



D-BOX MOTION SYSTEM CONFIGURATION MANAGER



INSTALLATION AND USER MANUAL



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IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this device near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other device (including amplifiers) that produce heat.
9. Protect the USB cord from being walked on or pinched particularly at the ends.
10. Only use attachments/accessories specified by the manufacturer.
11. Unplug this device during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified service personnel. Servicing is required when the device has been damaged in any way, such as liquid has been spilled or objects have fallen into the device, the device has been exposed to rain or moisture, does not operate normally, or has been dropped.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.



This symbol indicates that you must communicate with the manufacturer for disposal of the equipment.

WARNING: To reduce the risk of fire or electric shock, do not expose this device to rain or moisture.

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INTRODUCTION

D-BOX Motion System customers can use the Configuration Manager tool to update the firmware of the KCU-1P and associated D-BOX hardware; also, customers can use the application to modify the configuration of the ACM-II(s) connected to the KCU-1P.

For detailed information about installation and operation of the D-BOX Motion System, refer to the Gen II Installation and Operation Guide.

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INSTALLING THE SOFTWARE

Use the following instructions to update the D-BOX firmware and reconfigure your ACMs and actuators if required.

Note: the software is compatible with Windows Vista, Windows 7, Windows 8 and Windows 10 (32 and 64 bits).

Note: Do not interrupt the update process while it is running. Interrupting the update process before it is completed may cause improper operation. Please contact D-BOX support if you experiment improper operation.

Go to <http://www.d-box.com/corporate-page/downloads/>

and select the Software and Drivers tab.

Download the D-BOX Configuration Manager update package - compressed file - to your computer and

decompress the files to a location of your choice, and then run the Setup executable



Run the application and follow the on-screen instructions.

⚠ WARNING: The D-BOX drivers and software must be installed before installing and running the Configuration Manager software. The D-BOX drivers and software (*D-BOX Motion Player Software Disc*) can be downloaded from <http://www.d-box.com/corporate-page/downloads/> (select the Software and Drivers tab).

INSTALLING THE HARDWARE

Before running the Configuration Manager software, connect the KCU-1P to the computer.

⚠ WARNING: The KCU-1P has been designed to work only with D-BOX ACM-II. Do not connect the KCU-1P to a regular D-BOX ACM.

Connect the KCU-1P to the ACM-II per Figure 1.

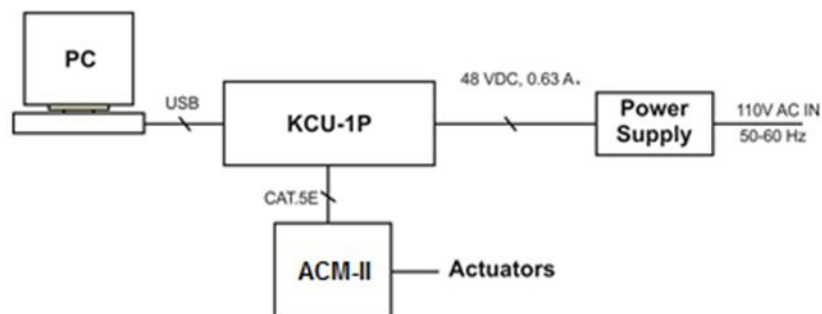


Figure 1 Hardware Connections

Note: Refer to the KCU-1P Installation Guide for more information about the hardware installation.

