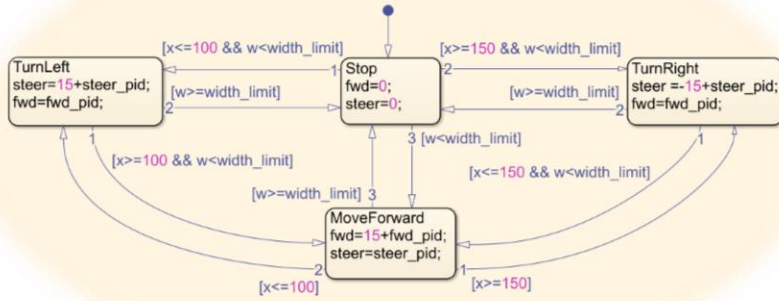


Why use MATLAB and Simulink for VEX Robotics?

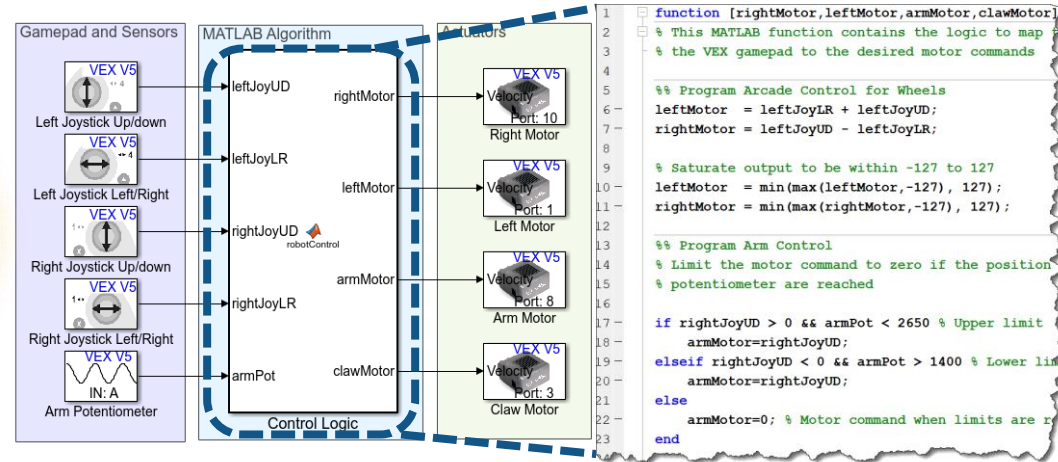
mathworks.com/vex-guide



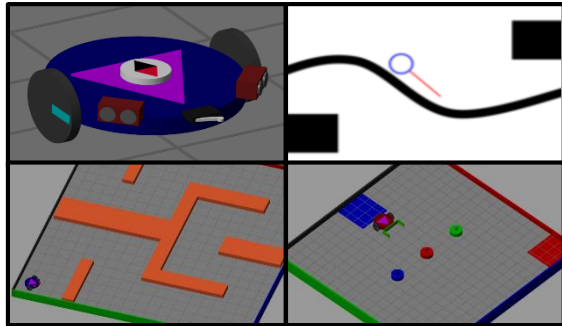
Flow Charts



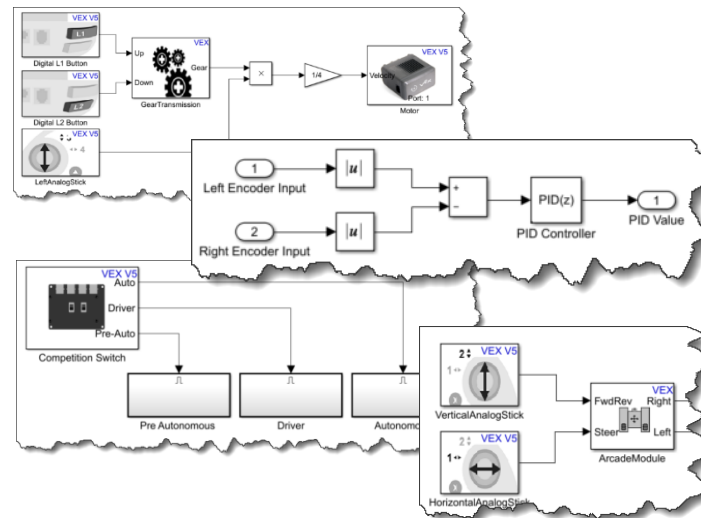
Graphical and Textual Programming



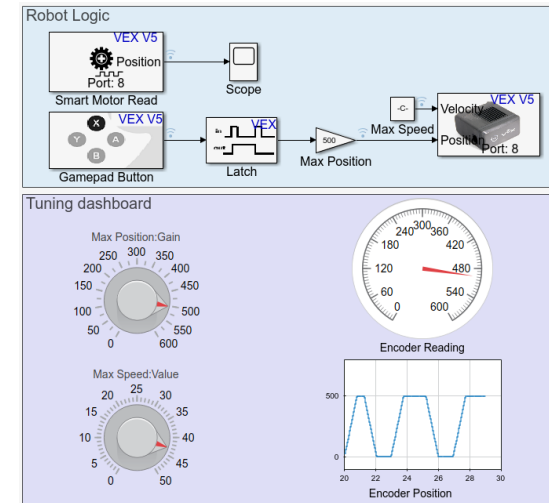
Simulations



Hardware and Control Libraries



Parameter Tuning and Visualization



MATLAB and Simulink VEX Support available for **Windows** and **MAC**

MATLAB and Simulink VEX Getting Started Guide

mathworks.com/vex-guide



Computer Setup


1. [Request Free License](#)
2. Install:
 - [MATLAB and Simulink](#)
 - [VEX EDR Libraries](#)
 - [VEX Companion App*](#)

Software Ramp Up

1. [Intro to MATLAB](#)
2. [Intro to Simulink](#)
3. [Intro to Stateflow](#)


Robot Programming

Simulations



- 1. Autonomous Robot Motion
- 2. PID Controllers
- 3. Line Following Robots
- 4. Obstacle Detection
- 5. Path Navigation

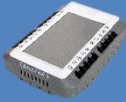
Robotics Playground



- 1. MATLAB Programming
- 2. Autonomous Robot Motion
- 3. Simulink Modeling
- 4. Driver Controls
