

171. DESIGN OF ROM ENTRENCHED SRAM FOR HIGH DENSITY ON-CHIP MEMORY

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In digital circuits we use both ROM and RAM separately for storing purpose which is an off-chip memory. Here each individual has its own advantages. Due to use of off-chip memory hardware is increased and performance is also degraded this problem creates the demand for onchip memory for such application. Thus for providing a solution for this issue we proposed a circuit which can be operated both as ROM and RAM using a single circuit. The R-cache uses a circuit which can be used both as ROM and SRAM. This made possible by incorporating the ROM in conventional SRAM circuit by adding either extra word line or a ROM control signal (RCON). The designed R-cache can be used for the circuit which requires high density and high performance on-chip memory. The circuit simulation is done using the tanner EDA tool.

Index Terms- Static random access memory, Read only memory, R-Cache, ROM control signal, On-chip memory.

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