Cypress Programmer Release Notes

Version 2.1

Thank you for your interest in Cypress Programmer. This document lists the installation requirements, software and hardware updates, limitations, and known issues with the tool.

Product Description

Cypress Programmer is a flexible, cross-platform application used to program Cypress devices. It can perform Program, Erase, Verify, and Read operations on the flash of the target device.

Cypress Programmer is both a command-line tool and a GUI tool. It is based on OpenOCD v0.10.0 software with Cypress enhancements, fixes, and updates.

Cypress Programmer 2.1 delivers:

- Pre-production support for PSoC 6A-512K product line
- Support for new part numbers in existing device families, and new development boards and kits
- Support for several new features:
    - Drag and drop the program file into the GUI
    - JTAG chain support
    - Partial checksum view

What's Included

- Cypress Programmer Graphical User Interface 2.1: This tool provides a graphical user interface to perform Program, Erase, Verify, and Read operations on the flash of the target device.
- Cypress OpenOCD 2.2: This tool provides debugging and in-system programming functionality for target devices in Cypress Programmer.
- KitProg3 1.13: This tool provides communication firmware that supports CMSIS-DAP programming and debugging via HID and bulk interfaces.
- Firmware Loader (fw-loader) 2.2.10: This is a cross-platform command line tool to easily update KitProg3 on Cypress kits. Refer to the Cypress Github website for more details or to get the latest fw-loader package.

Supported Operating Systems

- Windows 7 (x64) and Windows 10 (x64)
- MAC OS X 10.13 (x64) and MAC OS X 10.14 (x64)
- Ubuntu 18.04 LTS (x64)

Supported Kits

- PSoC 6 Pioneer and Prototyping kits
    - CY8CKIT-062-WiFi-BT
    - CY8CKIT-062-BLE
    - CY8CPROTO-062-4343W

  - CY8CPROTO-063-BLE
  - CY8CPROTO-064-SB
  - CY8CKIT-062S2-43012
  - CY8CPROTO-062S2-43012
  - CY8CPROTO-062S3-4343W
  - CYW9P62S1-43438EVB-01
  - CYW9P62S1-43012EVB-01
  - CY8CKIT-064S2-4343W
- IoT and Bluetooth kits and boards
  - BCM94343WWCD2
  - CYW943907AEVAL1F
  - BCM943362WCD4
  - BCM943438WCD1
  - BCM943364WCD1
  - CYW943340WCD1
  - CYW943907WAE4
  - CYW954907AEVAL1F
  - CYW943455EVB-02
  - CYW943012EVB-04
  - CYBT-213043-MESH
  - CYW920719Q40EVB-01
  - CYW920819EVB-02
  - CYW920820EVB-02

Note Support for NEB1DX_01, BCM94343WWCD1, CYW920706WCDEVAL01, CYW9MCU7x9N364, and CYW920735Q60EVB-01 is removed from the Cypress Programmer 2.1 release.

Supported Product Families

- PSoC 60xx/61xx/62xx/63xx/64xx

Supported Programming Hardware

- SEGGER J-Link probe
- MiniProg4 stand-alone programmer/debugger
- KitProg3 onboard programmer/debugger
- FTDI FT2232H

Installation

For Windows, use the exe installer.

For macOS, use the PKG installer. Approve the system software from developer "Cypress Semiconductor" in **System Preferences > Security & Privacy > General > Allow**.

For Linux, unzip the tar.gz file and run the “udev_rules/install_rules.sh” script before the first tool launch. Script location:

<install_dir>/udev_rules

Resolved Issues

Limitation ID	Description
CYPROGRAMMER-87	OpenOCD is not able to automatically detect Flash Size on CY8CKIT-062-BLE devices in DEAD protection state, which causes failures while programming.
CYPROGRAMMER-80	Read operation does not work on CYW943907AEVAL1F kit.
CYPROGRAMMER-55	Unable to Verify hex file on BCM943362WCD4, BCM943438WCD1, BCM943364WCD1, CYW943340WCD1, CYW943907AEVAL1F, CYW943907WAE4, CYW954907AEVAL1F, CYW943455EVB-02, and CYW943012EVB-04 kits.
CYPROGRAMMER-108	Unable to program external flash on the CYW943012EVB-04 kit.
CYPROGRAMMER-532	PyOCD does not detect the Cypress kit if Cypress Programmer is installed on the same machine. Issue is described in KBA228321.

