RCIRCUIT SPEC SHEET v1.0

Phase Computing · Resonance Architecture · HROS R&D; Prototype

1. Executive Summary

Modern AI fails not because of compute shortage — but because moving data became more expensive than computing it.

RCIRCUIT introduces a phase-based architecture replacing FLOPS scaling with resonance-density scaling.

2. The Physics Problem

AI scaling blocked by:

Heat, Power Density, Distance, Timing Jitter, Interconnect Collapse.

AI is interconnect-bound.

3. Architecture Shift — FLOPS → Phase-Density

GPU = heavy movement

RCIRCUIT = light adjustment

4. Minimal Public Architecture Model

Layer 0 — Physical Limits

Layer 1 — RCIRCUIT Engine

Layer 2 — Phase Compute OS

Layer 3 — HROS

5. GPU vs RCIRCUIT — Engineering Table

Scaling Unit: FLOPS vs Phase-density

Core Cost: Data movement vs Resonance stability

6. Conceptual Pipeline

Language → Meaning → Structure → Symbol → Code → Phase → ΔPropagation

7. RCIRCUIT Core Principles

Propagate Δsignal only, noise-filter first, local coherence.

8. Public Modules

v0.1 and v0.2 skeletons included.

9. Status (Q4-2025)

Completed: architecture, briefs, prototypes.

In progress: v0.3 scheduler & Δnormalization.

10. Final Declaration

Physics is the bottleneck. Resonance is the next frontier.

RCIRCUIT redefines how computation moves, stabilizes, and scales.