ALP LAB

Lifecycle & Longevity Statement

E1M and E1M-X System-on-Module families

Document Number: LCS-E1M-001 **Revision:** 0.5 **Date:** November 2026 **Status:** Preliminary

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1 Purpose

Industrial OEMs designing equipment that will ship and be supported for 5-10+ years need supplier-side commitments before they will commit to a SoM. This document is Alp Lab's public statement of those commitments for the E1M and E1M-X System-on-Module families.

It is intended for:

- Engineering teams selecting a SoM for a multi-year program.
- Procurement evaluating supply-chain risk.
- Regulatory / compliance teams documenting the supplier in safety files (IEC 62443, ISO 9001, etc.).

This document is **informational** and is updated whenever Alp Lab's lifecycle posture changes. It is not a contractual commitment; specific terms can be negotiated as part of a Long-Term Supply Agreement (LTSA) — contact Alp Lab at contact@alplab.ai.

2 Long-Term Availability Commitment

Alp Lab commits to **at least 10 years** of production availability for every SoM SKU from the date that SKU enters volume production, subject to silicon supplier availability for the upstream SoC.

Commitment	Detail
Minimum production life	10 years from volume-production start, family-level.
End-of-Life (EOL) notice period	Minimum **12 months** advance written notice to active customers before any production stop.
Last-Time-Buy (LTB) window	Minimum **6 months** after EOL announcement to place final orders.
Final-delivery window	Up to **12 months** after the LTB cut-off to take delivery of LTB orders.
Backwards-compatible refresh	Where a silicon supplier discontinues an upstream component, Alp Lab will release a form-fit-function-compatible refresh of the affected SoM SKU under a new minor revision before EOL of the original revision.

Table 1 Production-availability commitment

3 Silicon-Supplier Risk Management

Each SoM's longevity depends on the underlying SoC supplier. Alp Lab tracks each supplier's published lifecycle and aligns its own commitments accordingly.

SoM family	Primary silicon	Supplier's stated longevity	Alp Lab commitment
E1M-AEN	Alif Semiconductor Ensemble	10+ years (per Alif's industrial-grade longevity program)	10 years minimum from VOL production
E1M-X V2N	Renesas RZ/V2N	15 years (per Renesas industrial-MPU program)	10 years minimum from VOL production
E1M-X V2N-M1	Renesas RZ/V2N + DeepX DX-M1	RZ/V2N: 15 years (Renesas); DX-M1: TBD (DeepX program details emerging)	10 years minimum from VOL production; DX-M1 longevity is the constraining factor

Table 2 Upstream silicon longevity (per supplier published commitments)

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4 Versioning & Change-Management Policy

4.1 Form-fit-function (FFF) compatibility

Within a single SoM SKU, hardware revisions are **form-fit-function compatible** unless a Product Change Notification states otherwise. Example: a customer who designed against `E1M-AEN701` revision R2 must check the carrier against the R2 → R3 changes listed in the datasheet section "Hardware Revisions" and in `ER-AEN-001` before fitting an R3 module.

4.2 Backwards-compatible additions

Minor revisions may **add** features (populated parts, new boot options, expanded operating range) that the previous revision did not have. Software that targets the older revision continues to work; software that wants to use the new capability must opt-in explicitly via the **per-SoM manifest** in the **E1M Specification** (E1M-STD-1.0 Annex C).

4.3 Backwards-incompatible changes

A change that breaks form-fit-function compatibility (different pad mapping, different electrical envelope, mandatory new external component) is **not** permitted within a single SoM SKU. Such a change requires:

- A new SKU.
- An accompanying **Product Change Notification** (PCN), issued at least 6 months before any affected customer takes delivery.

5 Product Change Notifications

Alp Lab issues a **Product Change Notification** (PCN) for every change that affects:

- The SoM's form-fit-function envelope (pinout, dimensions, electrical characteristics).
- The factory-shipped firmware image.
- Materials or substances in the SoM's BOM (RoHS, REACH, halogen-free, conflict-minerals).
- Regulatory certifications (FCC, CE/RED, ISED, MIC).
- Production location or assembly partner.

PCNs are published as numbered documents (`PCN-<family>-<NNN>`) and notified to active customers by email at least 90 days before the change takes effect, unless the change is regulatory-mandated with a shorter compliance window.

> **Note:** No PCNs have been issued for any Alp Lab SoM family at the time of this revision. PCNs, once issued, will be linked from this document and from the affected SoM's datasheet.

6 Long-Term Supply Agreements

Customers planning to ship >= 5,000 modules / year for >= 5 years are encouraged to enter a Long-Term Supply Agreement (LTSA) with Alp Lab. An LTSA provides:

- **Reserved production capacity** against a rolling 12-month forecast.
- **Price stability** for the agreement duration (CPI-linked, no surprise increases).
- **Buffer-stock commitment** under a vendor-managed-inventory (VMI) model.
- **Extended EOL notice** (24 months minimum vs 12 months default).
- **Priority access** to engineering-sample batches of upcoming SKUs.

LTSA terms are negotiated case-by-case. Contact Alp Lab at contact@alplab.ai to start the conversation.

7 Spare-Parts & RMA Policy

For every shipped module, Alp Lab maintains a repair / replacement supply chain **for the full 10-year availability period**. After EOL, spare-parts availability is governed by the LTB inventory acquired before the LTB cut-off.

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The Alp Lab warranty covers manufacturing defects for **two years from date of shipment**. RMA requests are processed through contact@alplab.ai.

8 Environmental & Regulatory Continuity

Alp Lab undertakes to maintain the following compliance posture across every SoM revision for the full production-availability period:

- **RoHS 3** (EU 2015/863) compliance.
- **REACH** (EC 1907/2006) declaration of any SVHC concentration >= 0.1 %.
- **Conflict-minerals** reporting per Dodd-Frank §1502.
- **Halogen-free** per IEC 61249-2-21 (where the original SKU is halogen-free).
- **Industry certifications** (FCC ID, CE/RED, ISED, MIC) renewed for any change that triggers a new certification cycle.

9 Contact

For any longevity, supply-chain, or LTSA conversation:

- Email: contact@alplab.ai
- Web: alplab.ai

10 Revision History

Revision	Changes	Date
0.1	• Initial publication of the Alp Lab lifecycle commitment for the E1M and E1M-X families.	May 2026
0.2	• FFF compatibility clause revised: hardware revisions are form-fit-function compatible unless a Product Change Notification states otherwise; added the E1M-AEN701 R2 to R3 example pointing to the datasheet “Hardware Revisions” section and ER-AEN-001.	October 2026
0.3	• Release history: every entry formatted as a bullet list.	October 2026
0.4	• Contact: contact@alplab.ai is the only contact address.	October 2026
0.5	• Product name on page 1 links to the product page on alplab.ai.	November 2026

Table 3 Document revision history

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