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# Cypress Programmer Release Notes

**Version 4.0**

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 program, erase, verify, and read 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 4.0 delivers:

- Support for PSoC™ 64 secure targets with 1M, 2M, 512K flash size and kits
- Support for PSoC™ 62 and PSoC™ 61 MCU targets with 256K flash size and kits
- Support for single-core PSoC™ 61 and PSoC™ 62 devices with 2M and 512K flash size
- Support for EZ-PD™ PMG1-S0, S1, S2, S3 devices and kits
- Support of PSoC™ 4100S Max targets and kits
- Support for chip protection and SFlash programming in PSoC™ 4000S, PSoC™ 4100S, PSoC™ 4100S Plus, PSoC™ 4100S Max, and PSoC™ 4500S devices
- Support for new IoT Bluetooth® kits
- Ability to specify the OpenOCD Telnet port number
- Bug fixes

## What's Included

- Cypress Programmer graphical user interface 4.0: This tool provides a graphical user interface to program, erase, verify, and read the flash of the target device.
- Cypress OpenOCD 4.2: This tool provides debugging and in-system programming functionality for target devices in Cypress Programmer.
- KitProg3 2.21: This tool provides communication firmware that supports both CMSIS-DAP and DAPLink programming and debugging.
- CyBridge library 3.2.0: This is a cross-platform library providing access to KitProg3, MiniProg4, and UART devices via high-level API.
- ChipLoad 1.6.1: This tool allows to download firmware to WICED IoT Bluetooth® platforms

## Supported Operating Systems

- Windows 10 (x64) and Windows 7 (x64)
- macOS X 10.14 (x64) and macOS X 10.15 (x64), macOS 11 (x64)
- Ubuntu 18.04 LTS (x64) and Ubuntu 20.04 (x64)

## Supported Kits

- PSoC™ 6 Pioneer and Prototyping kits
  - CY8CKIT-062-WiFi-BT
  - CY8CKIT-062-BLE
  - CY8CPROTO-062-4343W
  - CY8CPROTO-063-BLE
  - CY8CKIT-062S2-43012
  - CY8CPROTO-062S2-43012
  - CY8CPROTO-062S3-4343W
  - CY8CEVAL-062S2
  - CY8CKIT-062S4
- Wi-Fi kits
  - CYW9P62S1-43438EVB-01
  - CYW9P62S1-43012EVB-01
- PSoC™ 64 kits
  - CY8CPROTO-064S1-SB
  - CY8CPROTO-064B0S3
  - CY8CPROTO-064B0S1-BLE
  - CY8CKIT-064B0S2-4343W
  - CY8CEVAL-064SXS2
- PSoC™ 4 kits
  - CY8CKIT-041-40XX
  - CY8CKIT-041-41XX
  - CY8CKIT-145-40XX
  - CY8CKIT-149
  - CY8CKIT-045S
  - CY8CKIT-041S-MAX
- PMG1 kits
  - CY7110
  - CY7111
  - CY7112
  - CY7113
- IoT Wi-Fi kits and boards
  - BCM94343WWCD2
  - BCM943362WCD4
  - BCM943438WCD1
  - BCM943364WCD1
  - CYW943012EVB-04

  - CYW943340WCD1
  - CYW943455EVB-02
  - CYW943907AEVAL1F (Rev 1.1)
  - CYW943907WAE4
  - CYW954907AEVAL1F
- IoT Bluetooth® kits and boards
  - CYBT-213043-EVAL
  - CYBT-213043-MESH
  - CYBT-343026-EVAL
  - CYBT-413055-EVAL
  - CYBT-423054-EVAL
  - CYBT-483056-EVAL
  - CYW920719Q40EVB-01
  - CYW920719B2Q40EVB-01
  - CYW920706WCDEVAL
  - CYW920721B2EVK-02
  - CYW920721B2EVK-03
  - CYW920735Q60EVB-01
  - CYW920819EVB-02
  - CYW920820EVB-02
  - CYW989820EVB-01
  - CYW9M2BASE-43012BT

## Supported product families

- PSoC™ 60xx, PSoC™ 61xx, PSoC™ 62xx, PSoC™ 63xx, PSoC™ 64xx
- PSoC™ 4000S, PSoC™ 4100S, PSoC™ 4100S Plus, PSoC™ 4100S Max, PSoC™ 4500S, and PSoC™ 4500H
- PMG1