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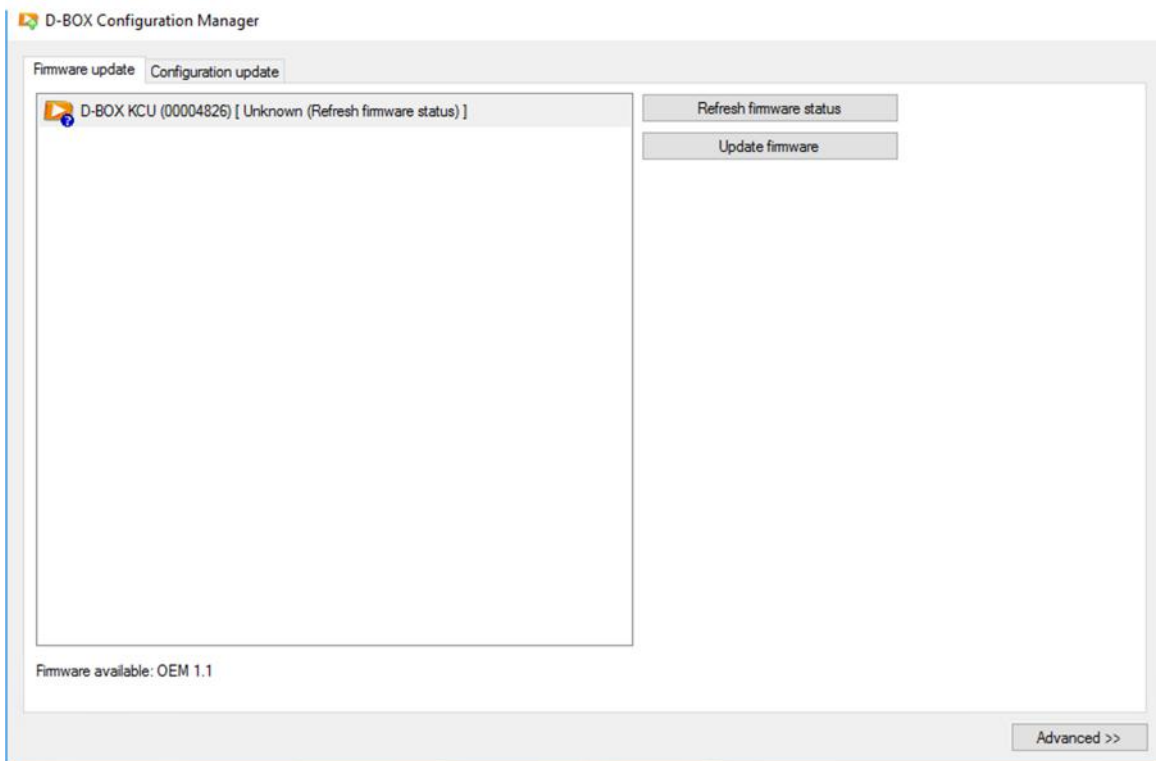
USING THE SOFTWARE

Note: Running the software requires administrative privileges.



Once the updater has successfully installed, run the Configuration Manager by clicking on its icon - Either from the Windows START menu under the D-BOX folder: *D-BOX Configuration Manager*, or from the desktop.

The following window appears:



Updating the Firmware

You can update the firmware of the KCU-1P, ACM-II and KCA. In order to do so, you must use the *Firmware update* tab (the active tab when you start the application). A list of the KCU-1P currently connected to the computer is displayed on the left side with their current status. The possible values are:

-) [Unknown: (Refresh firmware status)]: initial status (status will be known after it is refreshed).
-) [Outdated (firmware should be updated)]: a newer firmware is available.
-) [Up-to-date: (No action required)]: the latest firmware is installed.

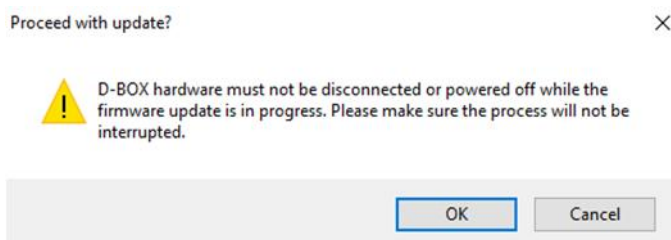
Two buttons are located on the right side to execute actions on the selected KCU-1P in the list:

1. *Refresh firmware status*: This action will refresh the current status of the firmware. The status is initially unknown until you do this action. This will update the status to outdated (if a newer firmware is available) or up-to-date (if the latest firmware is already in use).

