UM1965
User manual

SPC5xx Flasher

Introduction

SPC5xx Flasher tool is developed to manage the Flash (programming/verification /dumping/erasing) on different targets via SCI, CAN and K-line in the same tool.

The application GUI is a user friendly interface that allows the user to connect the tool with the target using a USB dongle and to perform the tool functionalities.

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1 Overview

1.1 Scope

This document gives an overview of SPC5xx Flasher and it illustrates the first steps to use the basic functionalities and how to use it.

1.2 Requirements

SPC5xx Flasher (PCs) has been designed to work correctly using Windows 7 platform and no particular hardware requirements are needed. However, in order to connect your PC to the target, a USB port or a RS232 port installed in your PC is mandatory depending on which interface will be used.

2 SPC5xx Flasher overview

SPC5xx Flasher is an application developed to manage the Flash by different interfaces.

SPC5xx Flasher allows to easily perform the basic Flash management tasks with results logging.

The tool functionalities are:

- Flash program
  - To download an image file into the Flash in s19, run or hex format.
- Flash Erase
  - To erase all data Flash.
- Flash dump
  - To upload the content of the Flash. It can be showed on the memory window or it can be saved on a file in binary format.
- Flash Verify
  - To check the content of the Flash with an image file (s19, run or hex format).
- Flash blank check
  - To check the first address not blank of the Flash selected.

The interfaces available are:

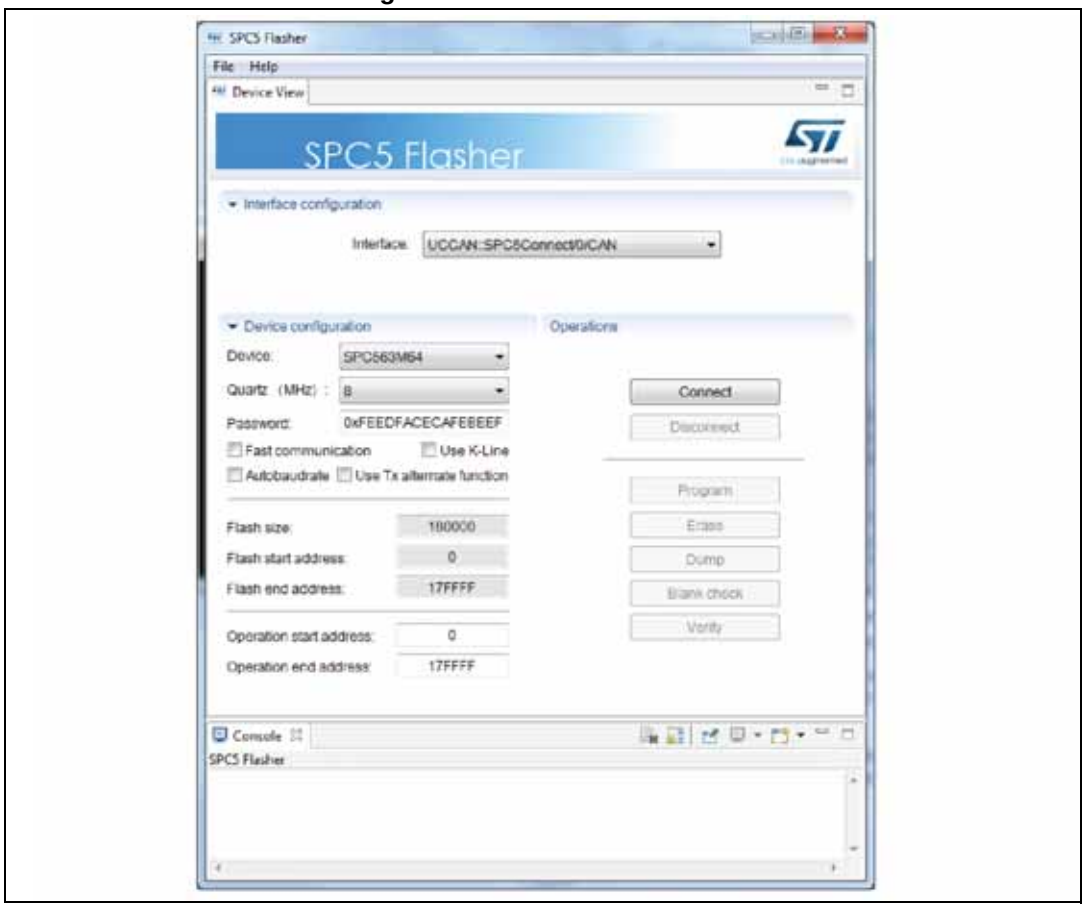
- SCI
- K-Line
- CAN

2.1 SPC5xx Flasher GUI

SPC5xx Flasher is composed of a menu and different windows that allow to execute the Flash management command easily.

