

Interfacing FlashRunner 2.0 with CY_A devices

Algorithm Notes

Supported Protocol:

- ISSP

Optional Command List:

- Read/Dump

Custom Settings:

- RESET_ENTRY <YES|NO>

Indicates which program entry method use, the **Reset** or the **Power Cycle**.

It's recommended to use the Reset Entry where possible for the devices that offer the XRES pin.

Notes:

The device has a main memory (**Flash**) and one block (**Security**) to setting the access privilege to the Flash.

There is one security data record for every 256 blocks of flash. For devices with under 256 blocks of flash, the

record is still 64 bytes long.

The correct programming flow implies the **MassErase F** (erase also the security settings),

BlankCheck both memory, **Program and Verify** (ReadOut or CheckSum) Flash and only after **Program and**

Verify (only ReadOut) the Security.

It's important to remember that with some security setting you will not able to Verify Readout the Flash

memory anymore.

Only a MassErase can reset the security setting.

The **Verify CheckSum** is supported only for the Flash memory and it is always available independently

from the security setting.

It is recommended to use programming frequency strictly below 6.25 MHz.

Higher frequency cause programming instability and not entail better programming times.

The PowerUp time (**PWUP**) must be less than 2 ms if it is chosen to use the **Power Cycle** programming

mode instead the Reset Mode.

If this constraint is not satisfied the driver return an explicative error.

Algorithm Flow

Commands List

CONNECT

Connect function: Power on and entry

DISCONNECT

Disconnect function: Power off and exit

Memory types:

F → Flash

- **MASSERASE <F>** This function perform a Masserase for both Flash and Security.
- **BLANKCHECK <F> or BLANKCHECK <F> <start_addr> <size>** Blankcheck command for Flash - Auto or Manual mode allowed.
- **PROGRAM <F> or PROGRAM <F> <start_addr> <size>** Program command for Flash - Auto or Manual mode allowed.
- **VERIFY <F> <R|S> or VERIFY <F> <R|S> <start_addr> <size>** Verify command for Flash - Auto or Manual mode allowed. R – Normal verify with Read-Out method S – Normal verify with Checksum method
- **READ <F> <start_addr> <size>** Read function for Flash – Address check.
- **DUMP <F> <start_addr> <size>** Dump function for Flash – Address check.

S → Security

- **BLANKCHECK BLANKCHECK <S>** Blankcheck command for Security.
- **PROGRAM <S>** Program command for Security.
- **VERIFY <S> <R>** Verify command for Security. R – Normal verify with Read-Out method
- **READ <S> <start_addr> <size>** Read function for Security – Address check.
- **DUMP <S> <start_addr> <size>** Dump function for Security – Address check.