

Acknowledgements

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ABSTRACT

The main objective of the research is to enhance the capability of the computer to manage greater parallel input and output. This increase in parallel in and out is necessary when dealing with systems, which enhances the ability of the computer (17 bits input and 12 bits output). Many applications need greater number of parallel I/O. The proposed hardware solution is to use the Programmable Parallel Interface (PPI) technique. The proposed design facilitates the expansion of parallel I/O. One PPI gives the ability to deal with 24 parallel I/O, through software program. The software deals in real time with the external design to manage the parallel I/O's. Low level language is preferable as a software to activate program and control the PPI chips. Light Emitting Diodes (LEDs) are used to indicate for parallel I/O.

This design is dynamic in the sense that other PPI IC's can be added to circuit to increase the ability throughout the system. In addition to the enhancement of parallel input and output capability of the system, this design can be used for so many applications such as data acquisition and activation of different peripherals as well as applications related to control.

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