- **Medical Devices:** Secure and stable platforms for healthcare applications

Support & Services
SYSGO is committed to ensuring the success of your projects by offering a range of support services:
- **Training & Consulting:** Expert guidance to harness the full potential of our products
- **Certification Assistance:** Access to certification kits and documentation to streamline compliance with industry standards
- **Long-Term Support:** Dedicated assistance throughout the entire product life cycle, ensuring sustained performance and reliability