

Interfacing FlashRunner 2.0 with RNSS_SYNERGY_RA devices

Command List standard

Memory types:

F → Code Flash

D → Data Flash

O → Configuration Area

CONNECT

Power on and entry.

MASSERASE

MASSERASE <F|D> or **MASSERASE** <F|D> <start_addr> <end_addr>

Masserase command for Code or Data Flash - Auto or Manual mode allowed.

In Manual Mode the address and size have to be aligned with the block size. If not, the driver aligns them automatically to the minimum area that match the user request.

BLANKCHECK

BLANKCHECK <F|D|O> or **BLANKCHECK** <F|D|O> <start_addr> <size>

Blankcheck command for Code, Data Flash or Configuration Area - Auto or Manual mode allowed.

In Manual Mode the address and size have to be aligned with the block size. If not, the driver aligns them automatically to the minimum area that match the user request.

Not always possible for the Data Flash Area, see the Developer's section.

PROGRAM

PROGRAM <F|D|O> or **PROGRAM** <F|D|O> <start_addr> <size>

Program command for Code or Data Flash - Auto or Manual mode allowed.

In Manual Mode the address and size have to be aligned with the block size. If not, the driver aligns them automatically to the minimum area that match the user request.

VERIFY

VERIFY <F|D|O> <R> or **VERIFY** <F|D|O> <R> <start_addr> <size>

Verify command for Code or Data Flash - Auto or Manual mode allowed.

R – Normal verify with Read-Out method. The address and size have to be aligned with the write block size.

S - CRC verify (only for M33 devices). The address and size have to be aligned with the CRC block size.

If the alignment is not respected, the driver aligns them automatically to the minimum area that match the user request.

READ

READ <F|D|O> or **READ** <F|D|O> <start_addr> <size>

Read command for Code Flash, Data Flash and User Boot area - Auto or Manual mode allowed.

Read the memory and print the values into the terminal.

The address and size have to be aligned with the block size. If not, the driver aligns them automatically to the minimum area that match the user request.

DUMP

DUMP <F|D|O> or **DUMP** <F|D|O> <start_addr> <size>

DUMP command for Code Flash, Data Flash or Configuration area - Auto or Manual mode allowed.

Read the memory and store the values into the binary file selected with #TPSETDUMP.

The address and size have to be aligned with the block size. If not, the driver aligns them automatically to the minimum area that match the user request.

GET_SIGNATURE

Returns the device Signature on the terminal:

- No M33 devices:
 - SCI operating clock frequency.
 - Recommended maximum UART baud rate.
 - Number of areas.
 - Synergy/RA series.
 - Firmware version.
- M33 devices:
 - Recommended maximum UART baud rate
 - Number of areas.
 - Synergy/RA series.
 - Firmware version.
 - Device unique ID.
 - Product name

AREA_INFORMATION

Retrieve the Information for Each Area:

- Area type.
- Start address.
- End Address.
- Erase access unit (if 0x00, that area can't be erased).
- Write access unit.
- Read access unit (only M33).
- CRC access unit (only M33).

DISCONNECT

Power off and exit.

Additional Command List M33

CRC

CRC <F|D|O> <start_addr> <size>

CRC command for Code Flash, Data Flash and User Boot area - Auto or Manual mode allowed.

Request the CRC of the memory and print the value into the terminal.

The address and size have to be aligned with the CRC block size. If not, the driver aligns them automatically to the minimum area that match the user request.

DLM_STATE

DLM_STATE <GET|SET> <new_state>

Device Life Management:

- GET: print on the terminal the current status of the DLM
- SET: set the status of the DLM. *new_state*, the name of the next state. The transitions allowed are the one without authentication. The states are: SSD, NSECSD, DPL, LCK_DBG and LCK_BOOT.

INITIALIZE

Initialiaze the device. Erase all the memory areas (F, D, O) and return to SSD state (available only from SSD, NSECSD and DPL states). Can be disabled permanently with the `PARAMETER` command.

BOUNDARY

BOUNDARY <GET|SET> <cfs1> <cfs2> <dfs1> <srs1> <srs2>

Boundaries for Secure/Non-Secure programming:

- GET: print on the terminal the current boundaries
- SET: set the boundaries.
 - cfs1: Size of code flash secure region (without NSC) [KB]
 - cfs2: Size of code flash secure region [KB]
 - dfs1: Size of data flash secure region [KB]
 - srs1: Size of SRAM secure region (without NSC) [KB]
 - srs2: Size of SRAM secure region [KB]

PARAMETER

PARAMETER <GET|SET> <parameter_ID> <parameter_data>

Parameter management:

- GET: print on the terminal the status of the ID requested.
 - parameter_ID: ID of the parameter to get.
 - 0x01: enable/disable of the initialization
- SET: set ID.
 - parameter_ID: ID of the parameter to set
 - 0x01: enable/disable of the initialization
 - parameter_data: value
 - 0x00: disable initialization (permanent)