

CTRE Toolsuite Installation Guide

Rev 1.2



Cross The Road Electronics

www.ctr-electronics.com

Table of Contents

1. The Installer	3
2. Installer Components	4
2.1. LifeBoat	4
2.2. roboRIO-FRC	4
2.3. HERO C#	4
3. Troubleshooting	5
3.1. I ran the installer with Java/C++ selected, but I still can't use CANTalon or PigeonIMU in Eclipse.....	5
3.2. I can't select LabVIEW under the roboRIO-FRC component.....	5
3.3 FRC Java: The Driverstation console gives an error that there's no CTRLlibDriver in java.library.path	5
4. Functional Limitations	6
4.1. Installer 4.4.1.9 and Earlier: Installing on Non-Admin Account Places Java/C++ Files in Admin User Directory	6
4.2. CTRE Toolsuite Installer is Windows-Only.....	6
5. Updating the roboRIO Web-Based Interface	7
6. Revision History	8

TO OUR VALUED CUSTOMERS

It is our intention to provide our valued customers with the best documentation possible to ensure successful use of your CTRE products. To this end, we will continue to improve our publications, examples, and support to better suit your needs.

If you have any questions or comments regarding this document, or any CTRE product, please contact support@crosstheroadelectronics.com

To obtain the most recent version of this document, please visit www.ctr-electronics.com.

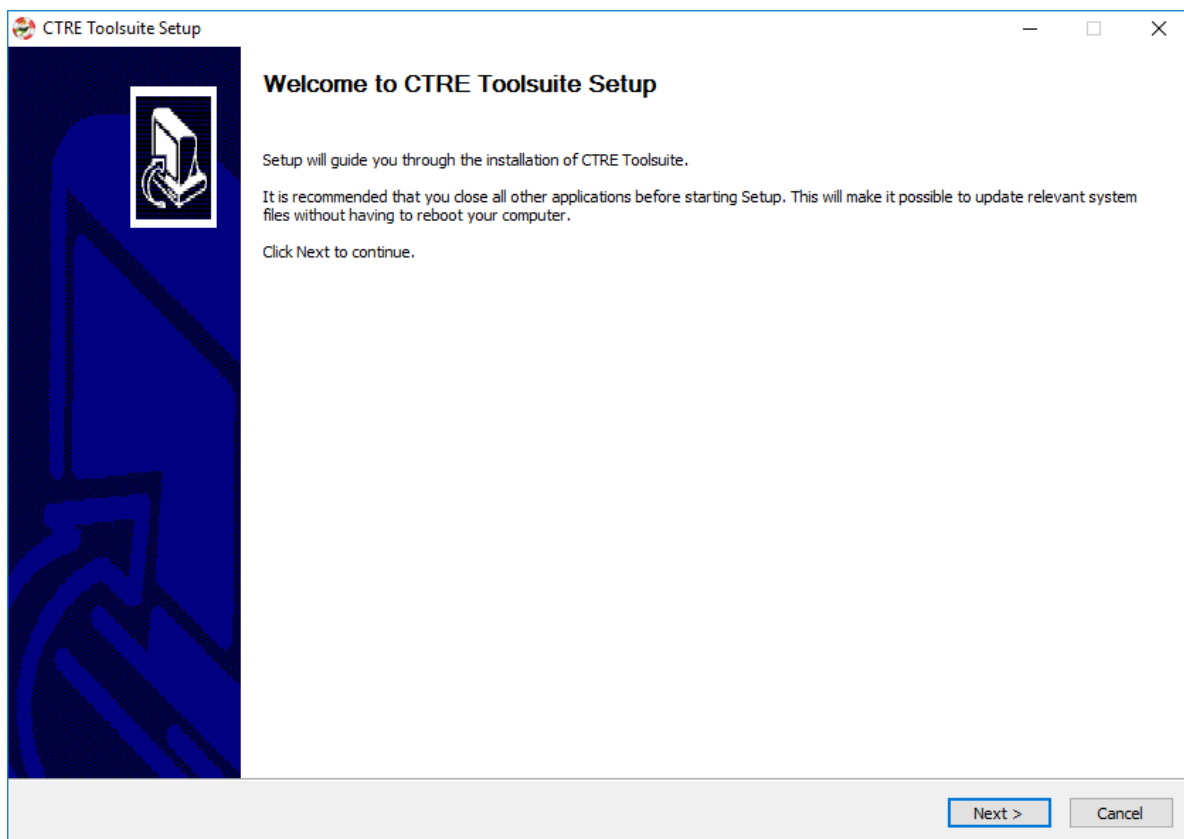
1. The Installer

The CTRE Toolsuite Installer is the Windows Executable Installer that provides all software and API Libraries required to support CTRE products.

