

Software Manual

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CHANGES OF DOCUMENT

Version	Date	Changes	Responsibility
1.0	18/10/2007	First version, created	C. Wieand
1.1	19/10/2007	Changed Format	C. Wieand
1.2	27/08/2009	Update due to new features in Version 2.4.0; for SF2100 only	T. Novak
1.4	14/11/2011	Fixed some errors regarding file upload.	J. Hummel

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1 Introduction

1.1 Overview

The software manual describes how to use the application [*SWFFirmwareUpload.exe*](#) on a PC with SF2100.

1.2 Scope

The manual covers all functionality of [*Version 2.4.0*](#) of the Firmware Upload Tool for the SF2100 controller. The following functionality is provided by the tool:

- Firmware-upload via profibus network
- Firmware-upload via RS232 connection
- Firmware-upload via UDP
- Upload/download/activate Content Ids (CID)
- Changing the brightness of the LED board
- Changing of the SF2100 Profibus slave address
- Changing of the SF2100 FuturitCom2 slave address
- Changing of the SF2100 IEC870 slave address for SMARTTLS
- Changing of the SF2100 IEC870 slave address for SiTOS
- Remote start of the testmode via profibus network
- Remote start of the testmode via RS232 connection
- Retrieving the SW Version
- Setting/Getting the LED Test timer

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2 Installation

No install procedure in Windows is needed. The software can be started by a double click on the file SWFFirmwareUpload.exe.

Note: The executable file must be in the folder "SWFFirmwareUpload" which also contains several other files.

