

ELEC5620M: Embedded
Microprocessor System Design
MINI - PROJECT: Videogame

PONG

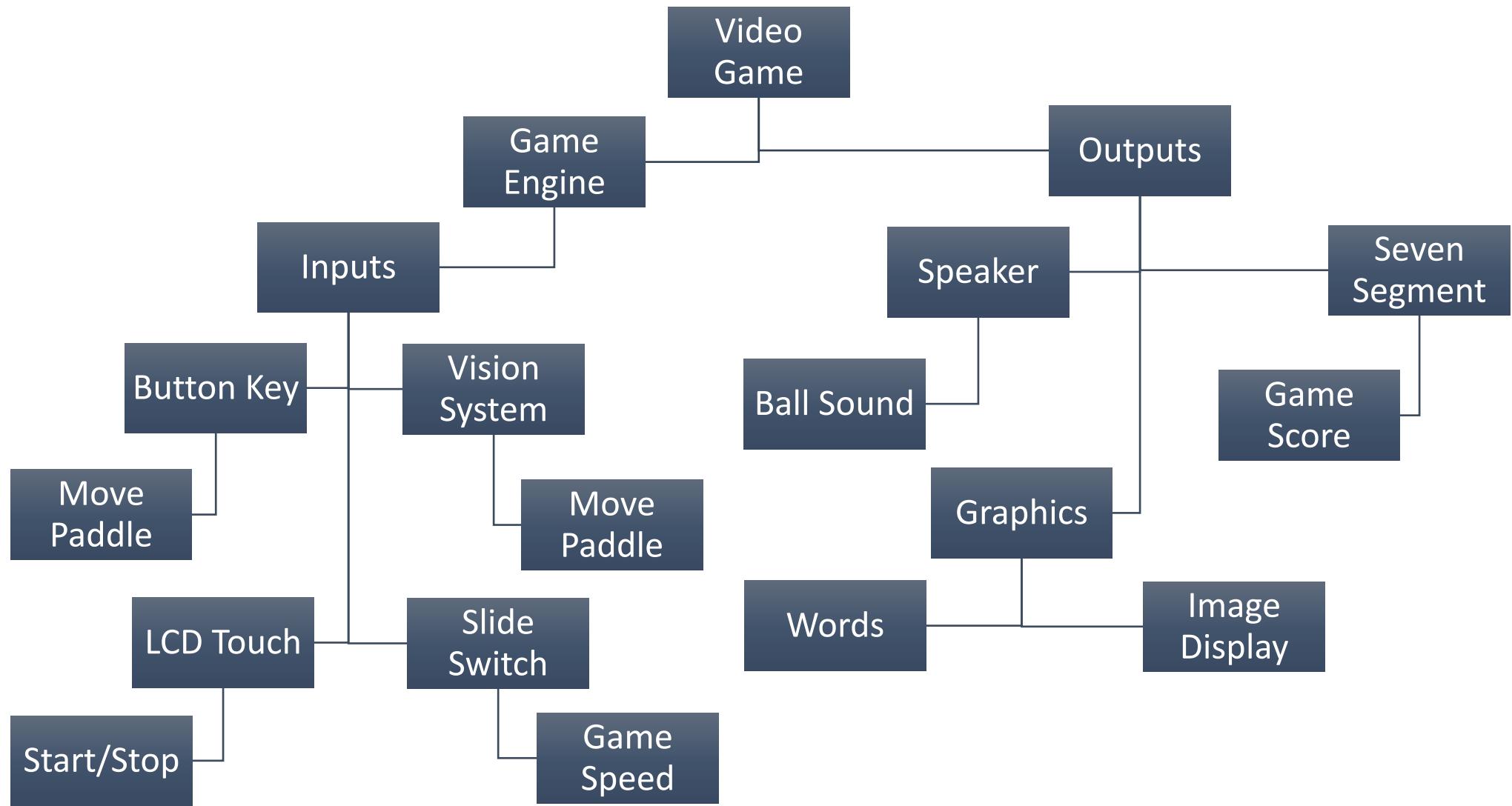
