

ABSTRACT

The 68000 microprocessor becoming an increasingly important microprocessor in today's market, as evidenced by the frequent announcements of products using the 68000. The chip is expandable by design, and Motorola has produce a full 32-bit version in 1984. The 68000 is considerably more complex than many of the 16-bit minicomputers popular since the 1970s. The main purpose of the MC68000 microprocessor development board is to educate the coming generation of engineers and programmers about the 68000, with the expectation that they will able to learn, understand, and design their own systems that will be using the 68000 microprocessor. In addition to its intended audience of educators and students, this board is of interest to both high school student and the others which involved in learning and developing of the 68000-based system. This system will consist of two board which is the main board and the application board. The application board consist of various types of input and output devices such as 4x4 keypad, DIP switch, traffic light LED, DC motor, 7 segment display, dot matrix, and LCD. This prototype of 68000 microprocessor based development board will be able to produce various types of outputs according to the input given where it is able to be manipulated by programming the memory unit.

ABSTRAK

Pemproses-mikro 68000 menjadi kian penting dalam pasaran kini dan buktinya jelas kelihatan melalui kekerapan produk yang menggunakan 68000 yang semakin meningkat. Chip tersebut boleh dikembangkan melalui rekaan dan Motorola telahpun menghasilkan versi 32 bit pada tahun 1984. 68000 boleh dikatakan lebih kompleks daripada banyak komputer mini berciri 16 bit sejak 1970-an. Tujuan utama papan pembangunan MC68000 pemproses-mikro adalah untuk mendidik bakal jurutera dan penulis program tentang 68000, dengan harapan mereka dapat memahami, belajar, dan mereka system mereka sendiri dengan menggunakan pemproses-mikro 68000. Tambahan untuk pengajar dan pelajar yang berminat, papan ini sesuai untuk pelajar dan mereka yang terlibat dalam pembelajaran dan perbanguan sistem berasakan 68000. Sistem ini mengandungi dua papan iaitu papan utama dan papan aplikasi. Papan aplikasi mengandungi pelbagai jenis input dan output komponen seperti 4x4 papan kekunci, suis DIP, LED, DC motor, 7-segment display, dan LCD. Papan prototaip pembangunan berasaskan pemproses-mikro 68000 mampu menghasilkan pelbagai jenis output berdasarkan jenis input yang diberi, dimana ia mampu dimanipulasi melalui pemrograman unit memorinya.