

Challenge_0009: Improving RV32IMCK

This challenge is a continuation of Challenge_0008. You are required to take the provided reference solution **Challenge_0008_Solution.zip** and improve its performance and/or area while keeping the design functionally **100%** correct. The baseline achieved the following:

- Functionality: 100%
- Area Score: 68
- Performance Score: 59
- Final Score: 81

Your goal is to modify and optimize the existing design to achieve a Final Score of at least 82 or higher using the same evaluation flow. There are no restrictions on maximum area or minimum performance individually — only the final score threshold (≥ 82) must be met.

Summary:

Start from the given RV32IMCK reference design → Optimize for performance and/or area → Maintain 100% functionality → Achieve Final Score ≥ 82 .