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3 GUI components

In the following the components of the Graphical User Interface are outlined

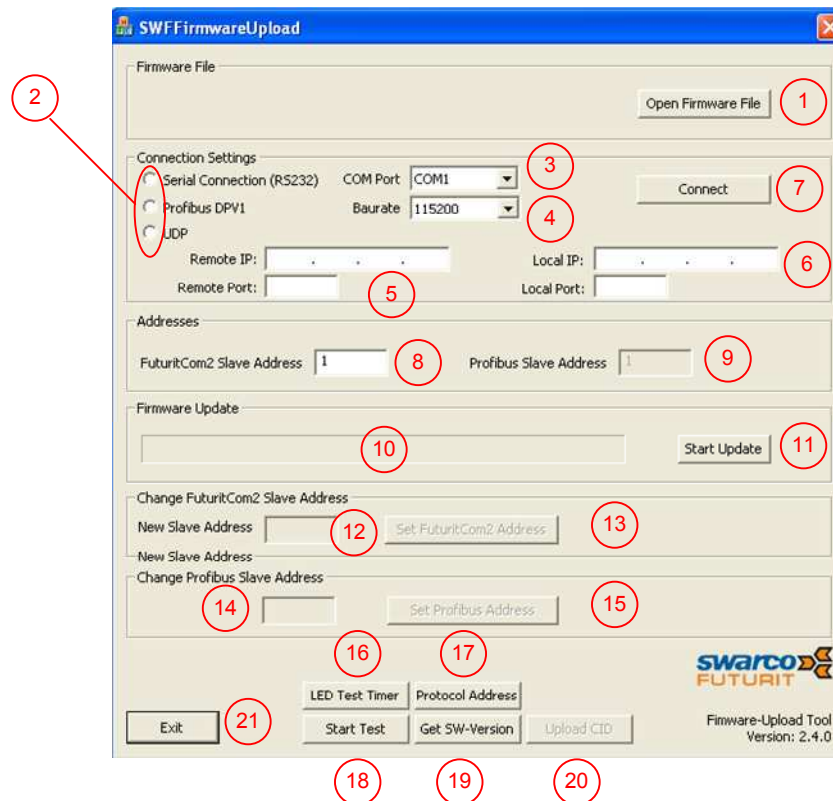


Figure 1 - GUI of Firmware Upload Tool

1. Button to open a file to upload
2. Selection which connection will be used
3. Selection which COM Port will be used
4. Selection which baud rate will be used
5. Select the Remote IP and port address
6. Select the Local IP and port address
7. Button to connect to the SF2100 controller.
8. FuturitCom2-Address of the SF2100 controller
9. Profibus Slave Address of the SF2100 controller
10. Progress bar which shows the current status of the firmware upload
11. Button to start the firmware upload
12. Field to enter a new FuturitCom2 slave address
13. Button to change the FuturitCom2 slave address
14. Field to enter a new Profibus slave address
15. Button to change the Profibus slave address
16. Button to set the LED test timer
17. Button to set the IEC870 address (SMARTTLS and SiTOS)
18. Button to start/stop the test mode
19. Button to retrieve the SF2100 software version
20. Button to upload a Content ID (CID)
21. Exit Button

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4 Description of Functionality

This chapter shows how to use the Firmware Upload Tool for each supported feature in a detailed way.

Note: It is strongly recommended that the software is used exactly in the described way!

4.1 Firmware upload via Profibus network

Step 1: Open the file which should be uploaded

- Click on the “Open Firmware File” – button (1). → A dialog appears in which the file (*.IMG) can be opened.
After opening the file, the filename is displayed next to the button (1).

Step 2: Select the Connection Settings

- Select the Profibus DPV1 connection with the radio buttons (2).
- Select the used COM-Port for the firmware upload with (3).
- Enter the right FuturitCom2 address (default value = 1) in field (8).
- Enter the Profibus slave address of the controller into field (9).

Step 3: Connect to the slave

- Click the “Connect” button (7). → After successfully connecting to the slave, the caption of button (7) changes to “Disconnect”. After that the connection is established successfully.

Step 4: Start the update

- Click the “Start Update” button (11).

Step 5: Wait until the upload is finished

- This may take about 30-60 minutes.
- After the upload was done successfully the following message box appears:



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4.2 Firmware upload via RS232 connection

Step 1: Open the file which should be uploaded

- Click on the "Open Firmware File" – button (1). → A dialog appears in which the file (*.IMG) can be opened.
After opening the file, the filename is displayed next to the button (1).

Step 2: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port for the firmware upload with (3).
- Select the baud rate which should be used for the upload with (4).
- Enter the right FuturitCom2 address (default value = 1) in field (8).

Step 3: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 4: Start the update

- Click the "Start Update" button (11).

Step 5: Wait until the upload is finished

- The duration of the upload depends on the selected baud rate. This may take about 2-10 minutes.
- After the upload was done successfully, the following message box appears:



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4.3 Firmware upload via UDP

Step 1: Open the file which should be uploaded

- Click on the "Open Firmware File" – button (1). → A dialog appears in which the file (*.IMG) can be opened.
After opening the file, the filename is displayed next to the button (1).

Step 2: Select the Connection Settings

- Select the Remote IP and the Remote Port in (5).
- Select the Local IP and the Local Port in (6).
- Enter the right FuturitCom2 address (default value = 1) in field (8).

Step 3: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 4: Start the update

- Click the "Start Update" button (11).

Step 5: Wait until the upload is finished

- After the upload was done successfully, the following message box appears:



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4.4 Upload/download/activate Content IDs

Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baud rate which should be used with (4).
- Enter the right value as FuturitCom2 address in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3: Upload/download/activate Content IDs

- Click on the button (20). The following window appears (left, Figure 2).

