SMH Technologies®

28/04/2025

Driver v1.00

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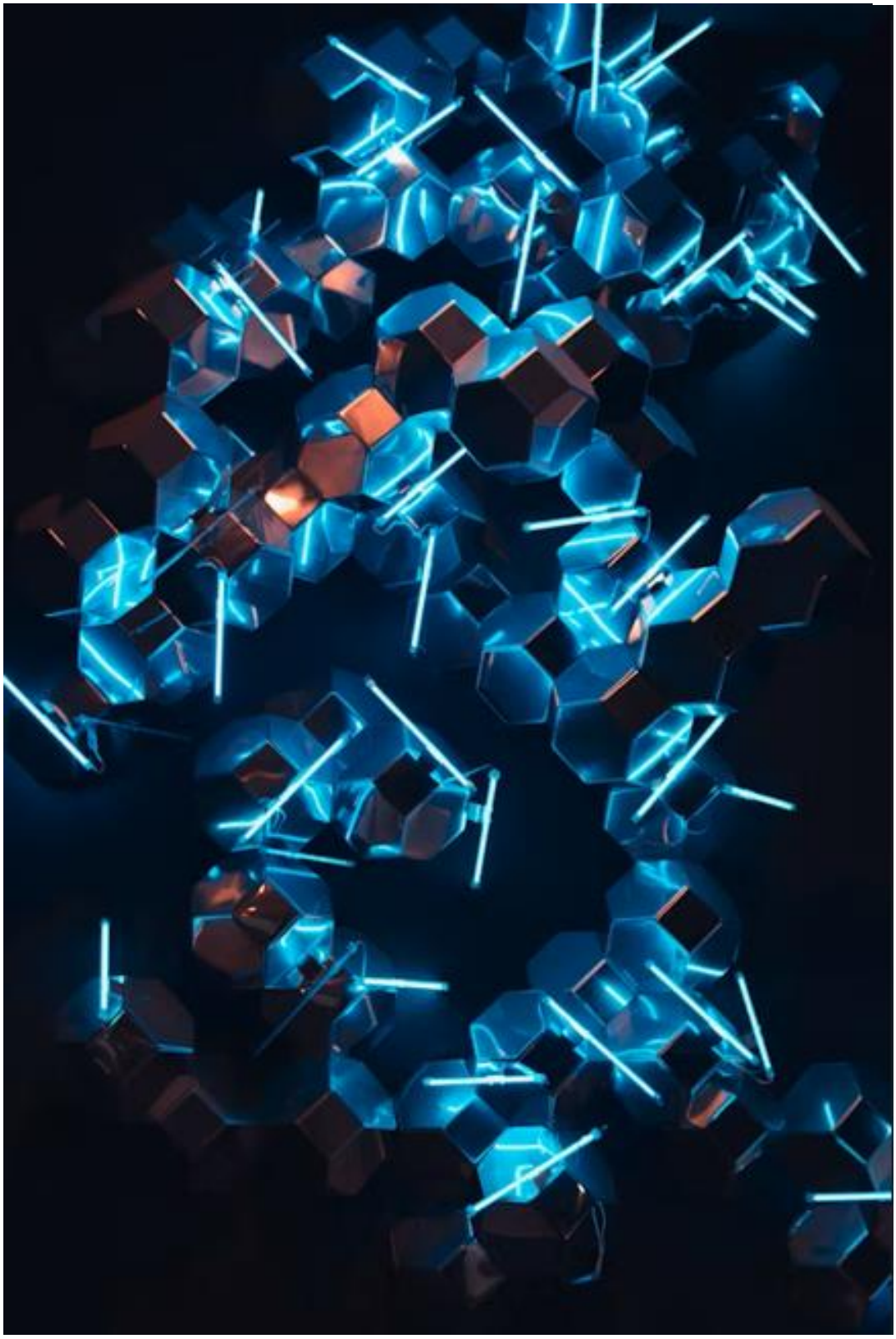
Interfacing FlashRunner 2.0 with CC23xx and CC27xx



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Standard Commands

CONNECT

This command is used to connect to the device. It might print information on the status of the debug interfaces.

MASSERASE <memory_type>

This command is used to erase the specified memory. For these devices only chip erase is available. It is not allowed to erase single parts of it.

BLANKCHECK <memory_type>

This command is used to check if the specified memory is blank. For these it is not allowed to check single parts of it.

PROGRAM <memory_type>

This command is used to flash the specified memory with a customer's firmware which fits into this memory. For these it is not allowed to program single parts of it.

VERIFY <memory_type>

This command is used to compare the content of the memory with a customer's firmware.

S – CRC32 only method available for these devices.

READ <memory_type> <start_address> <size>

This command is used to read the specified memory or a portion of it and print it out in the GUI terminal.

DUMP <memory_type> <start_address> <size>

This command is used to read the specified memory or a portion of it and save it into a binary file stored inside the programming system SD-CARD.

DISCONNECT

This command is used to disconnect from the device.

Supported protocols

CC_SWD flashing algorithm supports only SWD protocol.

