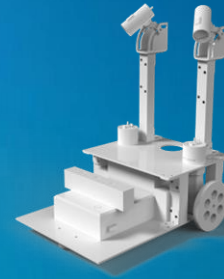
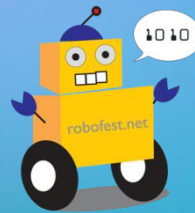


Developing Education Robotics Kit Designed for Competition



The First Robotics Kit With Vision

UNMET NEEDS



Business Idea 핵심 컨셉



The robot doesn't move into the direction I want.



I won the prize but what have I really learned about robotics?

Voice of Customer



There are more than a million number of students attending international robot competitions each year.

?



However, the educational robot kits still remain outdated

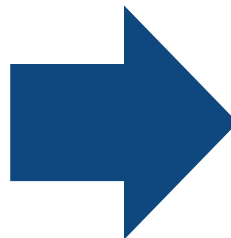
BUSINESS IDEA / ITEM CONCEPT

In 2014 **Image Processing** is included in international robot Competitions

Robot with accurate and fast image processing skill is needed

Tutorial and library is provided along with the robot kit

Robot Kits from Luxrobo are used both domestically and internationally



Business Idea

Robot Kit with
Vision

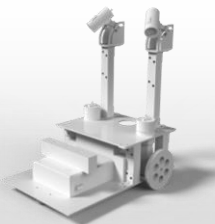


customer needs

1. Robot that can use image processing
2. Good accuracy and speed compared to other existing robot kits
3. Learning on/offline with easy concepts

SOLUTION (PRODUCT)

VALUE PROPOSITION



- Accurate Algorithm with Speed
- User-friendly Tutorial
- World's First Educational Robot Kit with Vision

OFFERING



- Developing robot kit with neural network algorithm and fudge speed that is 4 times faster than other existing robot kits.
- Offers large capacity that allows to add extra sensors and motors
- Robot's vision makes accurate and sensitive control possible
- Tutorial is made by previous robot competition winners

Competitiveness

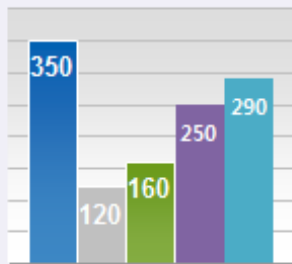
Luxrobo

Lego NXT (Global)

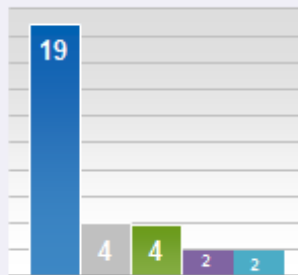
VEX (Global)

Roborobo (Local)

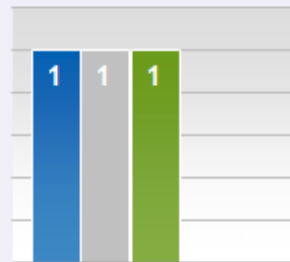
하늘아이 (Local)