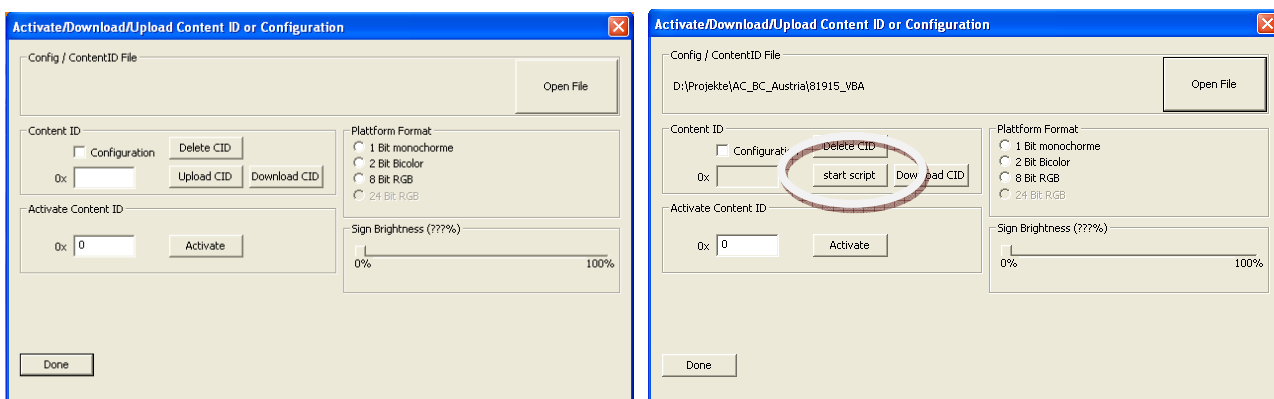
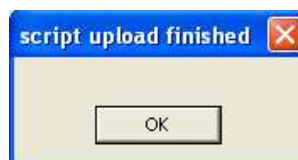


Figure 2 - Window "Activate/Download/Upload Content ID or Configuration"

Step 4a: Upload configuration

- Click on the button "Open File".
- Select the upload-script in XML format
- The button "Upload CID" changes to "start script" as shown in the window (right, Figure 2). Press the button "start script" to start with the upload of the software configuration.
- The upload may take 1-2 minutes. The duration of the upload depends on the selected baud rate and the number of CIDs to be uploaded
- After the upload was done successfully, the following message box appears:



Step 4b: Delete a single CID

- Insert a value in the field next to the button "Upload CID". In case of the configuration CID use the mark "Configuration".
- Press the button "Delete CID"
- When the deletion was successful, the following message appears:

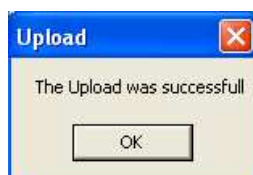
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Step 4c: Upload of a single CID

- Click on the button "Open File" and select the file.
- Select the "Platform Format" – this is only needed for images!
- Delete the single CID first as specified in Step 4b.
- Press the button "Upload CID". The file is uploaded to the same place that was chosen during the deletion process. After uploading was successful the following window appears:



Step 4d: Download of a single CID

- Insert a value in the field next to the button "Upload CID". "Upload CID". In case of the configuration CID use the mark "Configuration".
- Press the button "Download CID"
- Specify a name for the CID
- The CID is stored at the specified place.

Step 4e: Activate a CID

- Insert a value in the field next to the button "Activate"
- Press the button "Activate"
- In case of activating the picture CID successfully the following window appears:



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4.5 Changing the brightness of LED boards

Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baud rate which should be used with (4).
- Enter the right value as FuturitCom2 address in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3: Upload/download/activate Content IDs

- Click on the button (20). The following window appears (Figure 3).

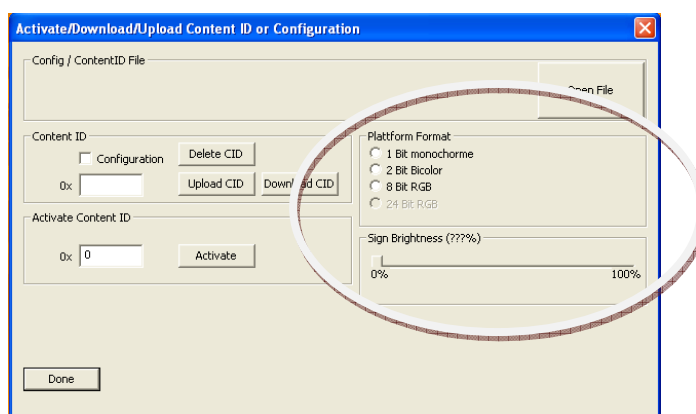


Figure 3 - Window "Activate/Download/Upload Content ID or Configuration"