#TCSETPAR CMODE <**SWD**>

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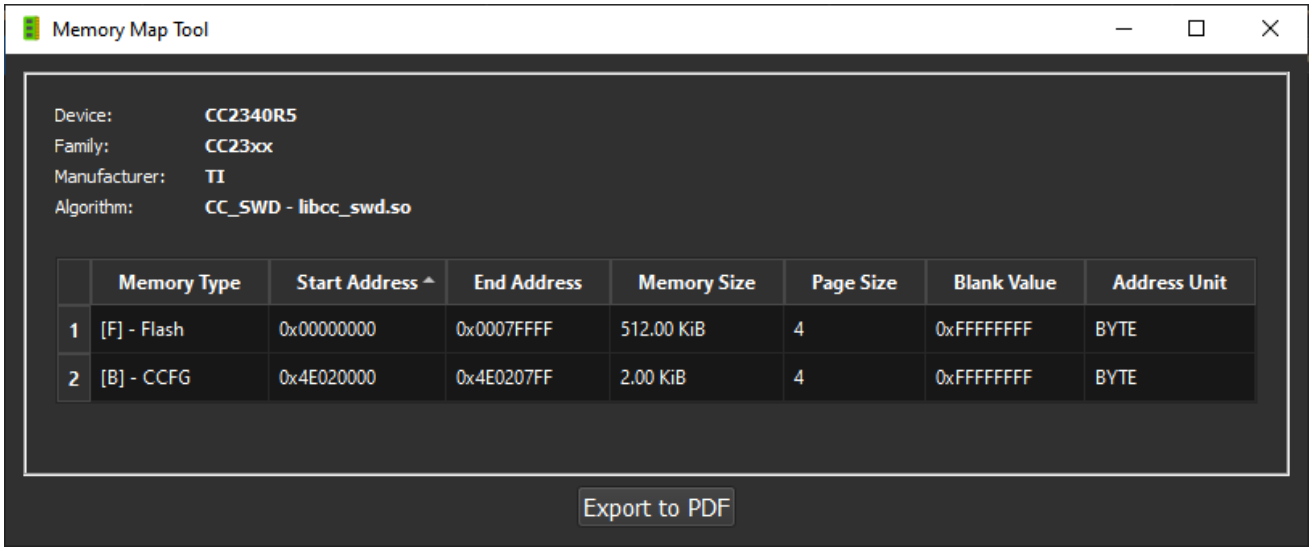
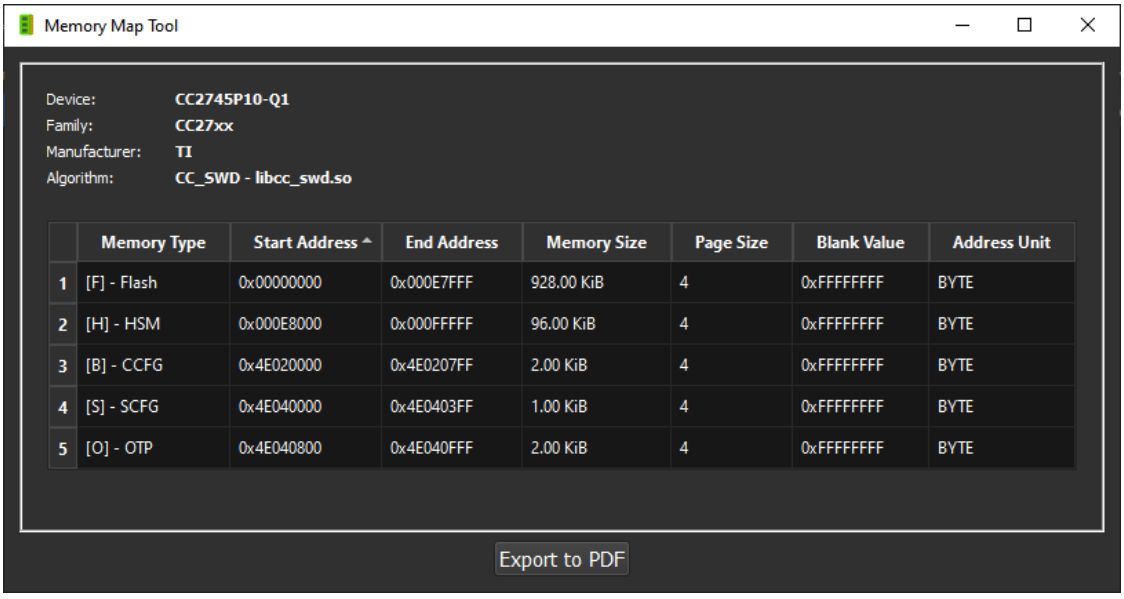
FRB creation

CC_SWD flashing algorithm supports two memories for CC23xx devices: ***FLASH and CCFG***.



Since there is no command that allows to erase single parts, every time a device is erased, it must be completely programmed. For this reason, the customer should always include into FRB files all data that needs to be programmed inside the device for both FLASH and CCFG memories and call PROGRAM C command. This is also what TI suggests during electronic boards manufacturing.

CC_SWD flashing algorithm supports five memories for CC27xx devices: ***FLASH, CCFG, SCFG, OTP and HSM***.



Since there is no command that allows to erase single parts, every time a device is erased, it must be completely programmed. For this reason, the customer should always include into FRB files all data that needs to be programmed inside the device for all memories and call PROGRAM C command.

For CC27xx HSM area, the firmware file is usually a raw binary file: while creating the FRB the customer should be careful to upload it and move it to the right HSM area: the GUI will automatically place it at the beginning of the flash memory (address 0); the customer should edit that block and move it to address 0xE8000.

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Commands

CC23xx family

Commands supported:

#TPCMD CONNECT

#TPCMD MASSERASE C

#TPCMD BLANKCHECK C

#TPCMD PROGRAM C

#TPCMD VERIFY C

#TPCMD READ F | B <start_address> <size>

#TPCMD DUMP F | B <start_address> <size>

#TPCMD DISCONNECT

CC27xx family

Commands supported:

#TPCMD CONNECT

#TPCMD MASSERASE C

#TPCMD BLANKCHECK C

#TPCMD PROGRAM C

#TPCMD VERIFY C

#TPCMD READ F | B | S <start_address> <size>

#TPCMD DUMP F | B | S <start_address> <size>

#TPCMD DISCONNECT

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