

# Update RapidPro Firmware

**Valid for** The RapidPro firmware update concerns the following RapidPro units:

- SC Unit
- Power Unit
- Control Unit

**New features** The firmware update improves the functions of the RapidPro units and fixes bugs.

**Where to go from here** Information in this section

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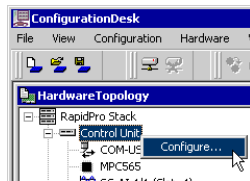
# How to Check the Firmware Version of RapidPro Hardware

**Objective** You have to check the current firmware version of your RapidPro units to decide if this firmware update must be executed.

- Preconditions**
- dSPACE Release 4.2 is installed on your host PC.
  - dSPACE Release 4.2 is the active dSPACE installation. If there is more than one dSPACE installation on your host PC, it may be necessary to activate dSPACE Release 4.2. For details, refer to *Managing Installations With the dSPACE Installation Manager in the Software Installation and Management Guide*.
  - The unit is connected to your host PC via USB. (For a stack with UCB only the Control Unit has to be connected.)
  - All systems (host PC, RapidPro) are switched on.

**Method** **To check the firmware version**

- 1 Start ConfigurationDesk.
- 2 Define a new Project (see: *How to Define a Project in the ConfigurationDesk Configuration Guide*).  
– or –  
Open an existing Project (see: *How to Open a Project in the ConfigurationDesk Configuration Guide*).
- 3 In the hardware navigator, right-click the specific unit and select **Configure** from the context menu.



The **Properties** dialog of the unit opens.

- 4 Check the **Carrier board firmware version**:
  - You must update the firmware of each unit if the carrier board firmware version is  $< 1.0.2$ .
  - You do not have to update the RapidPro unit(s) if the firmware version is  $\geq 1.0.2$ .
- 5 If you want to check another unit, proceed with step 3.

**Result** You have checked the version of the carrier board firmware.



To display the correct carrier board firmware after an update, you have to define a new application for this (see: *How to Define an Application* in the *ConfigurationDesk Configuration Guide*).

# How to Update the Firmware of a Single SC Unit or Power Unit

**Objective** This section gives instructions on updating the carrier board firmware of an SC Unit or Power Unit that is used as a single unit. You must update each unit separately.

- Preconditions**
- dSPACE Release 4.2 is installed on your host PC.
  - dSPACE Release 4.2 is the active dSPACE installation. If there is more than one dSPACE installation on your host PC, it may be necessary to activate dSPACE Release 4.2. For details, refer to *Managing Installations With the dSPACE Installation Manager in the Software Installation and Management Guide*.
  - The `RapidPro1.0p2.exe` patch file is executed on your host PC (source: Internet download; [http://www.dspace.com/goto?RapidProFwUpdate\\_RLS42](http://www.dspace.com/goto?RapidProFwUpdate_RLS42))
  - The unit is connected to your host PC via USB.
  - The host PC and the RapidPro unit are switched on.

**Method** **To update the firmware of a single SC Unit and Power Unit**



### Interrupting the update process disables the function of the hardware.

- At the beginning of the firmware update, the current firmware is deleted. This means that if the firmware update is interrupted, it must be restarted.
- The update takes approximately 4 minutes. The progress of the update is not displayed.
- The update is successful if 'Activating base board PIC firmware on unit' is displayed, followed by the prompt.

- 1 Open a DOS box.
- 2 Change to `%DSPACE_ROOT%\RapidPro\PicFw\BaseBoards`
- 3 Type the following at the DOS prompt:
  - For SC Unit: `LDRPPC DS1621PICFw1.0.2.hex`
  - For Power Unit: `LDRPPC DS1651PICFw1.0.2.hex`

**Result** The firmware of the single RapidPro SC Unit/Power Unit has been updated.



You can check the success of the carrier board firmware update on the Unit Info page of each unit in ConfigurationDesk. You have to define a new application for this (see: *How to Define an Application* in the *ConfigurationDesk Configuration Guide*).

# How to Update the Firmware of a Single Control Unit or a Stack with UCB

**Objective** This section gives instructions on updating the firmware of a single Control Unit or the units in a stack with UCB. The update contains carrier board firmware of the unit(s), and MPC565 slave application firmware and MPC565 boot firmware of the Control Unit's MC-MPC565 module.