Nuo Xu
201286653

Sanjith Chandran
201290793

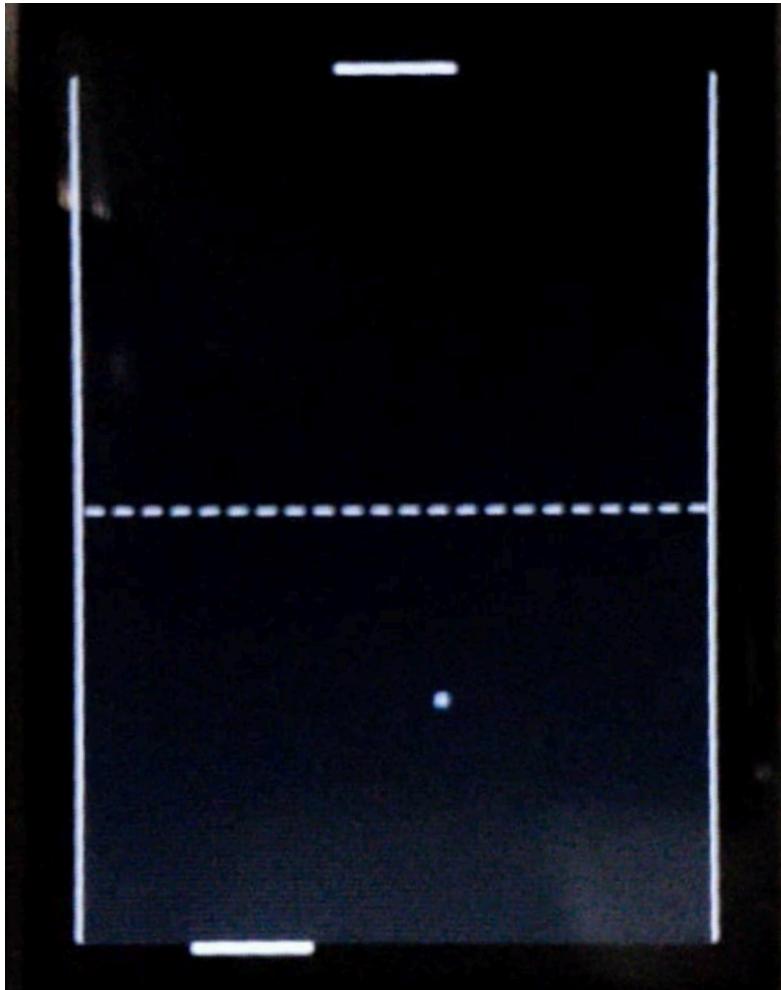
Shrajan Bhandary
201289634

MOTIVATION?