Step 4:

- Chose the LED Board type

Step 5:

- Use the scroll bar to change the brightness of the sign from 0% - 100%

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4.6 Changing the controller's Profibus slave address

Step 1: Select the Connection Settings

- Select the Profibus DPV1 connection with the radio buttons (2).
- Select the used COM-Port with (3).
- Enter the right FuturitCom2 address (default value = 1) in field (8).
- Enter the Profibus slave address of the controller into field (9).

Step 2: Enter a new profibus slave address

- Enter the new slave address into field (14). Make sure that it is a valid Profibus address in the range of 1-125.

Step 3: Change the address

- Click on button (15) to change the Profibus slave address. After successfully changing the address, following message box appears:



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4.7 Changing of the controller's FuturitCom2 slave address

Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baud rate which should be used with (4).
- Enter the right FuturitCom2 address (default value = 1) in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3: Enter a new FuturitCom2 slave address

- Enter the new slave address in field (12). Make sure that it is a valid FuturitCom2 address in range of 1 - 240.

Step 3: Change the address

- Click on button (13) to change the slave address. After successfully changing the address, the following message box appears:



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4.8 Changing of the controller's IEC870 slave address for SMARTTLS

Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baudrate which should be used with (4).
- Enter the right value as FuturitCom2 address in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3: Enter a new IEC870 slave address for SMARTTLS

- Click on button (17)
- The following window appears (left, Figure 4)
- Change the protocol type to SMARTTLS (right, Figure 4)

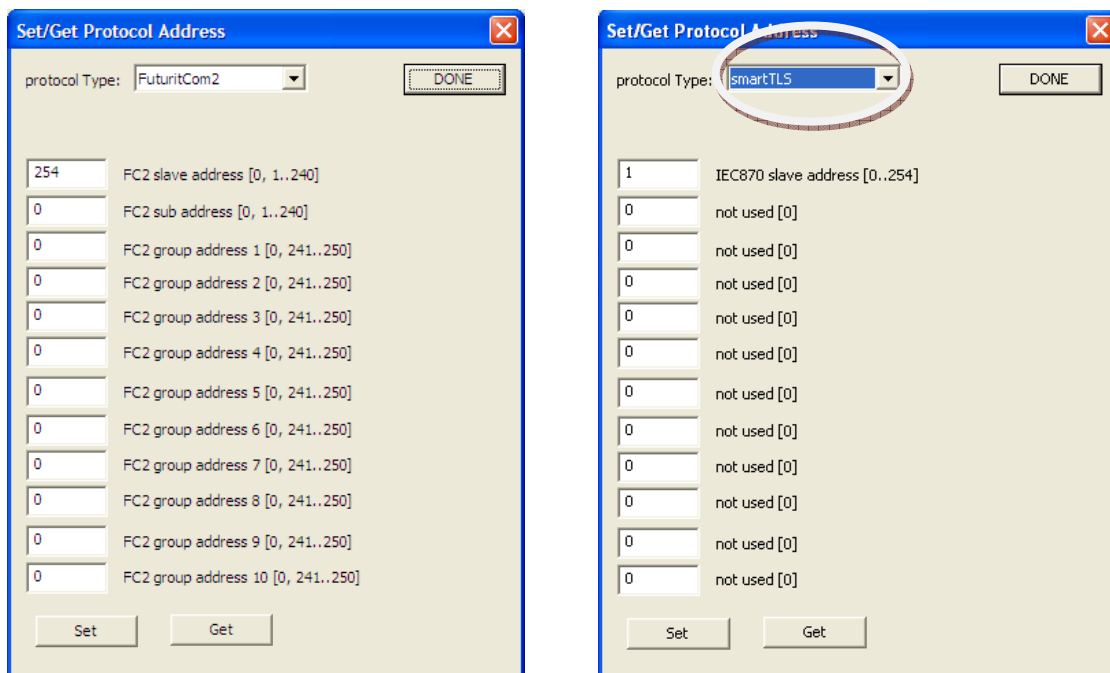
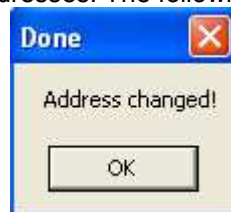