- Preconditions**
- dSPACE Release 4.2 is installed on your host PC.
  - dSPACE Release 4.2 is the active dSPACE installation. If there is more than one dSPACE installation on your host PC, it may be necessary to activate dSPACE Release 4.2. For details, refer to *Managing Installations With the dSPACE Installation Manager in the Software Installation and Management Guide*.
  - The `RapidPro1.0p2.exe` patch file is executed on your host PC (source: Internet download; [http://www.dspace.com/goto?RapidProFwUpdate\\_RLS42](http://www.dspace.com/goto?RapidProFwUpdate_RLS42))
  - The Control Unit, or the Control Unit of a stack with UCB, is connected to your host PC via USB.
  - The Control Unit, or the Control Unit of a stack with UCB, is connected to the RCP hardware (MicroAutoBox or DS1005) via LVDS.
  - The RCP hardware (MicroAutoBox or DS1005) is connected to your host PC.
  - All systems (host PC, RapidPro, RCP) are switched on.

**Method**      **To update the firmware of a single Control Unit or a stack with UCB**



**Interrupting the update process disables the function of the hardware.**

At the beginning of the carrier board firmware update, the current firmware is deleted. This means that if the firmware update is interrupted, it must be restarted.

- 1 Open a DOS box.
- 2 Change to `%DSPACE_ROOT%\RapidPro\PicFw\BaseBoards`
- 3 Type the following commands for each unit type of the stack on the DOS prompt:
  - SC Unit: `LDRPPC DS1621PICFw1.0.2.hex`
  - Power Unit: `LDRPPC DS1651PICFw1.0.2.hex`
  - Control Unit: `LDRPPC DS1601PICFw1.0.2.hex`



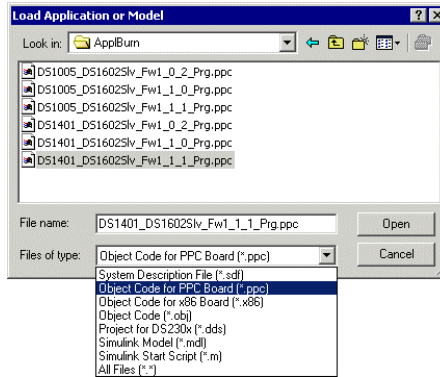
You must enter the update command only once for each unit type, i.e., SC Unit or Power Unit, even if there is more than one of each type in the stack. The command is repeated automatically for all the units of one type.



You can check the success of the carrier board firmware update on the Unit Info page of each unit in ConfigurationDesk. You have to define a new application for this (see: *How to Define an Application* in the *ConfigurationDesk Configuration Guide*).

- 4 Open ControlDesk.
- 5 Choose **Platform – Application – Load Model ...** to open the **Load Application or Model** dialog.
- 6 To update the RapidPro MPC565 slave application firmware, change to  
`%DSPACE_ROOT%\RapidPro\RPCU\DS1602\Firmware\ApplBurn.`

- 7 Change the Files of type to \*.ppc.



- 8 Depending on which RCP system you use, choose:
  - For MicroAutoBox: DS1401\_DS1602Slv\_Fw1\_1\_1\_Prg.ppc
  - For DS1005: DS1005\_DS1602Slv\_Fw1\_1\_1\_Prg.ppc

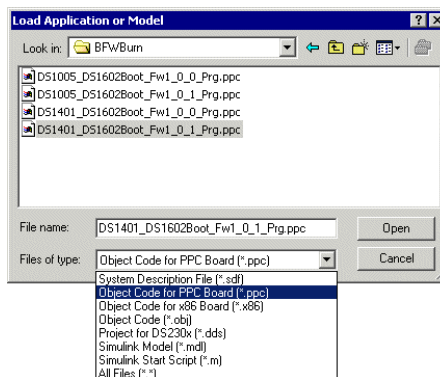
- 9 Click Open.



You can check the loading of the application in the **Log Viewer** of ControlDesk's **Tool Window**.

- 10 To update the RapidPro MPC565 boot firmware, change to %SPACE\_ROOT%\RapidPro\PCU\DS1602\Firmware\BFwBurn.

- 11 Change the Files of type to \*.ppc.





**12** Depending on which RCP system you use, choose:

- For MicroAutoBox: DS1401\_DS1602Boot\_Fw1\_0\_1\_Prg.ppc
- For DS1005: DS1005\_DS1602Boot\_Fw1\_0\_1\_Prg.ppc

**13** Click **Open**.



You can check the loading of the application in the **Log Viewer** of ControlDesk's **Tool Window**.

**Result** The firmware update for the RapidPro hardware is complete.

### How to Contact dSPACE

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