AIMS & PROGRESS



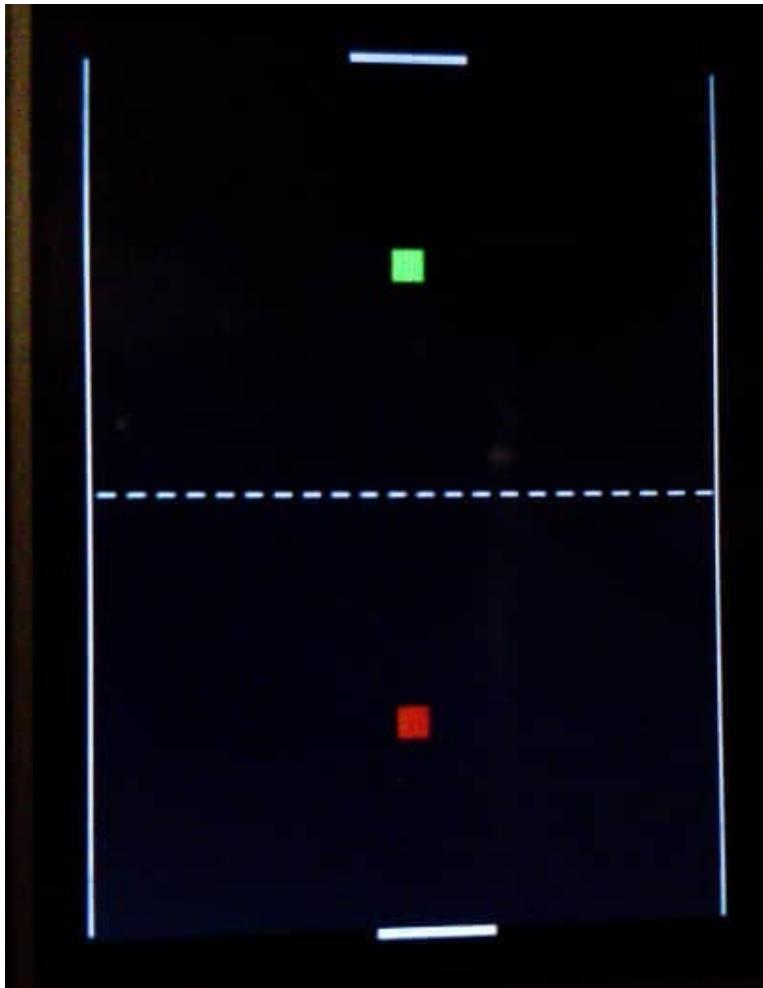
GAMEPLAY INTRO



Basic Rules

- Keep the ball in play
- First to 10 points wins

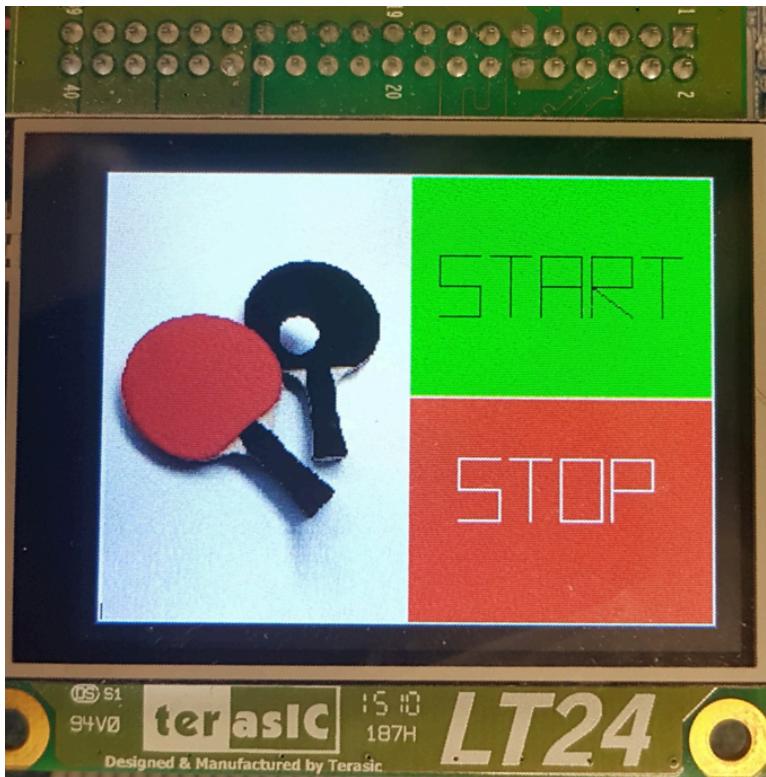
GRAPHICS



Pixel by Pixel

- LT24_drawPixel
 - drawLine
 - drawDash
 - drawBall & Erase
 - Paddles
 - Initialize, Draw & Move

