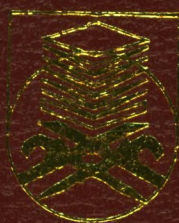# DEVELOPMENT OF AN INTELLIGENT, MULTIPURPOSE MOTION CONTROLLER FOR MANUFACTURING AUTOMATION

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In the Name of Allah

Most Gracious Most Merciful

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ABSTRACT

This report describes the design and development of the Intelligent Multipurpose Motion Controller (IMMC) for factory automation. The IMMC is developed for International Standard Architecture bus computer, which enables a computer to perform the switching and controlling processes. The main element of IMMC includes motion controller integrated circuits and programmable peripheral interfaces. Software design includes IMMC configuration, motion controller activation, communication between IMMC and computer, and the user interface. The functionality of the IMMC has been tested successfully on various types of applications and arrangements. The IMMC applications are not limited to certain design only as its software methodology is adaptable to various industrial application settings.

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