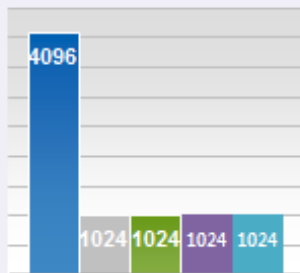
Motor Speed



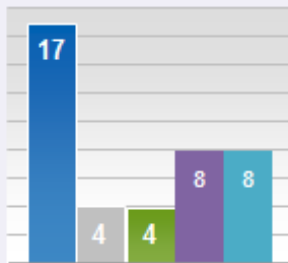
Motor Unit



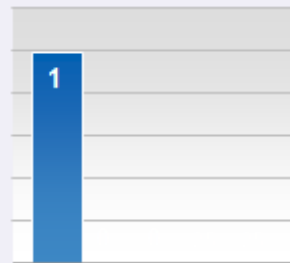
Encoder



Sensor resolution

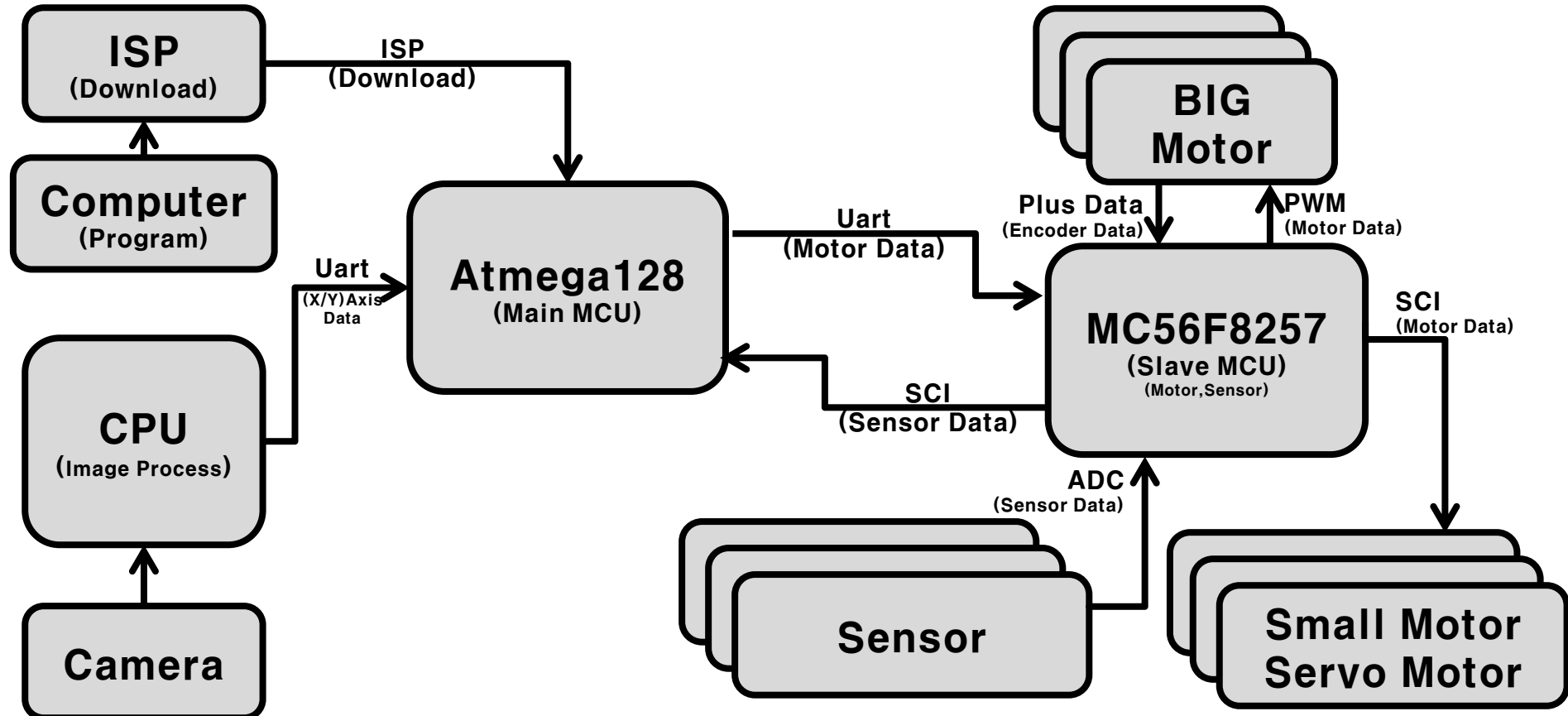


Sens or Unit

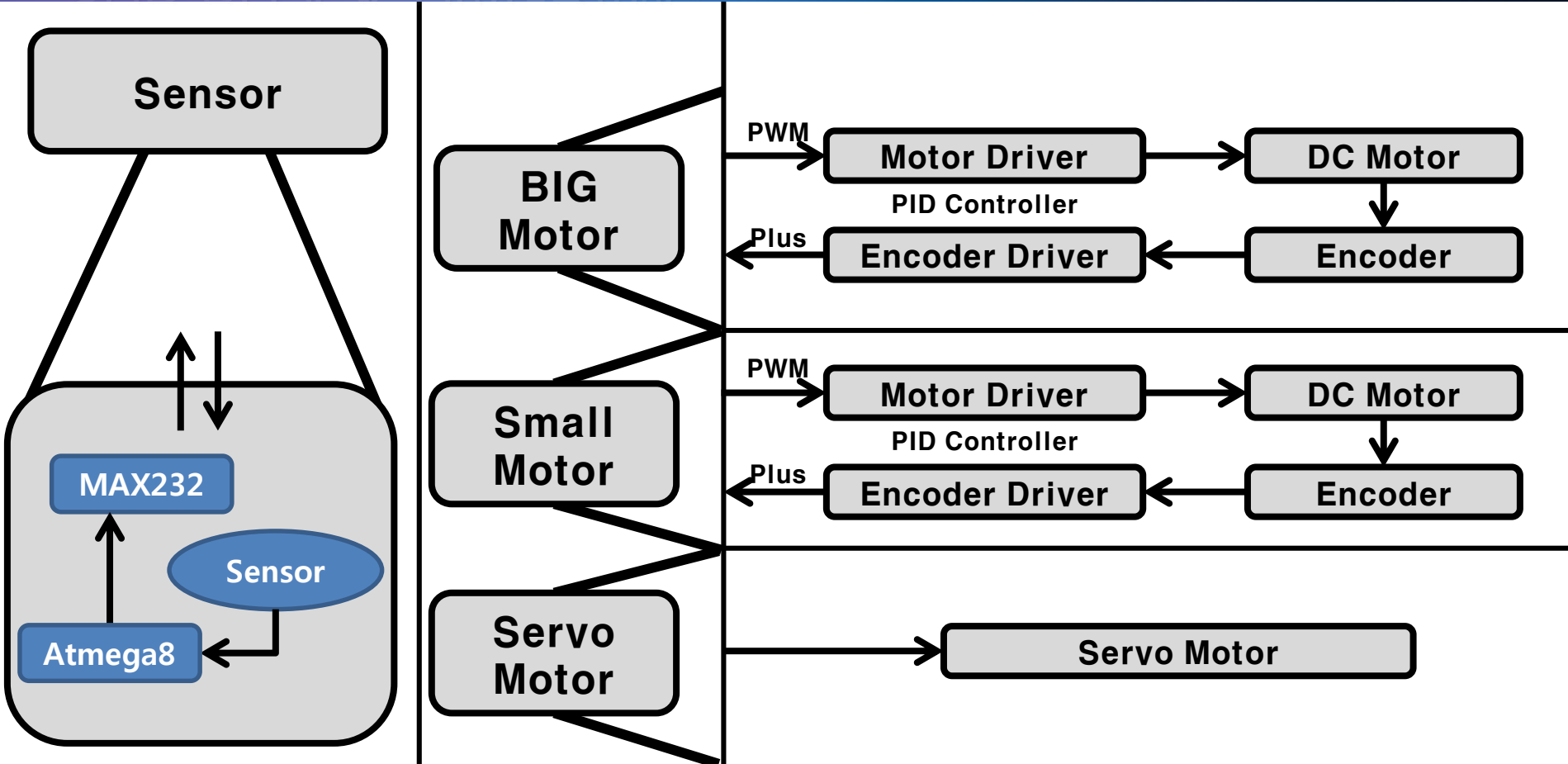


Camera

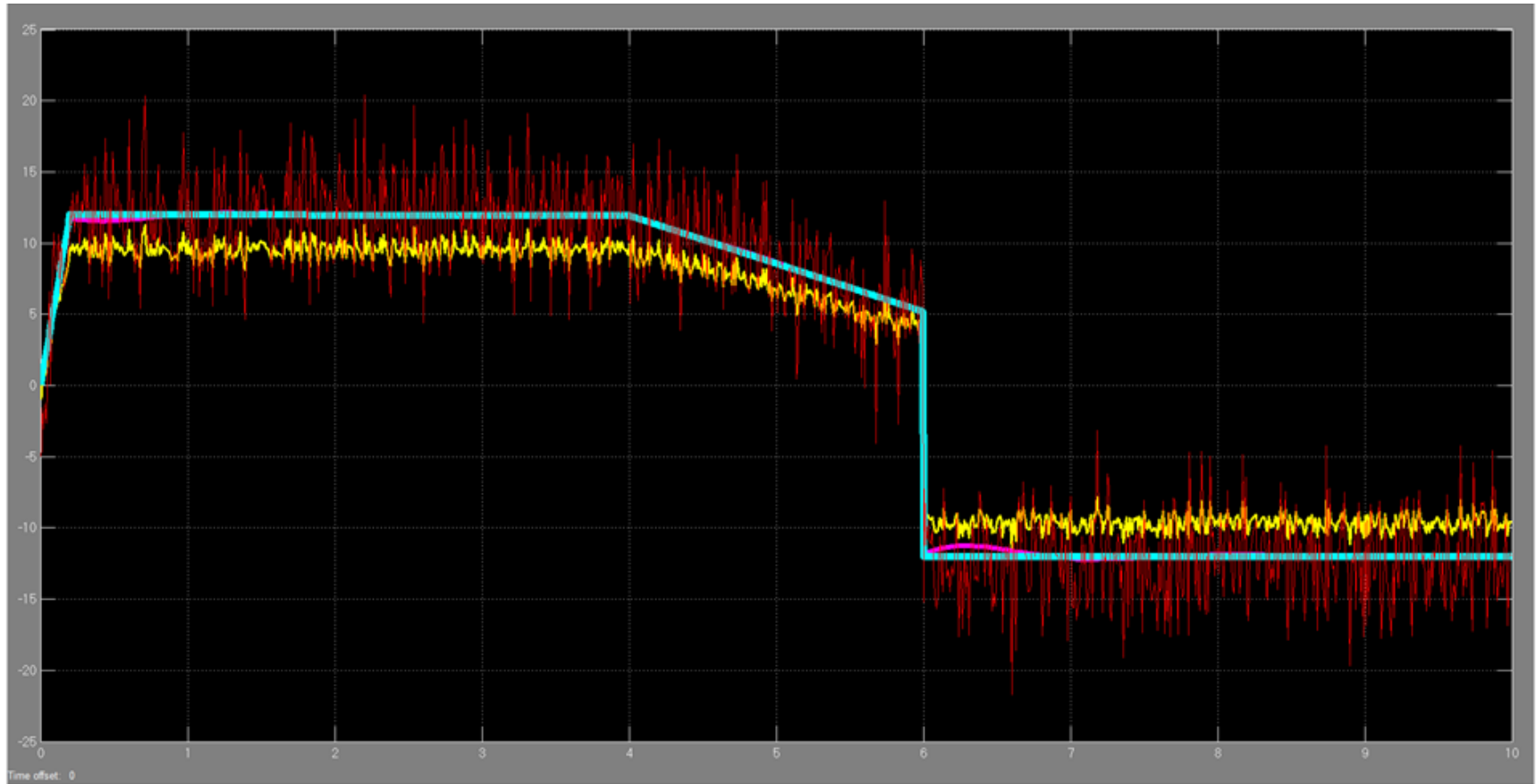