- 5. Distance Sensors
- 6. MATLAB Functions
- 7. State Machines
- 8. Maze Solving Robots

Hardware

VEX Curriculum



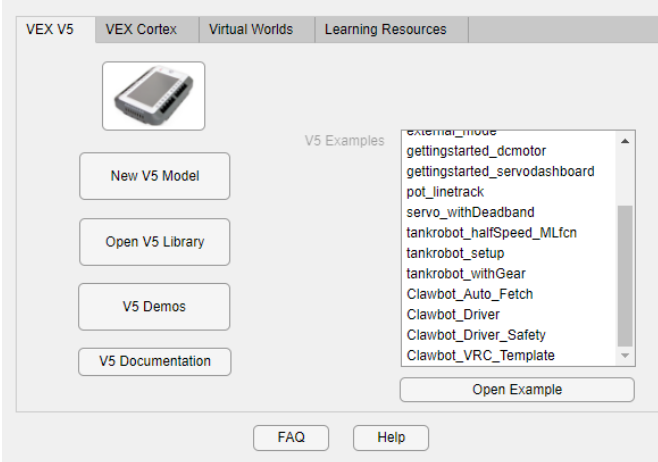
- 1. Autonomous Robot Motion
- 2. VEX Competition Template
- 3. Encoder Navigation
- 4. Distance Sensors
- 5. PID Controllers

Additional Resources

- [Get Started with VEX EDR V5 support for MATLAB and Simulink](#)
- [Program VEX EDR V5 Smart Motors](#)
- [Driver and Autonomous Control of VEX Robots](#)
- [Robot Autonomy and Control Webinar](#)

[Documentation](#) [Facebook](#)

*VEX Companion



The VEX Companion app interface shows a VEX V5 robot, a 'New V5 Model' button, an 'Open V5 Library' button, 'V5 Demos', and 'V5 Documentation' buttons. A list of 'V5 Examples' includes: external_mode, gettingstarted_dcmotor, gettingstarted_servodashboard, pot_linetrack, servo_withDeadband, tankrobot_halfSpeed_MLfcn, tankrobot_setup, tankrobot_withGear, Clawbot_Auto_Fetch, Clawbot_Driver, Clawbot_Driver_Safety, and Clawbot_VRC_Template. There are also 'FAQ' and 'Help' buttons at the bottom.

Questions?

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