

WIND RIVER LINUX

Wind River® Linux is the market-trusted, Yocto Project Compatible open source baseline that provides you with a flowing stream of support, maintenance, and risk mitigation assets designed to deliver quality and peace of mind, so you can focus on innovation.

Wind River is a founding member of the Yocto Project and one of its largest contributors of technology. Beyond nurturing the upstream innovation, Wind River Linux delivers vital components for the productization and commercialization of any Internet of Things (IoT) device. This includes software update capabilities in development and post-deployment, continuous security monitoring and vulnerability protection, IP and export compliance artifacts, and an unparalleled range of high-quality board support packages (BSPs) across a variety of architectures. These advantages create the ultimate starting point for embedded Linux development and innovation, while providing long-term peace of mind with support and maintenance for the life of your device.

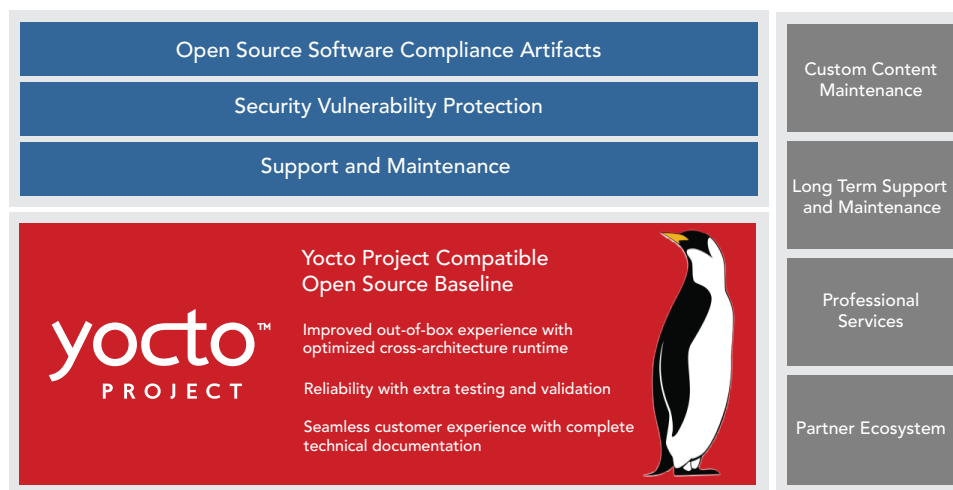


Figure 1. Wind River Linux benefits

KEY BENEFITS

Wind River Linux closely follows and contributes to the technology base developed by the open source community. When it comes to deploying open source software (OSS) into commercial products, device manufacturers must also consider the cost of owning and keeping the code base updated, handling legal liabilities, and putting in place a security protection strategy.

Security Vulnerability Protection

Device manufacturers and developers of IoT applications are increasingly including security functionality at the earliest stage of design. That's a good thing—in fact, it's essential—but it's not enough. Threats are constantly evolving. Operators of IoT systems need a mechanism to maintain the security of devices over their entire lifecycle. Wind River Linux provides ongoing threat mitigation in deployed systems against common vulnerabilities and exposures (CVEs). The Wind River security team is constantly monitoring security vulnerabilities, including specific security notifications from U.S. government agencies and organizations such as the National Institute of Standards and Technology and the United States Computer Emergency Readiness Team, as well as public and private security mailing lists and the CVE database at cve.mitre.org. The team receives alerts from each of these organizations whenever a new security threat arises. Alerts include both community-confirmed and potential vulnerabilities.

Wind River mitigates these threats through a four-step approach: monitoring, assessment and prioritization, notification, and remediation.

- **Monitoring:** Active monitoring of security alerts from reliable external sources, customers, and any other external submitters; during this stage, the team actively monitors specific security notification email lists
- **Assessment and prioritization:** Assessment and prioritization of vulnerabilities based on severity and difficulty of alerts (note that difficulty refers to the degree to which the vulnerability could be exploited, not the difficulty of fixing the issue)
- **Notification:** Notifying, within a short time frame, customers and the submitter of the level of susceptibility
- **Remediation:** Posting of the remediation action, based on the classification of susceptibility, within a short time frame (usually within 24 hours)

Open Source Software Compliance Artifacts

Licensing compliance and export disclosure requirements always arise when using OSS in production stages. Whether it concerns protecting the IP developed on top of the OSS base or clearing export classifications, these issues must be addressed early in the supply chain or there can be costly repercussions for downstream customers—fees and fines, business disruption, even lawsuits.

Wind River has worked with open source standards organizations to develop uniform approaches to managing OSS license and export compliance. These practices are intended to mitigate the risk of using OSS and avoid the consequences of noncompliance, while relieving developers of the burden of identifying, reporting, and complying with hundreds or even thousands of OSS license terms.

To facilitate the sharing of different types of compliance information throughout the supply chain, Wind River introduced the concept of the compliance envelope. A compliance envelope is a zipped archive that contains the following:

- All required licensing data
- Source code legal notices
- Export cryptography information associated with the OSS used to construct the product

Device Lifecycle and Maintenance

The open source release cadence is fast paced, and maintaining an entire code base can put a significant burden on developers. Accessing new enhancements means either using the latest code or backporting. Wind River Linux provides a constant flow of product updates that:

- May contain new board support packages
- May contain minor feature enhancements
- Are installed into a self-contained layer that does not taint any folder of the install directory

TECHNICAL SPECIFICATIONS

Supported Processor Architectures

Our list of BSPs is unrivaled in the industry, and we deliver optimized solutions for the latest NXP, Intel®, LSI, Texas Instruments, and Xilinx platforms:

- ARM®
- x86
- MIPS
- Power

Product Version

In 2016 Wind River released Wind River Linux 9. This release supports the Yocto Project environment to help developers achieve greater cross-platform compatibility and component interoperability:

- Yocto Project 2.2
- Linux kernel 4.8
- GCC 6.2 toolchain
- BitBake build system

WIND RIVER PROFESSIONAL SERVICES

Wind River Professional Services provides deep embedded Linux expertise across many processor architectures to expedite Linux platform delivery. Our offerings span the entire project lifecycle, including architecture, design, development, porting, integration, and maintenance services. We leverage our state-of-the-art platform simulation and test tools to accelerate deliverables and provide valuable reporting and documentation. Our global professional services organization provides flexible engagement options for consulting, training, and support that will meet your project resourcing requirements and budget. For more information, visit www.windriver.com/services.

WIND RIVER CUSTOMER SUPPORT

Wind River offers award-winning 24/7 global customer support services. We're here to assist you every step of the way through your Wind River Linux development project. Wind River Long Term Support Services and Wind River Premium Project Support offer technical assistance and resources that can be tailored to your unique project needs and budget. Custom-

ers can access live assistance, product manuals, software, and other resources such as the Knowledge Library and Knowledge Forum within the online Wind River Support Network. For more information, visit www.windriver.com/support.

WIND RIVER EDUCATION SERVICES

Wind River provides flexible training options to meet your business and learning needs. Our offerings empower developers with the knowledge and proficiency required to program and manage device software faster and more reliably. Reduce your project risks and shorten your development timelines with the right training from our experts. For more information, visit www.windriver.com/education.