Figure 4 - Window "Set/Get protocol address" with SMARTTLS

- Set the IEC870 address 1 according to the hardware configuration
- Press the button "Set" to change the addresses. The following window appears.



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- Use the button “Get” to check whether the addresses are set correctly. “Get” retrieves the addresses from the SF 2100 controller.
- Click on button “Done” to return to the main window (see Figure 1).

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4.9 Changing of the controller's IEC870 slave address for SiTOS

Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baudrate which should be used with (4).
- Enter the right value as FuturitCom2 address in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3: Enter a new IEC870 slave address for SiTOS

- Click on button (17)
- The following window appears (left, Figure 5)
- Change the protocol type to SiTOS (right, Figure 5)

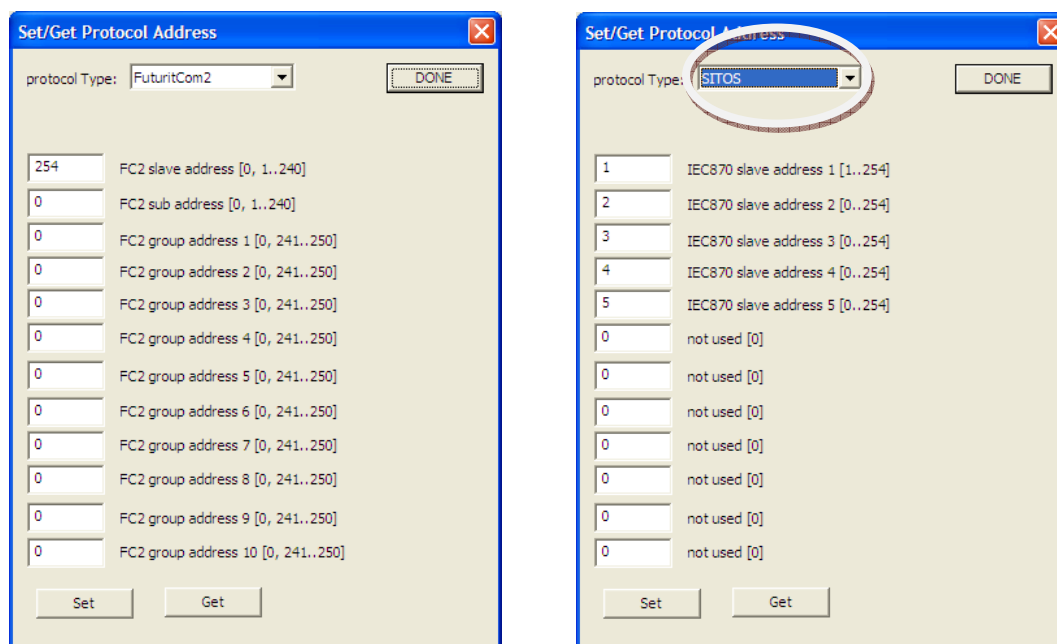
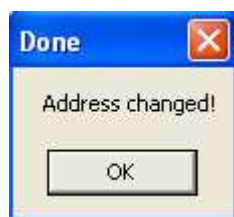


Figure 5 - Window "Set/Get protocol address" with SiTOS

- Set the IEC870 address 1-5 according to the hardware configuration
- Press the button "Set" to change the addresses. The following window appears.