It is available for download at:

http://www.ctr-electronics.com/control-system/hro.html#product_tabs_technical_resources

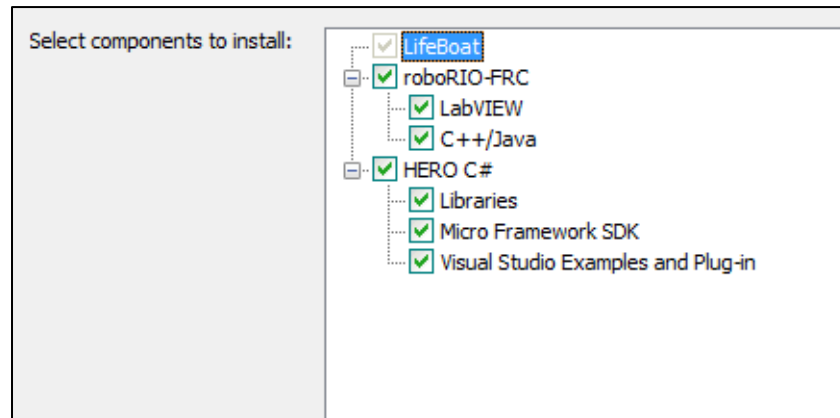
Users should run the installer and follow the directions given by the installation wizard.



Note that the CTRE Toolsuite Installer requires administrative privileges to run.

2. Installer Components

The CTRE Toolsuite Installer has several components that can be selected to have the appropriate component included in the installation.



2.1. LifeBoat

LifeBoat is the Windows Application used to interface with CTRE Hardware. It is used to upgrade firmware and settings for HERO and CTRE devices when attached to HERO. It is also used to update the roboRIO Web-Based Interface CAN Plug-in, giving users the latest roboRIO interface features for CTRE CAN devices.

For instructions on using LifeBoat, consult the manual for your CTRE device.



Important: FRC Teams need to use LifeBoat to update the roboRIO Web-Based Interface. [See Section 5.](#)

2.2. roboRIO-FRC

This component includes options for installing API Libraries needed to use CTRE products in robot programs for FRC. The relevant programming environment (Eclipse/LabVIEW) must be restarted after installing one of these component options.

2.3. HERO C#

This component includes all software to support the HERO Development Board. Visual Studio should be installed before running the Toolsuite Installer with HERO C# components. For more information on HERO, Visual Studio, and these software components, see the HERO User's Guide.

3. Troubleshooting

This section provides troubleshooting tips for common questions that may be encountered when using the CTRE Toolsuite Installer. Issues that have been resolved in a previous release are grayed out.

3.1. I ran the installer with Java/C++ selected, but I still can't use CANTalon or PigeonIMU in Eclipse.

The WPILib plug-ins for eclipse automatically include external libraries when Eclipse is opened. Please make sure you re-start Eclipse after running the CTRE Toolsuite Installer. Also, remember to use the appropriate import/include statement as described in the relevant product's user/software manual.

If you are on a user account without administrative privileges, see [Section 4.1](#).

3.2. I can't select LabVIEW under the roboRIO-FRC component.

Please install LabVIEW for FRC. The CTRE Toolsuite Installer prevents installation of LabVIEW VIs if the current FRC Season's LabVIEW version is not installed.

3.3 FRC Java: The Driverstation console gives an error that there's no CTRLibDriver in java.library.path

The following error may appear if you are missing the libCTRLibDriver.so file in your library directory:

```
***** Robot program starting *****
java.lang.UnsatisfiedLinkError: no CTRLibDriver in java.library.path
  at java.lang.ClassLoader.loadLibrary(ClassLoader.java:1857)
  at java.lang.Runtime.loadLibrary0(Runtime.java:870)
  at java.lang.System.loadLibrary(System.java:1119)
  at com.ctre.CTREJNIWrapper.<clinit>(CTREJNIWrapper.java:12)
  at com.ctre.CANTalon.<init>(CANTalon.java:366)
  at org.usfirst.frc.teamXXYY.robot.Robot.robotInit(Robot.java:46)
  at edu.wpi.first.wpilibj.IterativeRobot.startCompetition(IterativeRobot.java:64)
  at edu.wpi.first.wpilibj.RobotBase.main(RobotBase.java:247)
```

This happens if you used the (No Installer) option for installing the CTR libraries and did not transfer all the files to your java user library.

Please make sure to transfer the *entire* java/lib folder as described in the (No Installer) README.

4. Functional Limitations

Functional Limitations describe behavior that deviates than what is documented. Issues that have been resolved as of the current release are **grayed out**.