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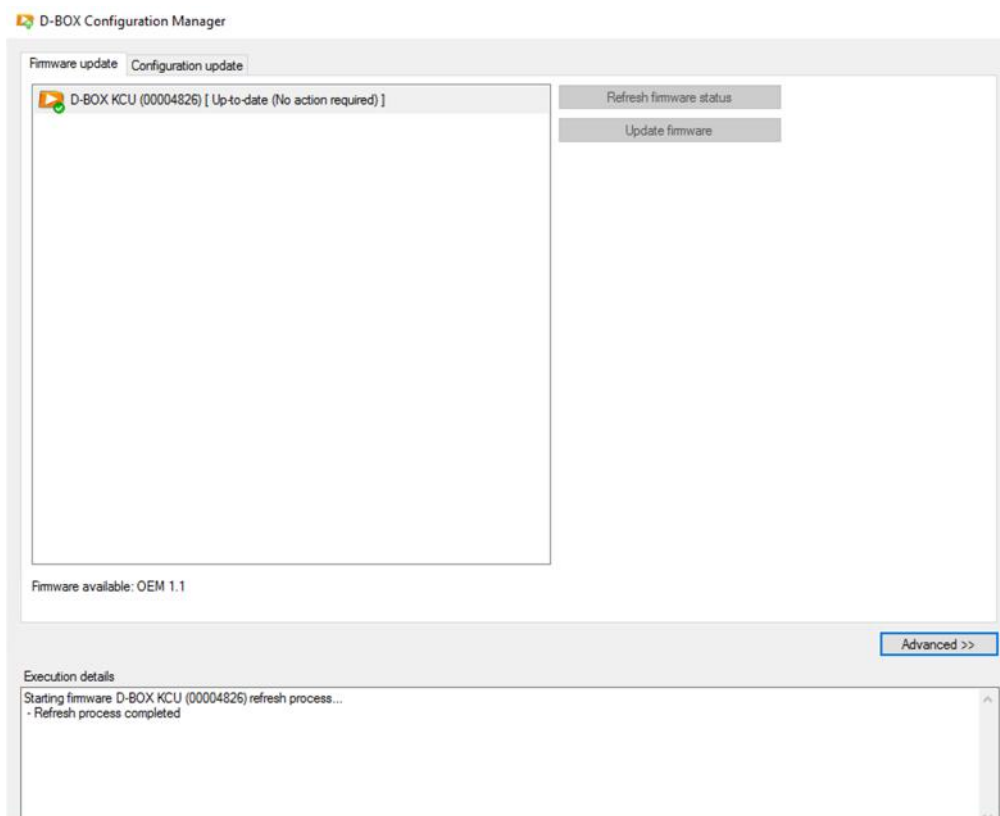
2. *Update firmware*: This action will update the firmware to the latest version. The firmware of the KCU-1P as well as every device connected to it (ACM-II, KCA) will be updated. The update might take a few seconds to a few minutes depending on the number of devices that need to be updated. If the devices already have the latest firmware, the update is skipped.

When you click *Update firmware*, the following confirmation window appears:



Click the *Advanced* button to display more information about the current operations. When refreshing the firmware status, the window displays a progression bar. If an error occurs while executing an action, details appear in the window.

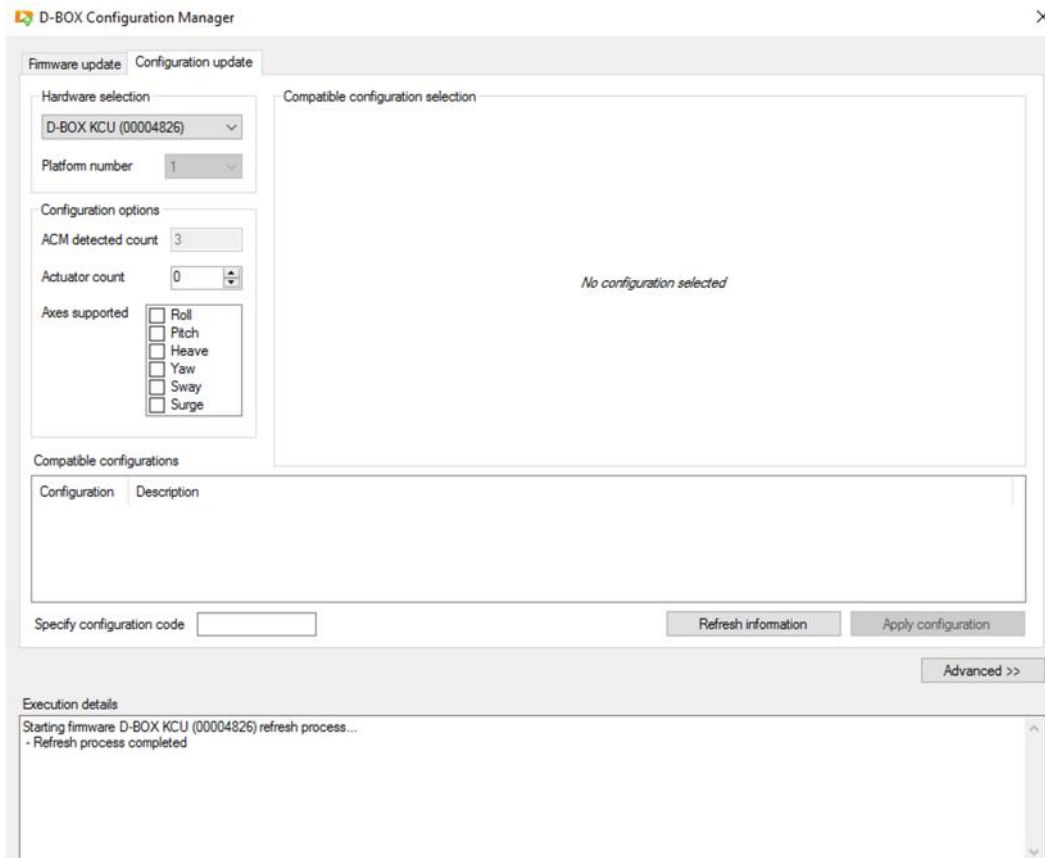
Once the update process is complete, the following window appears:



