



## ARLX Hypervisor - Roadmap

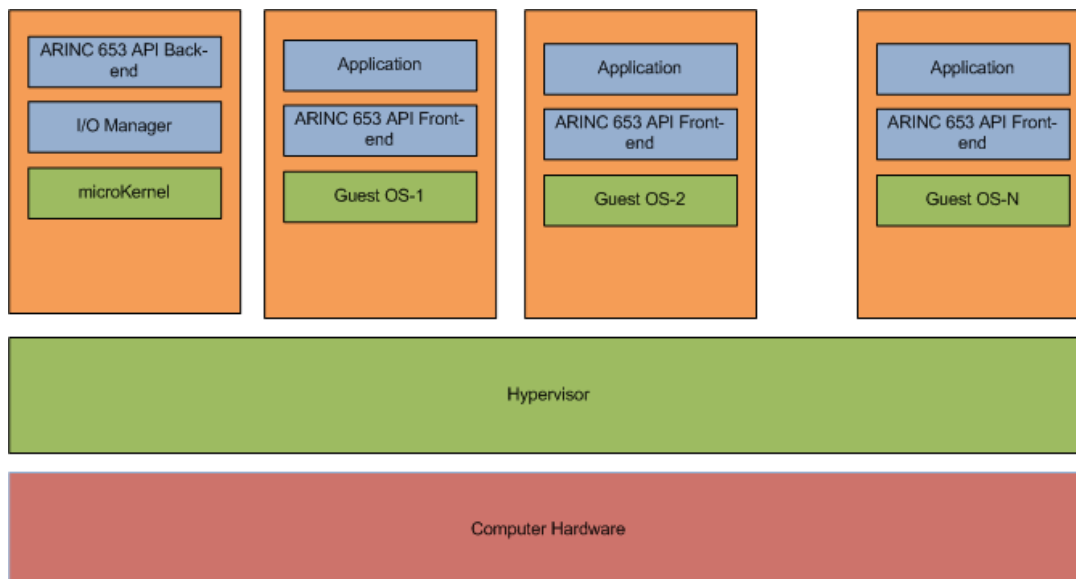
Embedded Software Products

### Overview

The ARINC 653 Real-time Linux on Xen (ARLX) Hypervisor is an open-source hypervisor built with safety and security in mind. When size, weight, and power (SWaP) are issues in your design, ARLX provides a unique path of meeting these goals. Our hypervisor is an ARINC 653 compliant extension to the open-source Xen hypervisor and is developed according to the strict safety assurance directed by DO-178. Our hypervisor decreases the cost and risk of certifying applications migrated to a new platform. We'll work with your operating systems and applications as they are.

When it comes time for implementation, a professional development subscription license can be purchased that provides the latest versions of source code, with an open source license that gives you complete freedom to use the code as you wish including customization and use with other vendors. We also provide certification packages for design assurance to some of the highest levels of safety and security in the industry.

Customization engineering services and support is available through our parent company, DornerWorks. Our staff of embedded engineers is available for customer and engineering support in the aerospace, medical, automotive, and industrial areas.



For additional information and ordering, contact [sales@genesysideation.com](mailto:sales@genesysideation.com)



## Benefits of a Hypervisor

- Consolidation of hardware resources by using a common computing platform.
- Lowered costs for certification.
- Sustainability of legacy systems
- Reduced complexity of maintaining legacy systems

## Target Applications

Embedded computer systems for your safety-critical and/or security-critical products.

- Aerospace
- Medical
- Automotive
- Energy
- Rugged Industrial
- Embedded security
- Mobile – Smartphone

## Features

- Type-1 Hypervisor with ARINC 653 extensions
- Hypervisor Partitions
  - Master System Partition for initialization and configuration
  - I/O System Partition to isolate and partition shared I/O bandwidth
  - Health Monitor Partition
  - micro OS Guest Partition
  - Linux Guest Partition
- Subscription licensing, with benefits of unrestricted open source software
  - No hidden restrictions or extra fees to make changes later
  - No legal entanglements chaining you to one vendor
  - Standard APIs giving you freedom of choice among vendors
- Open source and Open Standards
  - ARINC 653
  - POSIX
- Supports running instances of Linux, Solaris, Windows, VxWorks and other operating systems.
- Security and Safety Assurance
  - FAA DO-178C level A certification package

- MILS EAL certification package, including formal methods analysis
- CFR 21, Part 820 compliance for medical
- IEC 61508
- ISO 26262
- Target Platforms
  - x86
  - ARM
  - PowerPC

## Features Continued

- I/O Communication Device Drivers
  - RS-232/422/485
  - MIL-STD-1553
  - Ethernet, ARINC664p7 (AFDX)
  - CAN
- Tool Options
  - Software
    - Diff-Impact – Quickly analyze differences and impact of changes to code
    - Traceability – Analyze tracing between certification artifacts
    - System Configuration – specify the system schedule, partitioning, and inter-partition communication.
    - ARINC 615 data loader
  - Hardware
    - Debugger
    - Performance Monitor
    - System Monitor
- PC-based demonstration on a USB flash drive

## Benefits of Using ARLX

- Open source licensing of source code via a subscription. No hidden or obscure licensing requirements.
- Open standards. Mix and match vendors with freedom.
- Engineering and product support from the experts in our engineering services company, DornerWorks.
- Board support packages for Intel, ARM, and PowerPC processors. Customized BSP support through DornerWorks.

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