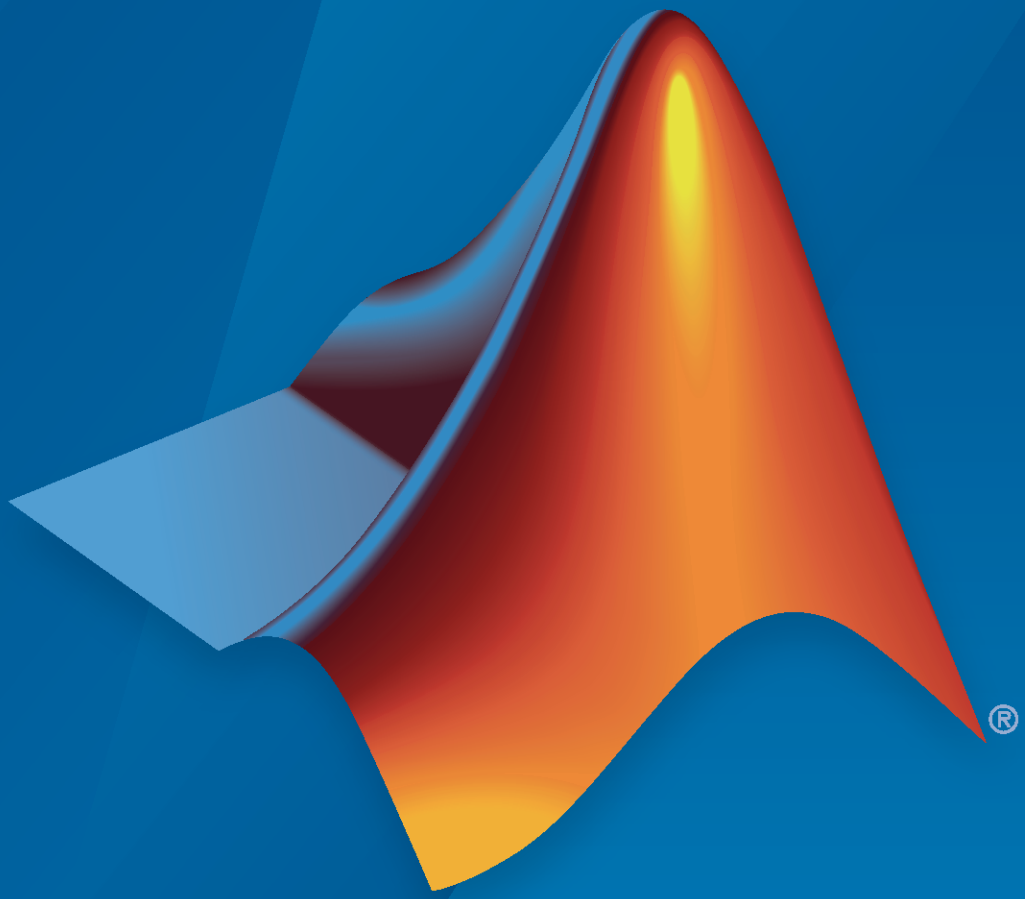
ROS Toolbox

Getting Started Guide



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Contents

1 Product Overview

ROS Toolbox Product Description **1-2**

Product Overview

ROS Toolbox Product Description

Design, simulate, and deploy ROS-based applications

ROS Toolbox provides an interface connecting MATLAB® and Simulink® with the Robot Operating System (ROS and ROS 2). With the toolbox, you can design a network of ROS nodes and combine MATLAB or Simulink generated ROS nodes with your existing ROS network.

The toolbox includes MATLAB functions and Simulink blocks to visualize and analyze ROS data by recording, importing, and playing back rosbag files. You can also connect to a live ROS network to access ROS messages.

The toolbox lets you verify ROS nodes via desktop simulation and by connecting to external robot simulators such as Gazebo or to hardware. ROS Toolbox supports C++ and CUDA® code generation (with MATLAB Coder™, Simulink Coder, and GPU Coder™), enabling you to automatically generate ROS nodes from a MATLAB script or Simulink model and deploy to simulated or physical hardware. Support for Simulink external mode lets you view messages and change parameters while your model is running on hardware.