- Menu (*Section 2.2: Menu*)
- Interface configuration (*Section 2.3: Interface configuration*)
- Device configuration (*Section 2.4: Device configuration*)
- Operations (*Section 2.5: Operations*)
- Console (*Section 2.6: Console*)

Figure 1. SPC5xx Flasher GUI



2.2 Menu

2.2.1 File item

The file item contains Exit item that allows closing the application.

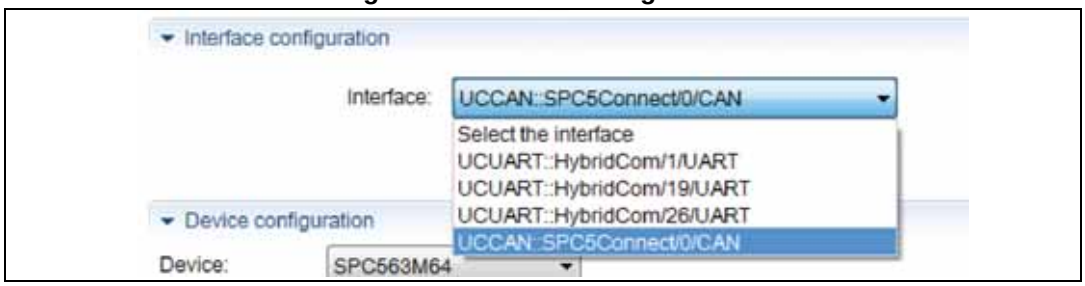
2.2.2 Help item

The help item contains “About” item just to show the information about SPC5xx Flasher.

2.3 Interface configuration

This section allows the user to select the serial interface (Interface configuration).

Figure 2. Interface configuration



2.3.1 Interface list

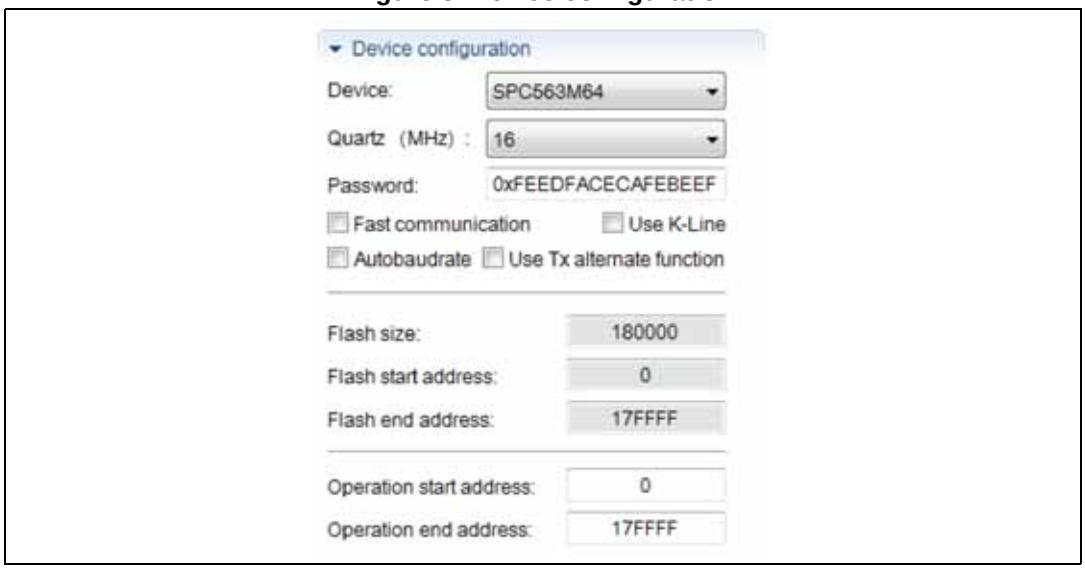
Interface list shows all interfaces available on SPC5Flasher tool. SPC5Flasher tool supports two kinds of interface:

- SCI interface: it is indicated by UCUART::HybridCom/<COM port number>/UART. This list contains all virtual com ports installed in the PC. To use the following interface, select the corresponding COM port number connected to the serial port of the target.
- CAN interface: it is indicated by UCCAN::SPC5Connect/<SPC5Connect number>/CAN. This list contains all instances of SPC5Connect connected into the PC. Select the item corresponding to the SPC5Connet connected to the target.

2.4 Device configuration

This section allows the user to select the device and the options used by SPC5xx Flasher to connect to the target selected (Device configuration).

Figure 3. Device configuration



2.4.1 Device list

The first part of the Flasher window allows the user to select the target and the external crystal frequency value. The “Device” list box contains all targets available. If the user

changes the target selected, the same section displays some information related to the Flash of the target selected: Flash-size, Flash-start and Flash-end addresses.

2.4.2 External Quartz

The “Quartz (MHz)” list box allows the user to indicate the external crystal used. When the user updates this value, automatically the speed of the interface used is updated.

