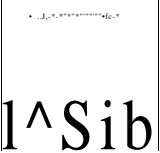


**DIGITAL COMPASS FOR INERTIAL NAVIGATION SYSTEM**

This thesis is presented in partial fulfillment for the award of the  
**Bachelor of Electrical Engineering (Hons.)**  
**UNIVERSITI TEKNOLOGI MARA**

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*Nur Idora Abdul Razak*

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## ABSTRACT

This paper presents the design of a digital compass for Inertial Navigation System (INS). The compass application can be implemented as a functional building block in navigation tracking device. The design is simple and low cost, made it suitable to be embedded on the control system of an aircraft or gliders, among others. Using magnetic sensor and accelerometer, the digital compass will give the heading and attitude of the aircraft which is the pitch and roll. It is programmed on the PIC18F2520 microcontroller using C language. The application is intended for the use in Malaysia with considering zero declination.

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## **REFERENCES**

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**APPENDIX B:** Digital compass PCB

**APPENDIX C:** Bill of material

**APPENDIX D:** Digital compass software