



Research Article



## VLSI Implementation of Low Complexity MIMO Detection Algorithms

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### ABSTRACT

This paper presents VLSI implementation of low complexity multiple input multiple output (MIMO) detection algorithms which are Maximum Likelihood and Zero Forcing. Initially, the MIMO system structure, the mathematical model and two receiver detection algorithms are presented. Then we investigated the characteristics and performance of typical algorithms and concentrated on VLSI implementation of the system architecture and the two detection algorithms, which can give good performance. Finally, simulation results have been compared with each other in terms of complexity and error performance.

**Keywords:** VLSI; MIMO, Detection Algorithms, ZF, ML, FPGA, BER, Low Complexity

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