1 Circuit Explanation

Encoder circuit has been used for this lab. The encoder circuit is consisted of 16 input pins and 5 output pins. The purpose of the encoder is to get the number of low input bits until the first high bit appears. 4 outputs represents the number of low inputs named CODE, and one remaining input represents ERROR which is high when none of input bit is high. Since we have 16 bit inputs, there are $2^1 6 = 65534 possible combinations$.