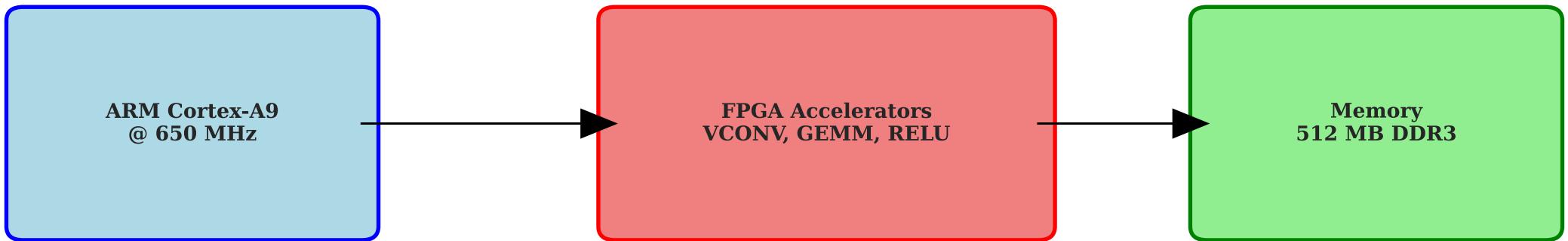


# FPGA-Accelerated RISC-V System Architecture



## Custom ISA Extensions:

*FPGA.VCONV (7.2× speedup) | FPGA.GEMM (4.2×) | FPGA.RELU (3.0×)*

**Performance: 2.14× Average Speedup | 49.1% Energy Reduction**