ABSTRACT

DESIGN OF MULTI I/O (48 I/O) COMPUTER CARD BASES ON PPI 8255 PROGRAMMABLE

By

NORMAN MEYER GULTOM

In computer system, a lot of facilities are offered by each of computer type, from the old type of computer until the very newest type. One of facility that being offered is slot that available in motherboard such as ISA slots (Industry Standard Architecture). To use this slot facility, a computer card is needed. Computer card that will be design in this research have a general function as I/O (input/output) component that can be programmed.

This computer card have PPI 8255 basis that have 48 I/O facilities. PPI was a chip that been design to used in microprocessor system. In this case, 2 pieces of IC PPI 8255 is needed to supply 48 I/O, so it is necessary to addressing each of PPI 8255. For 1 IC PPI 8255 needs 4 address which 1 of address is for Control port and the other for I/O port. Addressing for this computer card is processed by 2 pieces of IC Decoder 74LS138. Computer card that designed in here is address at 300H to 307H. Data process that happened in this computer card is able to result and to receive data. Chip Select signal's in each of PPI 8255 confirming computer card is access or not.

From this computer card, facility uses that offered by computer can be more effective, more over from this computer card consumer can use it for controlling activity as they need it.

Keyword : ISA slots, PPI 8255, Control Port, IC Decoder, 74LS138, Chip Select.