Interfacing FlashRunner 2.0 with LX Semicon LX6 Devices

SMH Technologies®

SMH Technologies S.r.l.

LX6 Protocols and PIN maps

All the LX6 devices support the SWD protocol.

#TCSETPAR CMODE **<SWD>**

SWD PIN MAP
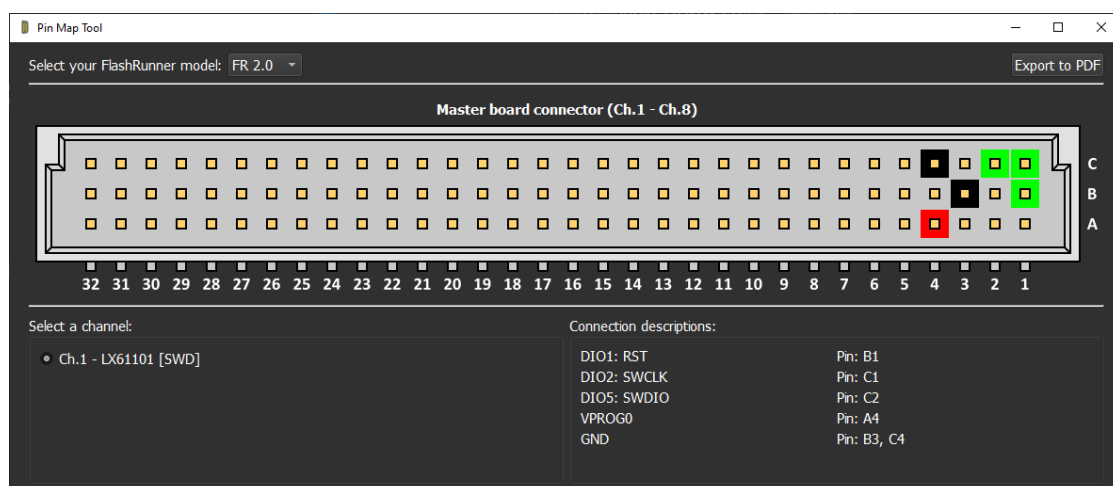
LX6 memory map
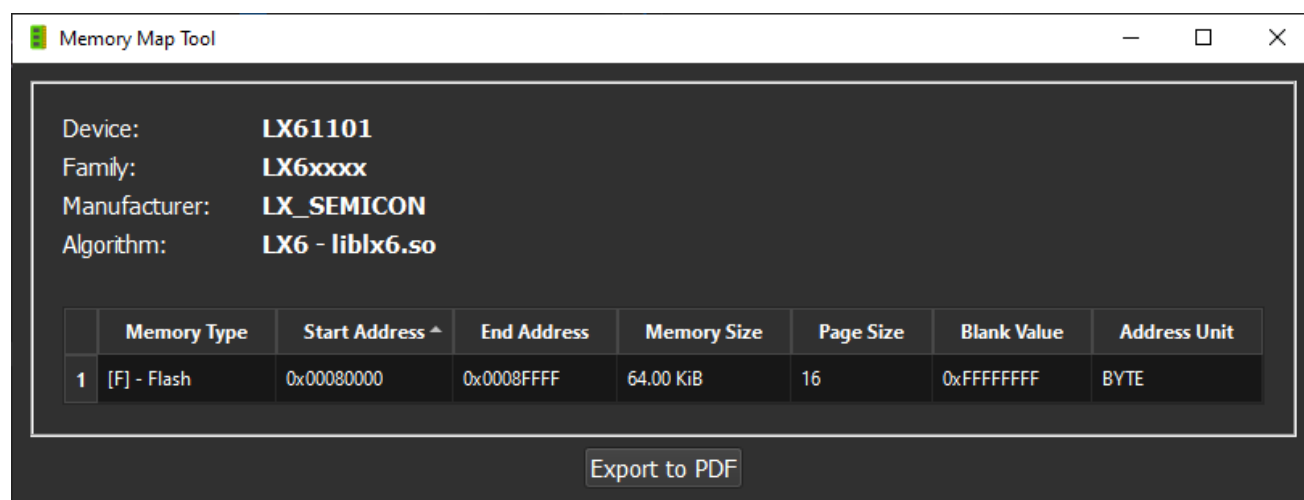
LX6 Available Commands

LX6 Standard Commands

MEMORY	MASSERASE	BLANKCHECK	PROGRAM	VERIFY READOUT	VERIFY CHECKSUM	READ	DUMP
Flash [F]	✓	✓	✓	✓	✓	✓	✓

LX6 Additional Commands

Commands for Flash memory:

#TPCMD LOCK <password> <xLIN_ENABLED|xLIN_DISABLED>
#TPCMD RUN <Time [s]>

LX6 Driver Commands

Here you can find the complete list of all available commands for the LX6 driver.

LX6 Standard Commands

This section will analyze standard commands, which are typically common across different drivers.

```
Memory type:
F → FLASH
```

#TPCMD CONNECT

#TPCMD CONNECT
This function performs the entry and is the first command to be executed when starting the communication with the device.
It will also detect if the device is locked and eventually print it in the Log.

#TPCMD MASSERASE

#TPCMD MASSERASE <F>
Masserase command for Flash memory of target device.
This command will erase all the content of the selected memory.

#TPCMD BLANKCHECK

#TPCMD BLANKCHECK <F>
Blankcheck is available for Flash memory.
Verify if all memory is erased.

#TPCMD PROGRAM

#TPCMD PROGRAM <F>
Programs all Flash memory based on the data in the FRB file.

#TPCMD VERIFY

#TPCMD VERIFY <F> <R|S>
R: Readout Mode.
S: Checksum 32 Bit Mode.
Verify Readout is available for Flash memory.
Verify all memory of the selected type based on the data in the FRB file.

#TPCMD READ

#TPCMD READ <F>
Read all memory of selected type.
The result of the read command will be visible into the Terminal.

#TPCMD READ <F> <start address> <size>
Read selected part of memory of the selected type.
The result of the read command will be visible into the Terminal.

#TPCMD DUMP

#TPCMD DUMP <F>
Dump all memory of selected type.
The result of the dump command will be stored in the FlashRunner 2.0 internal memory.

#TPCMD DUMP <F> <start address> <size>
Dump selected part of memory of the selected type.

#TPCMD DISCONNECT

#TPCMD DISCONNECT
Disconnect function. Power off and exit.

LX6 Additional Commands

Additional commands are specialized commands designed to perform specific functions.
They enable the execution of complex procedures with a single command and provide access to important information from the device.
Typically, these commands are available in the final section of the Graphical User Interface when creating a project.

#TPCMD LOCK

Syntax: **#TPCMD** LOCK <password> <xLIN_ENABLED|xLIN_DISABLED>

<password>   Password to lock the device. Insert this value in hexadecimal value starting with *0x* (e.g. 0xAABBCCDD).

<xLIN_ENABLED|xLIN_DISABLED>   Allows enabling or disabling xLIN access.

Description: This command **permanently locks** write operations on the device.

#TPCMD RUN

Syntax: **#TPCMD** RUN <Time [s]>

<Time [s]>   Time in seconds (e.g., 2 s). This time is an optional parameter.

Description: Move the Reset line up and down quickly if no parameter <Time [s]> is inserted.
#TPCMD RUN <Time [s]> instead moves the Reset line down and high, then waits for the entered time.
This command typically can be used to execute the firmware programmed in the device.

LX6 Driver Changelog

Info about driver version 1.00 - 10/02/2025
Supported Flash memory Commands for LX61101 devices.