MAIN BLOCK DIAGRAM



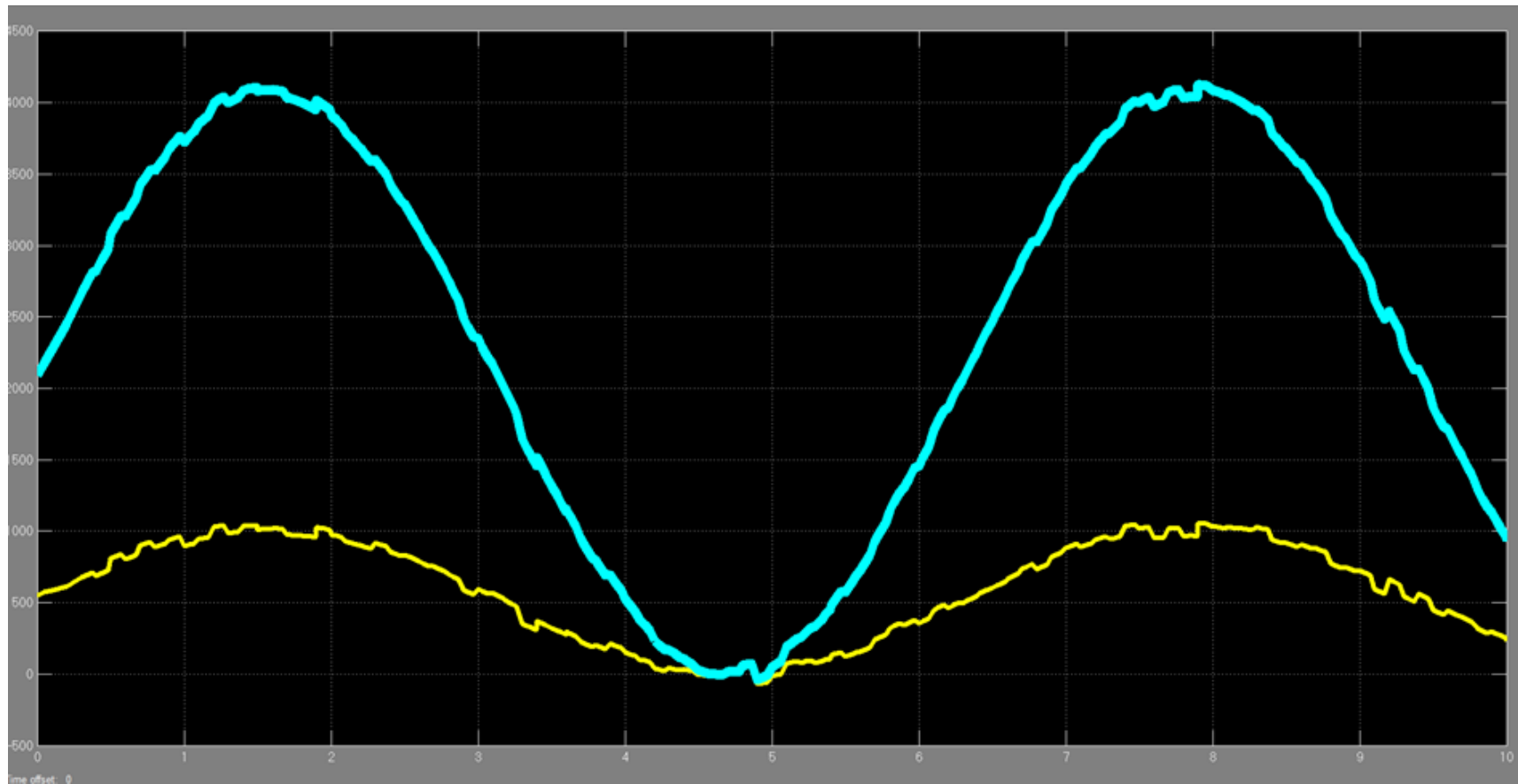
SUB BLOCK DIAGRAM



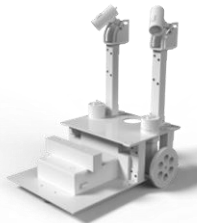
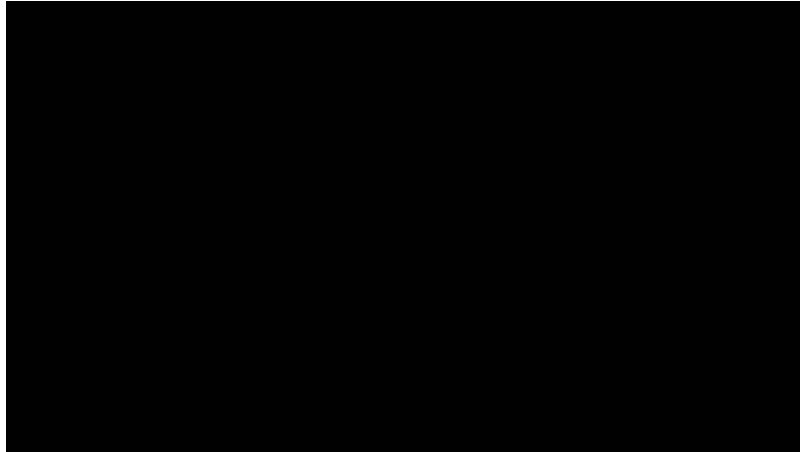
MOTOR PID CONTROL



SENSOR RESOLUTION MEASUREMENT



ROBOT KIT (PRODUCT DEVELOPMENT)



Bright Education Robot Kit part

- Vision Sensor Unit 2 Cameras
- Motor Unit 2 Motors

