# Innovation Design Of Four Axis Router Machine Module

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## Abstract

The present project aim to design and manufacture of a low cost four axis router machine module with increased percentage of a local manufacture.

A prototype should be built and tested in laboratory. The project activities include software simulation, materials selection from the local market, CAD (computer aided design) for mechanical design, machine ability for mechanical design, tracking and control system design and design optimization.

The main of this project is the design and manufacturing of four axis router machine that could be locally manufactured and installed. The total investment and therefore it has a strong influence in final cost of manufacturing. During the last years some novel approaches have appeared that aim to reduce this cost by developing low cost four axis router and/or new calibration and control procedures that could reduce significantly the cost of the manufacturing.

There are many high mass production drives that could be adapted to track a small machine. This small machine suitable for cutting processes in different materials and mass production for factories, improving quality and reducing assembly, alignment and checkout costs.