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Updating the ACM II Configuration

You can change the configuration of the platform connected to the KCU-1P by clicking the *Configuration update* tab. The following window appears:

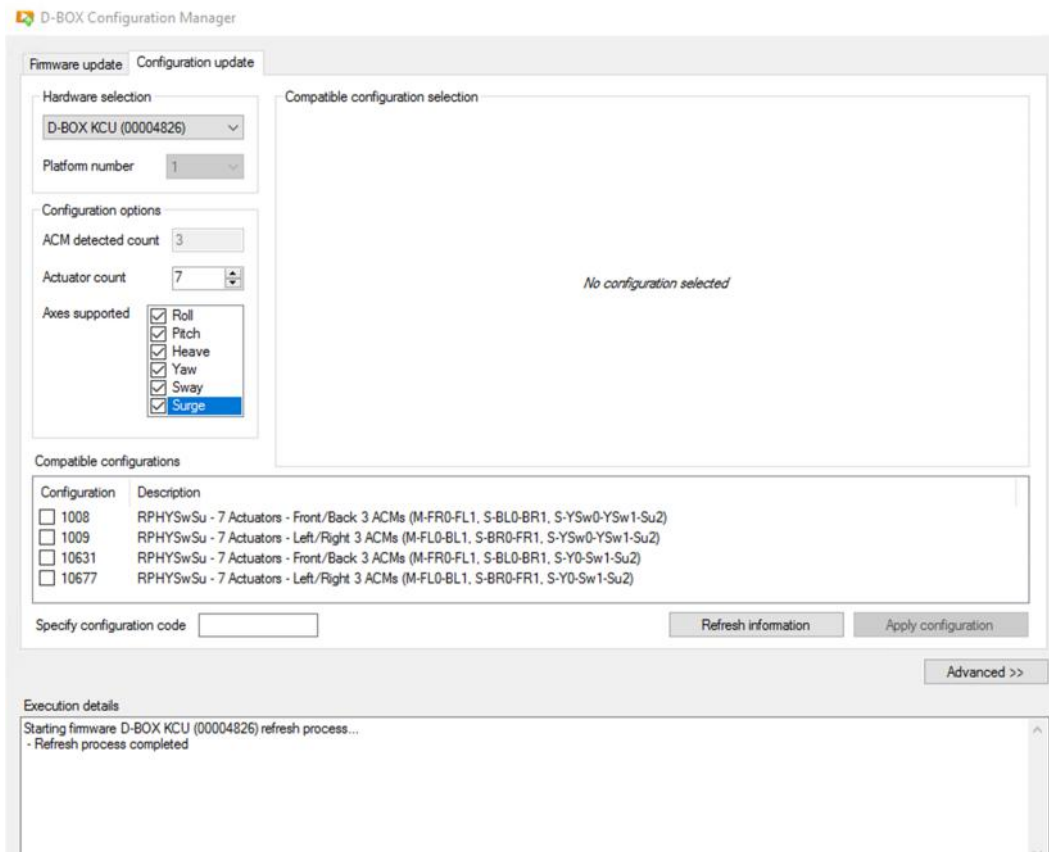


In order to change the configuration, do the following:

1. Hardware selection
 - a. Select the KCU-1P connected to the platform you want to update.
 - b. Select the platform number (if multiple platforms are connected to the KCU-1P).
2. Configuration options
 - a. Validate that the number of ACMs detected is accurate. If it is not the case, check the connections and click on the *Refresh information* button.
 - b. Set the number of actuators of the platform.

