



Research Article



Energy Efficient Reversible logic Design for Code Converters

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ABSTRACT

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This paper proposes a new 3×3 reversible logic gates for application in optimized code converters. An optimum reversible logic design for different code converters such as BCD to Excess-3, Excess-3 to BCD, Binary to Gray and Gray to Binary is achieved by using the proposed reversible logic gates. It was shown that the proposed design leads to the reduction of power consumption compared with conventional logic circuits. This optimization is achieved by minimizing number of logic gates, garbage values and input constants.

Keywords: code converters; garbage values; reversible logic gates;

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