Known Problems and Solutions

The following problems are known in this release:

Defect ID	Defect Description	Impact / Workaround
CYPROGRAMMER-543	Not able to reliably program the following kits: • CYW920719Q40EVB-01 • CYW920819EVB-02 • CYBT-213043-MESH • CYW920820EVB-02	Put the device into recovery mode: 1. Press and hold the Recovery button. 2. Press and hold the Reset button for one second. 3. Release the Reset button. 4. Release the Recovery button. 5. Re-program the board as usual.
CYPROGRAMMER-535	Read operation does not work on the following kits: • CYW920719Q40EVB-01 • CYW920819EVB-02 • CYBT-213043-MESH • CYW920820EVB-02	No workaround
CYPROGRAMMER-247	Cypress Programmer GUI/OpenOCD does not report an error on IoT devices during external flash programming when 'Offset' parameter is close to UINT32_MAX	Addresses close to UINT32_MAX are invalid, so they will not be used in real use cases.

Defect ID	Defect Description	Impact / Workaround
CYPROGRAMMER-536	Unable to program the following kits after erase: • CYW920719Q40EVB-01 • CYW920819EVB-02 • CYBT-213043-MESH • CYW920820EVB-02	After erase put the device into recovery mode: 1. Press and hold the Recovery button. 2. Press and hold the Reset button for one second. 3. Release the Reset button. 4. Release the Recovery button. 5. Re-program the board as usual.
CYPROGRAMMER-501	Unable to program external flash on the CYW943340WCD1 kit.	No workaround
CYPROGRAMMER-525	Unable to program external flash on the CYW9P62S1-43012EVB-01 kit.	No workaround

Known Limitations:

Limitation ID	Description
CYPROGRAMMER-484	The user cannot change SMIF region size in GUI
CYPROGRAMMER-15	Not able to detect KitProg3/MiniProg4 probe when the OpenOCD process has been killed. Killing OpenOCD process leaves KitProg3/MiniProg4 in unpredictable/invalid state. Unplug KitProg3/MiniProg4 from the USB port and re-attach.
CYPROGRAMMER-120	Cypress Programmer GUI loses connection with CYW943907AEVAL1F, CYW943907WAE4 kits in case they are programmed with invalid image. Messages regarding lost connection can be safely ignored. Connection with target is restored during next operation.
None	Programs only bin files in the external memory for IoT Wi-Fi devices.
CYPROGRAMMER-260 CYPROGRAMMER-261	Debugger connection is unstable when SWD/JTAG clock is higher than 2 MHz on PSoC6-A-2M A0 silicon in Virgin mode, CY8CPROTO-062-4343W kit.
CYPROGRAMMER-157	Unable to access PSoC 6 device via JTAG if DAP has been switched to SWD mode previously. Hardware Reset or power cycle is required in order to switch the DAP back to JTAG mode.
KITPROG3-15	The KitProg3 WinUSB driver for the CMSIS-DAP bulk device is bound as ‘HP Printer (BIDI)’ on Windows 7 OS with an internet connection: • If the Windows 7 machine is not connected to the internet, then this issue is not seen. • This issue is also not seen on a Windows 10 machine. This is a Microsoft known issue which should be fixed in a future Windows Update. Workaround: If the HP Printer (BIDI) driver is already installed in the Device Manager, then do the following: 1. Uninstall the driver from Device Manager. 2. Disconnect the internet on the machine. 3. Rescan the device in Device Manager.

Documentation and Links

The latest fw-loader tool is available at the Cypress Github website.

Original OpenOCD sources v0.10.0:

https://sourceforge.net/projects/openocd/files/openocd/0.10.0/

OpenOCD v0.10.0 release notes:

http://openocd.org/2017/01/openocd-0-10-0-release-is-out/

OpenOCD v0.10.0 user guide:

http://openocd.org/doc-release/pdf/openocd.pdf

Cypress Semiconductor
198 Champion Ct.
San Jose, CA 95134-1709 USA
Application Support Hotline: 425.787.4814
www.cypress.com