

# Interfacing FlashRunner 2.0 with NU\_MICRO devices

## Supported Protocol

- ICP

## Algorithm Commands

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

- **F**: Flash. It is internally divided into APROM and LDROM, but this division does not influence programming.
- **S**: SPROM.
- **W**: Config Bytes. Some bits are reserved, and as such they are always programmed and read as '1'.
- **C**: Chip (used only for command MASSERASE)

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. If the device is found to be locked, some commands may not be available before unlocking the device. To unlock a device, execute the command MASSERASE C.

## MASSERASE

**MASSERASE** <C|S>

Erases the SPROM (MASSERASE S) or the entire flash and configuration words (MASSERASE C).

## BLANKCHECK

**BLANKCHECK** <F|S|W>, or **BLANKCHECK** <F|S|W> <start\_addr> <size>

Checks that the selected memory is blank.

## PROGRAM

**PROGRAM** <F|S|W>, or **PROGRAM** <F|S|W> <start\_addr> <size>

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

## VERIFY

**VERIFY** <F|S|W> R, or **VERIFY** <F|S|W> R <start\_addr> <size>

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

## READ

**READ** <F|S|W>, or **READ** <F|S|W> <start\_addr> <size>

Reads the selected memory, printing it into the terminal.

## DUMP

**DUMP** <F|S|W>, or **DUMP** <F|S|W> <start\_addr> <size>

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

## DISCONNECT

Powers-off the device.