

Interfacing FlashRunner 2.0 with IQS devices

Supported Protocol

- **I2C:** To program the device, the pin VPROG1 must be connected to the clk line through a diode.

Supported Memory

- **OTP Options:** 5 One Time Programmable banks.

Additional Parameters

START_DELAY

: Delay between power-up of the device and start of communication. It must be less than 15 (ms), otherwise the communication window of the device would close before transmission could start. Overrides the standard parameter **PWUP**.

OTP_OPTIONS

: you can specify the value of the OTP options with this parameter, instead of using an FRB file. The structure of the OTP options is the following

ABCCDDEE , with

- **A** value of Bank 4 (only 4 bits, which is 1 digit)
- **B** value of Bank 3 (only 4 bits)
- **CC** value of Bank 2 (8 bits, which is 2 digits)
- **DD** value of Bank 1 (8 bits)
- **EE** value of Bank 0 (8 bits)

Using this parameter would be the same as using a binary firmware with values
EEDDCC0B0A

Algorithm Commands

The letter after the command names specifies on which memory region the command is to be executed:

- **O:** OTP Options. Bits set to 1 cannot be re-programmed to 0.

Many commands support the parameters <start_addr> and <size>, that specify to execute the command, respectively, from which address and for how many addresses.

CONNECT

Powers-on the device, enters programming mode and checks the connection.

BLANKCHECK

BLANKCHECK O, or **BLANKCHECK** O <start_addr> <size>

Checks that the the selected memory is blank (all to 0x00)

PROGRAM

PROGRAM O, or **PROGRAM** O <start_addr> <size>

Programs the selected memory using the data loaded into the FRB file.

VERIFY

VERIFY O, or **VERIFY** O <start_addr> <size>

Verifies that the data written into the selected memory corresponds to the data of the FRB file.

READ

READ O, or **READ** O <start_addr> <size>

Reads the selected memory, printing it into the terminal.

The OTP Options will also be printed in the log file using the OTP_OPTIONS structure

DUMP

DUMP O, or **DUMP** O; <start_addr> <size>

Reads the selected memory, dumping it into the dumping file.

DISCONNECT

Powers-off the device.