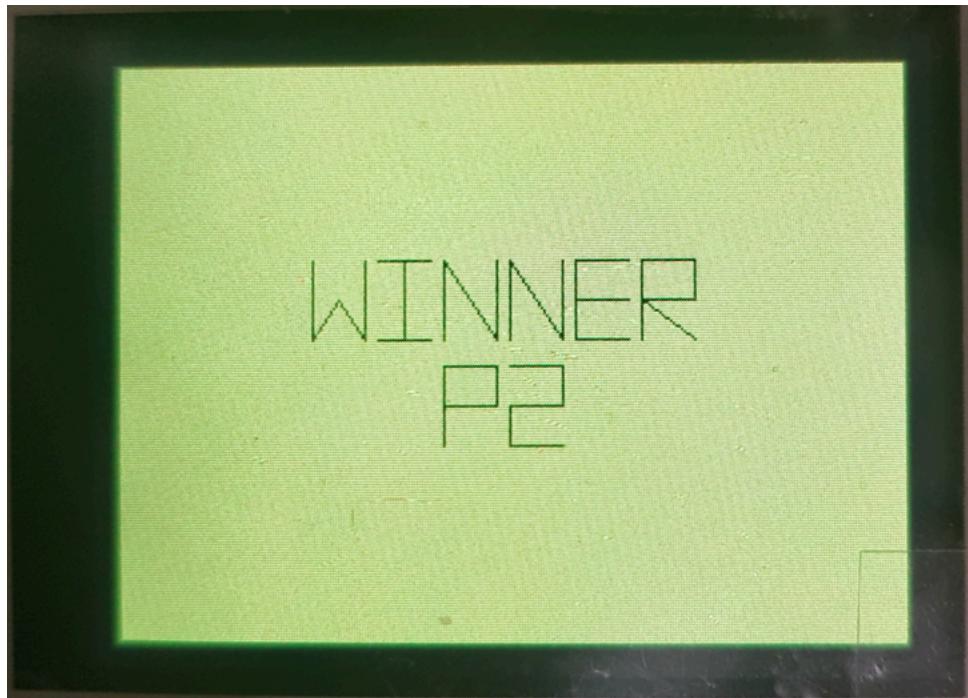
GAME ENGINE - SLAVE



Features

- Image Conversion
- LCD Touchscreen
 - Start & Stop
- Board-to-Board Communication