2.4.3 Properties

The second part of the device configuration section allows the user to set the interface properties. Below all items present in this part are listed:

- “Password” allows to set the password used by BAM.
- “Fast communication after BAM” check allows changing the baud rate in the UART interface from the BAM baud rate to 115200bps after BAM download just to improve the performance of the tool.
- “K-Line” check-box allows selecting K-Line interface. The user has to choose UART interface from interface list; at this point the check-box checked means that the K-Line interface is selected.
- “Auto baud rate” check allows using the BAM with auto baud setting enabled.
- “Alternate Tx” check-box allows selecting the alternate tx as tx pin.

2.5 Operations

Figure 4. Operations

2.5.1 Connect

“Connect” button: Once the interface is selected and configured, the user has to push “Connect” button to download by BAM the loader into the RAM of the micro. At this point the Flash management command is enabled and the user can perform the desired operation.

2.5.2 Disconnect

“Disconnect” button: the user can push this button to close the connection.

2.5.3 Program command

“Program” button schedules the Flash of the device starting from the binary file selected. When the user pushes the following button, a browser window is displayed to choose the binary image file. The result of the operation is displayed in the console.

2.5.4 Erase command

“Erase” button erases the Flash from «Operation start address» and «Operation end address» set in the device configuration section. The result of the operation is displayed in the console.

2.5.5 Dump command

“Dump” button performs a dump of the Flash from «Operation start address» and «Operation end address» set in the device configuration section saving the result in a file selected in the browser window displayed. The result of the operation is displayed in the console. “Read” button starts the reading operation. “Cancel” button aborts the operation.

2.5.6 Blank check command

“Blank check” button performs a blank check of the Flash from «Operation start address» and «Operation end address». The result of the operation is displayed in the console.

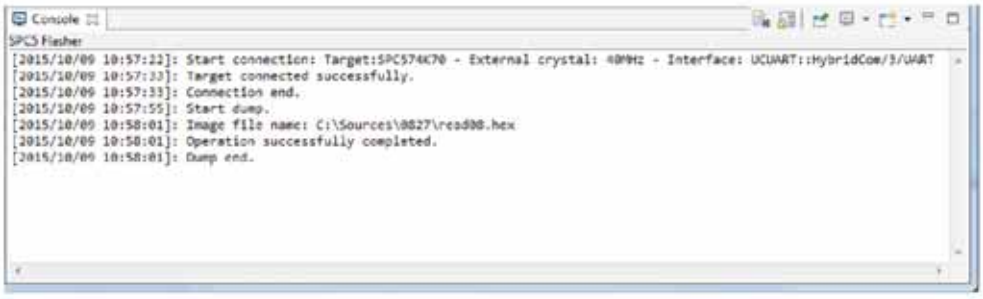
2.5.7 Verify command

“Verify” button performs of the Flash from «Operation start address» and «Operation end address» with the image file selected in the browser window displayed. The result of the operation is displayed in the console.

2.6 Console

Console shows the output of the tool (*Figure 5*).

Figure 5. Console



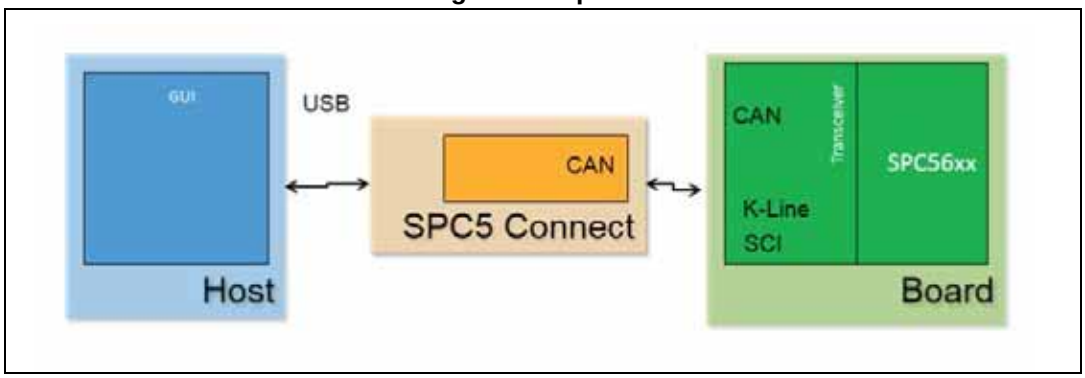
3 Diagram overview

This section gives a brief description of the system used to work with SPC5xx Flasher tool.

The management of the Flash is controlled by the host machine connected to the target using one of the interfaces available.

The top level diagram of theSPC5xx Flasher is showed in *Figure 6.*

Figure 6. Top level



4 Revision history

Table 1. Document revision history

Date	Revision	Changes
16-Nov-2015	1	Initial release.