# ISTANBUL TECHNICAL UNIVERSITY

Introduction to Embedded Systems

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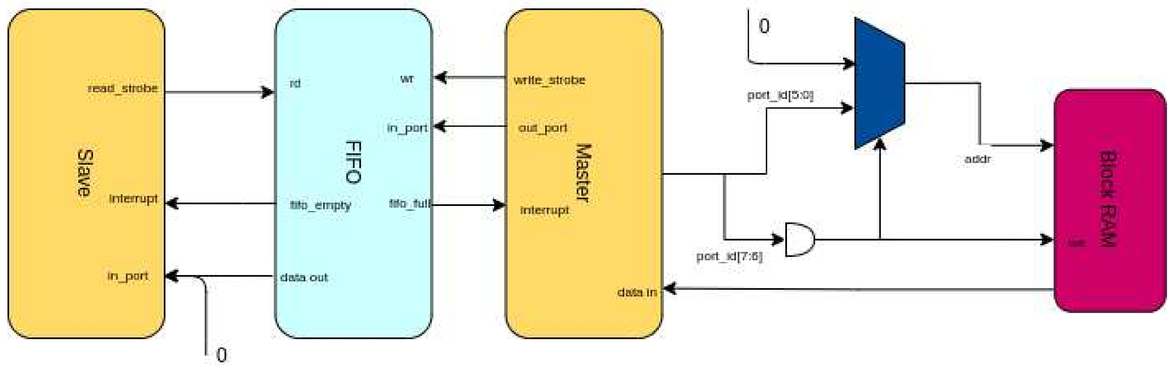
## Introduction

Master/slave configuration is a asymmetric communication model where one device or process controls one or more other devices or processes and serves as their communication hub. In some systems a master is selected from a group of eligible devices, with the other devices acting in the role of slaves.[1]

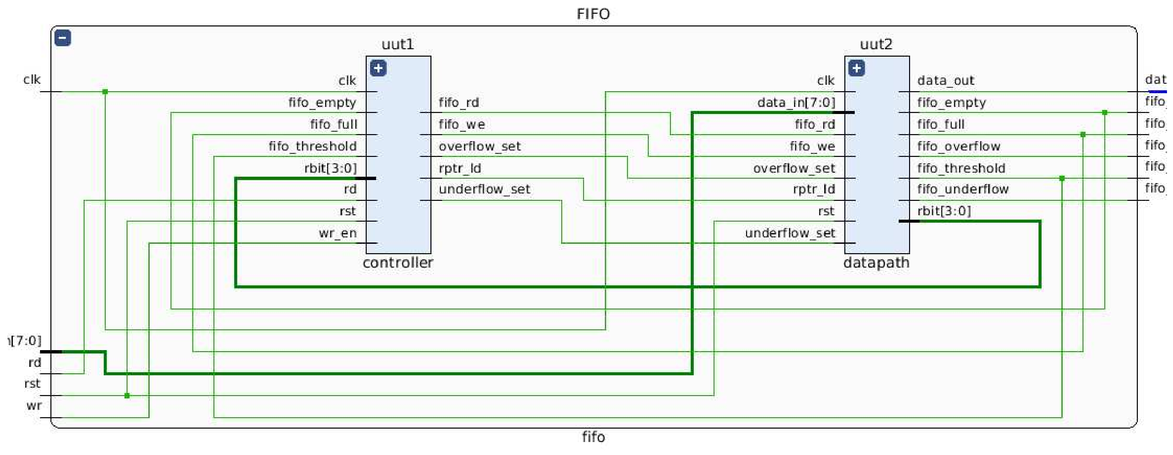
## How It Works

- Master picoblaze enables read strobe and reads data from block ram
- Master transfers data to the FIFO block
- If FIFO is full, master picoblaze goes into interrupt
- If FIFO is empty, slave picoblaze goes into interrupt
- Slave picoblaze reads data from FIFO block via 1 bit input
- Slave picoblaze converts 1 bit input in every 8 data received to the 8 bit original data by shifting received bit to the left and adding with new data
- Slave writes data to the out port

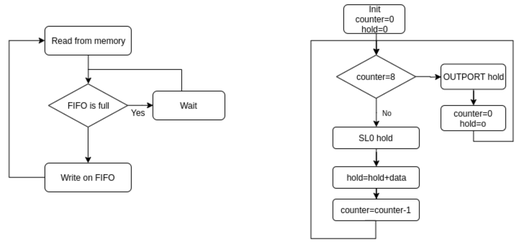
## System Overview




## System Blocks




## Algorithmic State Machine




## Source Codes

## References

[1] https://en.wikipedia.org/wiki/master/slave$_{(technology)}$.

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