LabVIEW for Robotics Starter Kit Tutorial



1. Launch Measurement and Automation Explorer to get the IP of the robot

🤒 Remote Systems - Measurement &	Automation Explorer	
<u>File Edit View Tools H</u> elp		
Configuration	Treate New 🦧 Show	v Help
🖃 🥸 My System		1
🕀 📑 Data Neighborhood	Demote Systems	\sim
Grades	Remote Systems	
Joans J	With Remote Systems, you can view and configure devices and systems connected over Ethernet. Your remote systems appear in the configuration tree when you expand Remote Systems by clicking the plus sign (E).	
Remote Systems (Searching)	What is a remote system?	
	A remote system denotes a real-time target that can be managed or configured over the network while a network device does not run a real-time operating system. Remote systems are not the same as network devices. A network device is any device that is accessible over an Ethernet or wireless connection. Such devices may be accessible by multiple computers and do not run a real-time operating system.	
	What do you want to do?	
	Set up my system for the first time	
	View my remote systems and devices	
	Configure the network settings of remote systems	
	•• Install software onto a remote system	
	Note To configure remote Traditional NI-DAQ (Legacy) devices, select Tools»Traditional NI-DAQ (Legacy) Configuration»Remote DAQ Configuration from the MAX menu to launch the Remote DAQ Configuration utility. To configure other NI remote systems, refer to your specific device documentation.	
	For more information about using your NI products in MAX, refer to your NI product help, located on the Help»Help Topics menu item. You can also access NI product help from within MAX help, which you can launch from the Help menu or by pressing <f1>.</f1>	
	Submit feedback on this topic	•
		~
	9 Help Remote Systems	
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2. Click the + next to Remote Systems



3. Slelect your robot and note the IP Address

🔝 Getting Started				
<u>Fi</u> le <u>O</u> perate <u>T</u> ools <u>H</u> elp				
LabVIEW [®] Robo	otics 2009			NATIONAL INSTRUMENTS
Create New	Open Recent	Getting Started	Online Res	sources
	Browse Recent Projects Robotics Project.lvproj Recent Files			Discussion Forums Ask questions, share answers, and learn from your peers.
Robotics Blank Blank VI Project Project 🇀 More				Code Sharing Download additional robotics examples, drivers, and partner products.
Find Robotics Examples Browse example programs with source code.				Request Support Ask for help from LabVIEW experts and download the latest drivers.
Browse Documentation Learn more about the LabVIEW environment, functions, and concepts in the <i>LabVIEW Help</i> .				Getting Started Tutorials Follow step-by-step instructions for robotics tasks.

4. Launch LabVIEW 2009 – Click on Robotics Project

Select project type Robotics Starter Kit CompactRIO Reconfigurable Embedded System Single-Board RIO Embedded System Windows Platform	
The LabVIEW Robotics Starter Kit includes a ready-to-run hardware platform based on the NI Single-Board RIO embedded control hardware and LabVIEW Robotics software. Use this kit to quickly and easily prototype an autonomous mobile robotic system. For more information visit http://ni.com/robot, or click on the link below.	
< Back Next > Finish Cancel	Help

5. Select Robotics Starter Kit and click Next >

Create New LabVIEW Robotics Project	
Create New LabVIEW Robotics Project Enter the IP address for the controller Controller IP address 172.16.0.50	
< Back Next >	Finish Cancel Help

6. Enter IP

Create New LabVIEW Robotics Project	
Enter project name and folder Project name Project 1 Project folder Z:\Home\ESE497_UGradResearch\LabVIEWRobotics\ Projects	
<pre>A Back Next ></pre>	Finish Cancel Help

7. Enter Project Name and browse to Project Folder



8. Please wait....



 This creates a new project (Starter Kit Roaming\Project1.lvproj) and opens Roaming.vi which is the sample application which drives the robot around avoiding obstacles. Follow the instructions to execute the program on the robot.