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- Use the button “Get” to check whether the addresses are set correctly. “Get” retrieves the addresses from the SF 2100 controller.
- Click on button “Done” to return to the main window (see Figure 1).

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4.10 Remote start/stop of the test mode via Profibus network

Step 1: Select the Connection Settings

- Select the Profibus DPV1 connection with the radio buttons (2).
- Select the used COM-Port with (3).
- Enter the right FuturitCom2 address (default value = 1) in field (8).
- Enter the Profibus slave address of the controller in field (9).

Step 2: Connect to the slave

- Click the “Connect” button (7). → After successfully connecting to the slave, the caption of button (7) changes to “Disconnect”. After that the connection is established successfully.

Step 3: Start the test mode

- Start the test mode with clicking “Start Test” - button (18). When the test was activated successfully, the caption of button (18) changes to “Stop Test” and the following message box appears.



IMPORTANT NOTE:

Starting the test mode activates the traffic sign. On a “Signaalgever” for example all available pictures are shown in a sequence.

Step 4: Stop the test mode

- Stop the test mode with clicking “Stop Test” – button (18). When the test was stopped successfully, the caption of button (18) changes to “Start Test” and the following message box appears:



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4.11 Remote start/stop of the test mode via RS232 connection

Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baudrate which should be used with (4).
- Enter the right FuturitCom2 address (default value = 1) in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3: Start the test mode

- Start the test mode with clicking "Start Test" - button (18). When the test was activated successfully, the caption of button (18) changes to "Stop Test" and the following message box appears.



IMPORTANT NOTE:

Starting the test mode activates the traffic sign. On a "Signaalgever" for example all available pictures are shown in a sequence.

Step 4: Stop the test mode

- Stop the test mode with clicking "Stop Test" – button (18). When the test was stopped successfully, the caption of button (18) changes to "Start Test" and the following message box appears:



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4.12 Retrieving the software version from the SF2100

Step 1: Select the Connection Settings

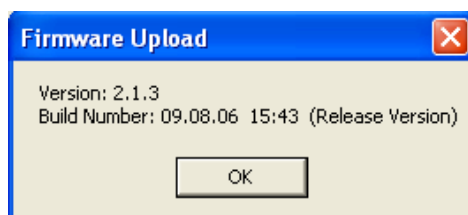
- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baudrate which should be used with (4).
- Enter the right value as FuturitCom2 address in field (8).

Step 2: Connect to the slave

- Click the "Connect" button (7). → After successfully connecting to the slave, the caption of button (7) changes to "Disconnect". After that the connection is established successfully.

Step 3:

- Press the button (19).
- The version number, the build number (YY/MM/DD) and the type of the revision (TEST/RELEASE) is displayed as shown e.g., in the following picture.



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4.13 Setting/Getting the LED test timer

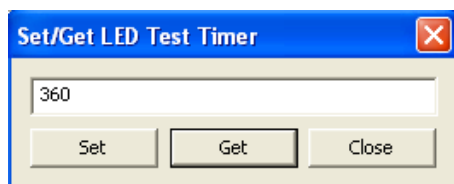
Step 1: Select the Connection Settings

- Select the Serial Connection (RS232) with the radio buttons (2).
- Select the used COM-Port with (3).
- Select the baudrate which should be used with (4).
- Enter the right value as FuturitCom2 address in field (8).

Step 2: Connect to the slave

- Click the “Connect” button (7). → After successfully connecting to the slave, the caption of button (7) changes to “Disconnect”. After that the connection is established successfully.

Step 3: Press the button (16). The following window appears:



Step 4a:

- Insert a value into the field in seconds and press the button “Set” to set a new timer limit for the complete LED test.
- Press the button “Close” to return to the main window (see Figure 1)

Step 4b:

- Press the button “Get” to retrieve the current timer limit from the SF2100
- The limit is displayed in the field.
- Press the button “Close” to return to the main window (see Figure 1)