4.1. Installer 4.4.1.9 and Earlier: Installing on Non-Admin Account Places Java/C++ Files in Admin User Directory

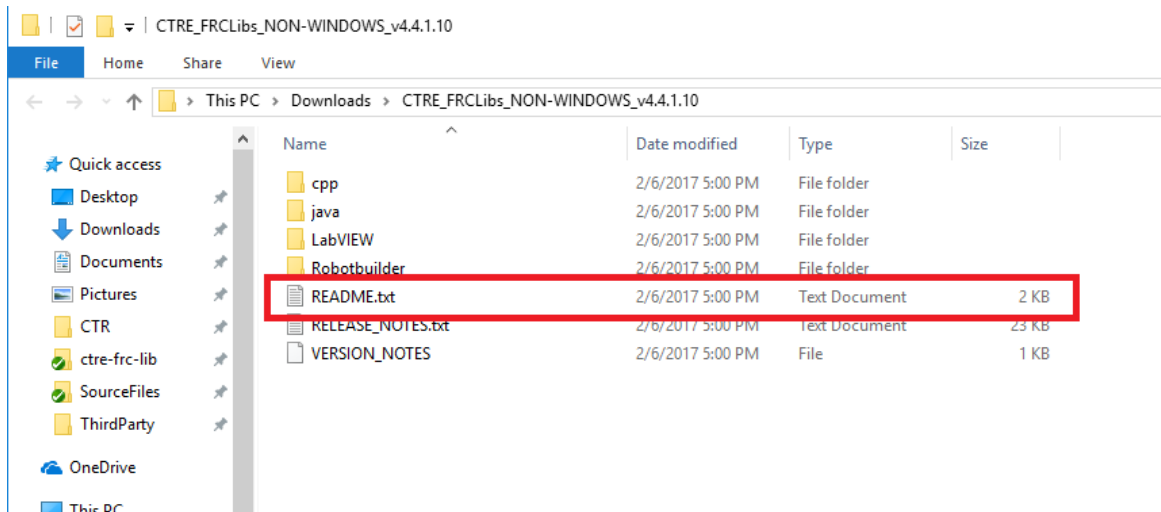
When installing on a user account without administrative privileges, the installer will automatically prompt the user for administrative authorization. When this authorization is given, Java and C++ Library files are placed into the user folder for the administrative account that authorized the installation instead of the user folder of the account currently logged in. This is a known issue and will be fixed in a later release.

For FRC users who need Java and C++ libraries, they should transfer the library files from [Admin]/wpilib/user/[language] to [User]/wpilib/user/[language].

4.2. CTRE Toolsuite Installer is Windows-Only

The installer process is an executable and only runs on the Windows platform. LabVIEW and Visual Studio NETMF languages require Windows and Eclipse is supported.

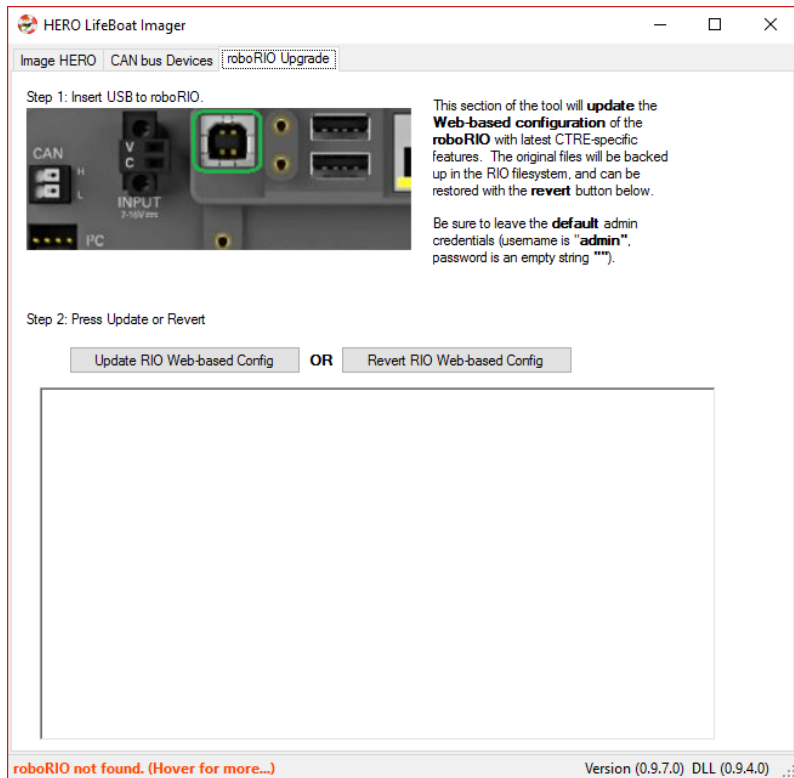
Non-Windows FRC users may download the (No Installer) package and follow the contained README file to manually place library files for use with Eclipse.



5. Updating the roboRIO Web-Based Interface

Teams will need to update their web-based interface in order to leverage the latest features of CTRE devices.

Open LifeBoat and select the “roboRIO Upgrade” tab along the top.



Connect PC to the roboRIO via the USB cable as explained in LifeBoat.

Once connected, the bottom status bar will transition from “roboRIO not found” to “roboRIO found”. If multiple RIOs are USB-connected, LifeBoat will ask the user to disconnect all but one.

Then press the “Update...” button.

LifeBoat will update the roboRIO web-based configuration to support latest Talon and Pigeon features. This update will take ~10 seconds.

User can always “undo” the update by pressing the “Revert...” button. This is far more expedient (10 seconds) than re-imaging the entire roboRIO (several minutes).

6. Revision History

Rev	Date	Description
1.2	22-Feb-2017	-Edited Section 2.1 -Added Section 5
1.1	6-Feb-2017	-Edited Section 4.2 -Added Section 3.3
1.0	25-Jan-2017	Initial Release