

# Hardware Abstraction Layer (HAL) Guide

**Document Version:** v25.10.01

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**Prepared by:** ARXOS Team

## 1. Introduction

- **Purpose:** Describe the goal and scope of this document.
- **Audience:** Intended readers (e.g., developers, students, integrators).
- **Scope & Limitations:** Boundaries of what is covered here and what is referenced elsewhere.

## 2. Overview

- Brief description of the ARXOS context relevant to this document.
- Relation to other ARXOS documents (cross-references where needed).

## 3. Core Content

*(Structure depends on the document - e.g., for Environment Setup, list steps; for API Manual, describe function groups, etc.)*

- Section A — [Topic-specific explanation]
- Section B — [Details, examples, figures if needed]
- Section C — [Additional notes, use cases, or warnings]

## 4. Examples / Use Cases

- Step-by-step walkthroughs.
- Illustrative screenshots or diagrams (if applicable).
- Sample code snippets (if relevant).

## 5. Best Practices / Recommendations

- Practical tips for efficient use of ARXOS.
- Common pitfalls and how to avoid them.

## 6. References

1. [arxos.pdf](#) — *Getting Started with ARXOS*
2. [arx\\_package\\_structure.pdf](#) — *Explains repository layout, directories, and files*
3. [arx\\_env\\_setup.pdf](#) — *Development Environment Setup: toolchains, IDEs, simulators*
4. [arx\\_build\\_config.pdf](#) — *Building and Configuring ARXOS*
5. [arx\\_api\\_manual.pdf](#) — *ARXOS API Manual*
6. [arx\\_porting\\_guide.pdf](#) — *Porting ARXOS*
7. [arx\\_debugging\\_guide.pdf](#) — *Debugging ARXOS*
8. [arx\\_coding\\_standards.pdf](#) — *ARXOS Coding Standards*

## 7. Revision History

Version	Date	Author	Description
v1.0	30/10/2025	APX Team	Initial draft

## About ARX

ARX is a real-time operating system developed and licensed by ARX Labs Pvt. Ltd.

It has been designed, developed, and tested by a team including alumni of the National Institute of Technology Karnataka (NITK).

Among existing RTOS solutions, ARX introduces advanced technology to address critical firmware development challenges on real-time platforms.

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