GAME ENGINE - MASTER



Custom Functions

- Move_Ball
- Round_off
- Seven Segment cases
- Update_Score

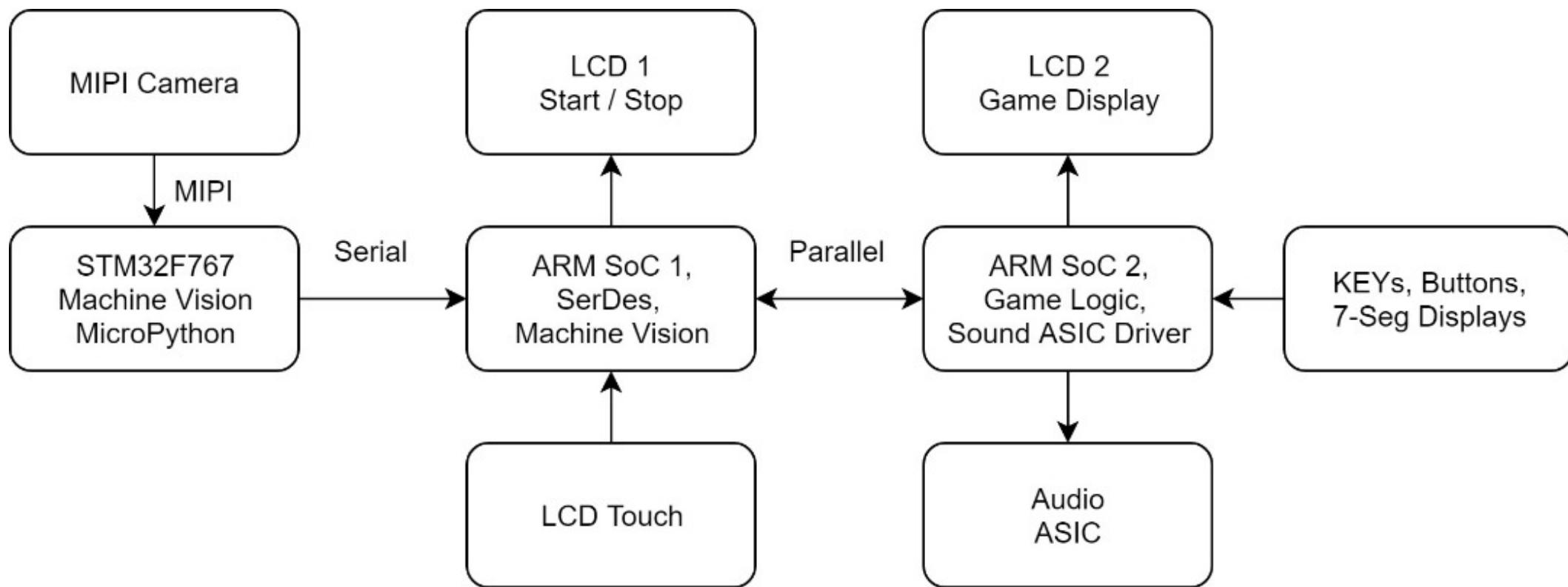
VISION SYSTEM



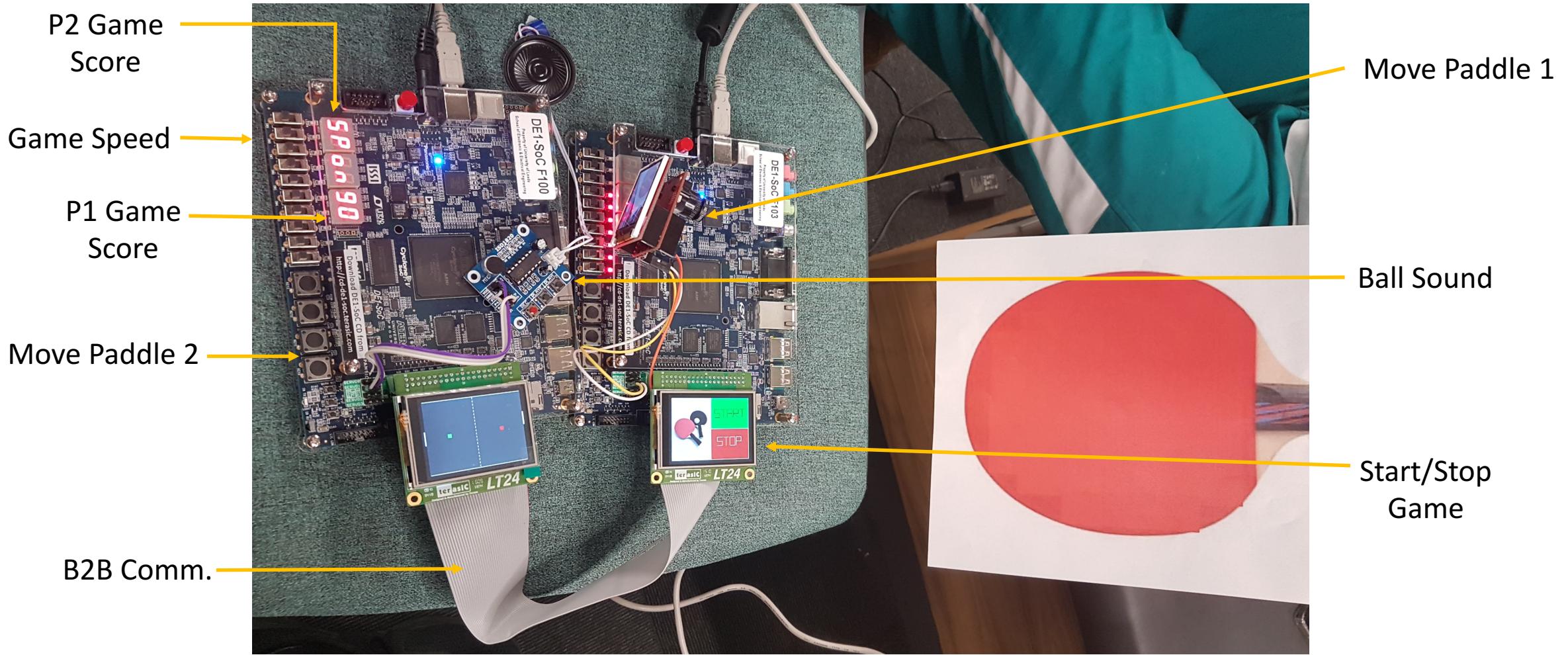
Camera & Paddle

- Global Shutter
- Full Frame Transfer
- MIPI Interface
- 100 FPS

HARDWARE SYSTEM



HARDWARE IMPLEMENTATION



RESULTS

