

[illegible][illegible]

- The design takes in a 32 bits input as word_in
- Checks for a 4-bit set of 1101 and marks the index of the MSB of the set
- If the set is not found in the first 4 bits the index shifts one bit to the right and looks at the next 4 bits
- Once the set is found the index of the MSB is reported as index_out
- If all 32 bits are checked OR a set of 1101 is not found index_out becomes zero