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- c. Check the boxes of every axes supported by the platform and click Refresh information. The following window appears:



Description Details

R = Roll

P = Pitch

H = Heave

Y = Yaw

Sw = Sway

Su = Surge

M = Master

S = Slave

! = Relative encoder (Old version, GEN I, non-ABS)

FR/FL = Front Right,/Front Left **BL/BR** = Back Left/Back Right

3. Compatible configurations

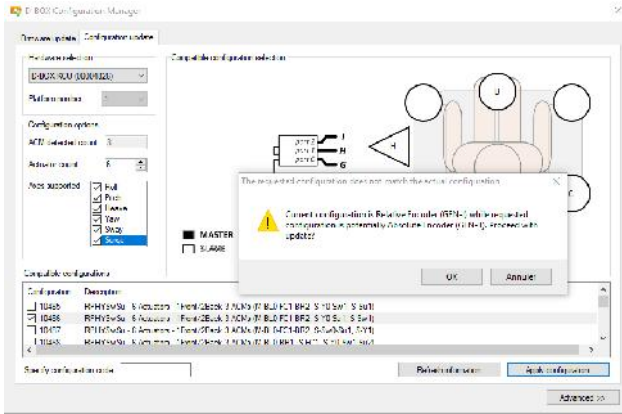
- a. Select the appropriate configuration. You can select a configuration to see its layout in the *Compatible configuration selection* section. The layout displays the ACM-II (Master and Slaves) as well as the actuators. The actuators in use display with a number corresponding to the slot of the ACM-II to which they are connected.
- b. When you choose the appropriate configuration, mark its check box in the *Compatible configuration* list.

Note: Typing the configuration code in the Specify configuration code field yields the same result.

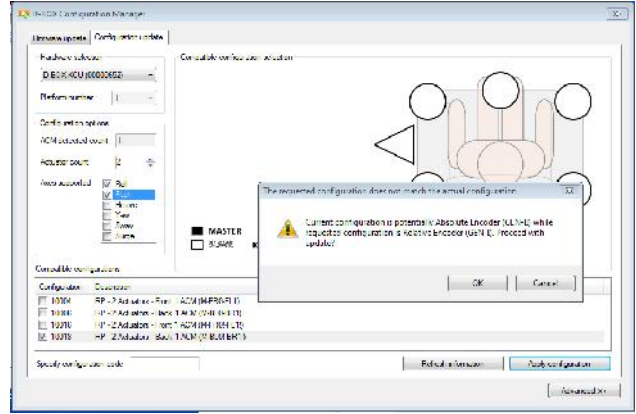
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- c. Click the *Apply configuration* button. The configuration update process will start and the following confirmation window may appear, depending on your current configuration:

Relative Encoder



Absolute Encoder



The following popup also displays:

Proceed with update?

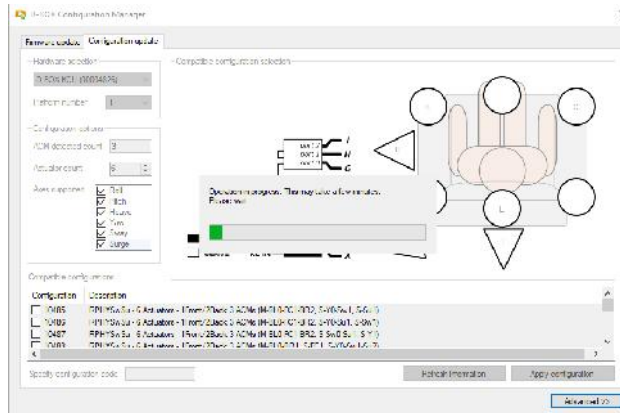


D-BOX hardware must not be disconnected or powered off while the configuration update is in progress. Please make sure the process will not be interrupted.

OK

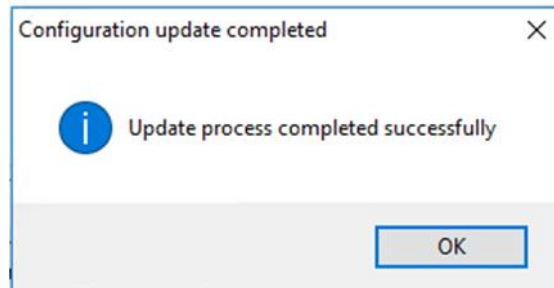
Cancel

Click OK. The following popup also displays:



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Once the configuration update is complete, the following window appears:



You have now successfully updated your Motion System firmware and configuration. Run your application to check if your Motion System is in good operational order.