

# Si5345

## Software

Silicon Labs ClockBuilder Pro software should be used to prepare the register file. Projects are included on the most reference designs.

Download: [ClockBuilder Pro](#)

Procedure:

1. Install and start ClockBuilder
2. Open "/misc/Si5345/Si5345-RevB-0808-02A-Project.slabtimeproj"
3. Modify settings
4. Export Register File select C code header save to file

Note:

- Si5345-REVB and REVD need different project
  - [AN1006-Si534x-8x-RevB-RevD-Differences.pdf](#)
  - Hint: With CBPro 4.3 and newer REVB is not longer selectable in case you start a new project. In this case open an existing Revision B Project and modify it.

## I2C Configuration

## Volatile memory

For Zynq based system Si5345 can be initialized during FSBL execution. For FPGA based modules init can be done by the application MicroBlaze.

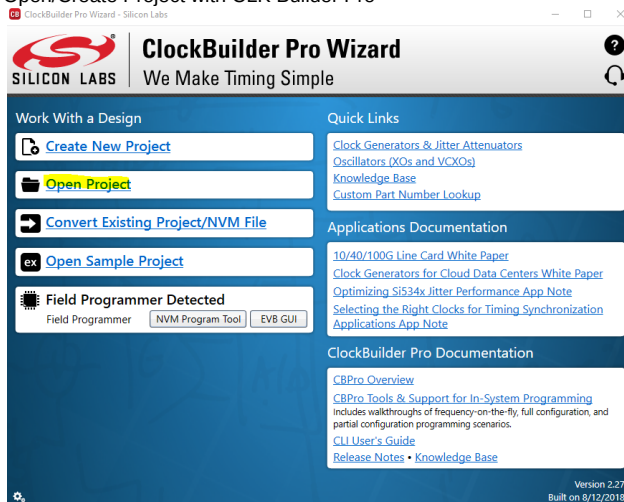
Examples are included in the reference designs.

Procedure with FSBL or MicroBlaze c code:

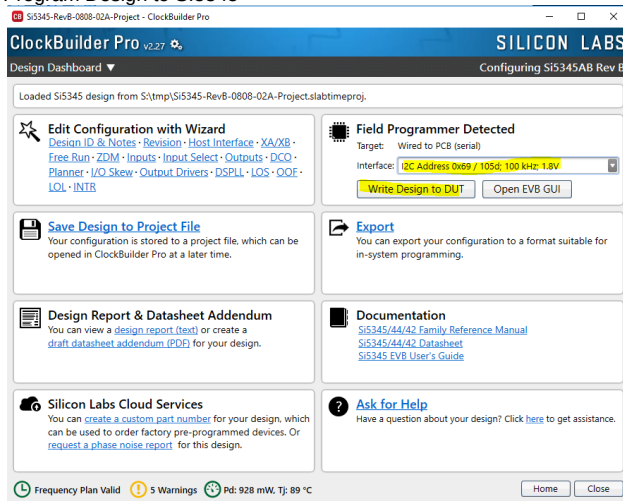
1. Replace Header files from modified FSBL template or SCU FPGA projects with exported header file and regenerate software.

Procedure with Clock Builder Pro:

1. Open/Create Project with CLK Builder Pro



2. Set correct Host Interface (I2C address and IO Voltage)
3. Program Design to SI5345



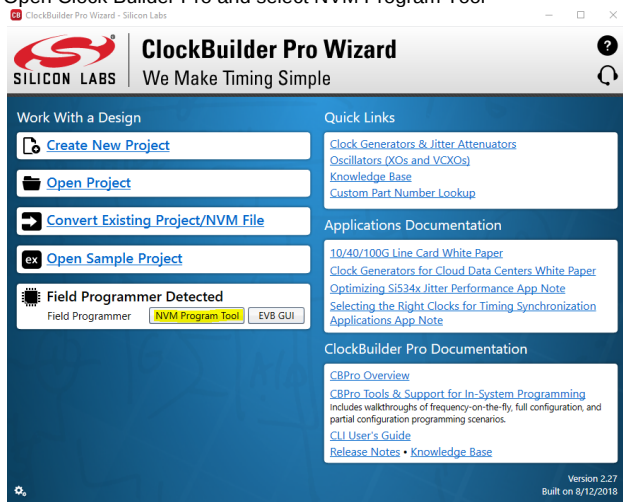
## Non-volatile memory (NVM)

NVM can be programmed on the module. **NVM is only two time programmable!** NVM is normally not preprogrammed and can be done by customer.

Therefore SI Clock Builder Pro Software and [Clock Builder Pro Field Programmer](#) are necessary.

Procedure:

1. Connect GND, I2C-SCL and I2-SDA\_SDIO with SI5345 I2C bus of the board.
2. Connect USB to PC and Power on the module
3. Open Clock Builder Pro and select NVM Program Tool



4. Select SI545 project and set correct Host Interface (I2C address and IO Voltage)

## 5. Scan device

NVM Program Tool - ClockBuilder Pro v2.27

Field Programmer Mode: Wired to Board (No Socket Detected)

Target Device: Si538x/4x (not firmware based)

Host Interface: I2C Address 0x69 / 105d; 100 kHz; 1.8V

Project File: S:\tmp\Si5345-RevB-0808-02A-Project.slbttimeproj Select Project ... Clear

Project File Created By: CBPro v2.9 OPN Lookup

Project Part: Si5345 Rev B

Project Design ID: 0808-02A

Project Design Check: OK

Project File NVM Hash: 0x397ADEBB03609B7EBA36929F52A85ACE [copy to clipboard](#) ?

Device Part Number: Present, Si5345A-B-GM Scan for Device Clear

Device Design ID: 5345BP2

Device NVM State: 1 bank used, 2 banks available for burn

# Valid Burns: 0

# Burns with Error: 0

Program NVM

## 6. Program NVM

## Links

- Silicon Labs UG286: ClockBuilderPro™Field Programmer Kit
- [Si5345-44-42-D-DataSheet.pdf](#) - Data sheet
- [Si5345-44-42-D-RM.pdf](#) - Register description