## 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

The following issues from a previous release have been resolved:

| Limitation ID | Description |
|---|---|
| PROGTOOLS-886 | The user cannot change SMIF region size in GUI. |
| PROGTOOLS-888 | Cypress Programmer GUI/OpenOCD does not report an error on IoT devices during external flash programming when 'Offset' parameter is close to UINT32_MAX. |
| PROGTOOLS-1561 | The CYBT-213043-EVAL kit is not accessible if hot-plugged on Ubuntu 18.04. |

## Known Problems and Solutions

The following problems are known in this release:

| Defect ID | Defect Description | Impact / Workaround |
|---|---|---|
| PROGTOOLS-887 | Not able to reliably program the following kits:<br>• CYBT-213043-EVAL<br>• CYBT-213043-MESH<br>• CYBT-343026-EVAL<br>• CYBT-413055-EVAL<br>• CYBT-423054-EVAL<br>• CYBT-483056-EVAL<br>• CYW920719Q40EVB-01<br>• CYW920719B2Q40EVB-01<br>• CYW920706WCDEVAL<br>• CYW920721B2EVK-02<br>• CYW920721B2EVK-03<br>• CYW920735Q60EVB-01<br>• CYW920819EVB-02<br>• CYW920820EVB-02<br>• CYW989820EVB-01 | Put the device into recovery mode:<br>1. Press and hold the Recovery button.<br>2. Press and hold the Reset button for one second.<br>3. Release the Reset button.<br>4. Release the Recovery button.<br>5. Re-program the board as usual. |

| Defect ID | Defect Description | Impact / Workaround |
|---|---|---|
| PROGTOOLS-884 | Read operation does not work on the following kits:<br>• CYBT-213043-EVAL<br>• CYBT-213043-MESH<br>• CYBT-343026-EVAL<br>• CYBT-413055-EVAL<br>• CYBT-423054-EVAL<br>• CYBT-483056-EVAL<br>• CYW920719Q40EVB-01<br>• CYW920719B2Q40EVB-01<br>• CYW920706WCDEVAL<br>• CYW920721B2EVK-02<br>• CYW920721B2EVK-03<br>• CYW920735Q60EVB-01<br>• CYW920819EVB-02<br>• CYW920820EVB-02<br>• CYW989820EVB-01<br>• CYW9M2BASE-43012BT | No workaround |
| PROGTOOLS-885 | Unable to program the following kits after erase:<br>• CYW920719Q40EVB-01<br>• CYW920719B2Q40EVB-01<br>• CYW920819EVB-02<br>• CYW920820EVB-02<br>• CYW989820EVB-01<br>• CYW920721B2EVK-02<br>• CYW920721B2EVK-03<br>• CYW920706WCDEVAL<br>• CYW920735Q60EVB-01<br>• CYBT-213043-EVAL<br>• CYBT-213043-MESH<br>• CYBT-343026-EVAL<br>• CYBT-413055-EVAL<br>• CYBT-423054-EVAL<br>• CYBT-483056-EVAL | After erase put the device into recovery mode:<br>1. Press and hold the Recovery button.<br>2. Press and hold the Reset button for one second.<br>3. Release the Reset button.<br>4. Release the Recovery button.<br>5. Re-program the board as usual. |
| PROGTOOLS-2459 | Some WICED Bluetooth® kits may not be accessible if hot-plugged on particular Windows 10 x64 PCs.<br>Affected platforms are CYW9207xx and CYW9208xx. | After restarting application, the device should be available in Cypress Programmer. |
| PROGTOOLS-1553 | Verify flash operation may fail on a WICED Bluetooth® device if you use HEX file generated by older version of ModusToolbox™ (<= 2.1) and BTSDK prior to version 2.7.<br>The issue affects CYW20819, CYW20820, and CYW89820 WICED Bluetooth® platforms. | Switch to the latest ModusToolbox™ (version >= 2.2), and rebuild the project with the BTSDK version 2.9 or grater |

## Known Limitations

The following are known limitations in this release:

| Limitation ID | Description |
|---|---|
| CYPROGRAMMER-15 | Not able to detect KitProg3/MiniProg4 probe when the OpenOCD process has been killed. Killing the 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 an invalid image. Messages about lost connection can be safely ignored. Connection with target is restored during next operation. |
| CYPROGRAMMER-157 | Unable to access PSoC™ 6 MCU via JTAG of J-Link if DAP has been switched to SWD mode previously. Hardware reset or power cycle is required to switch the DAP back to JTAG mode. |
| MTBIDE-781 | There is a programming error for Cypress platforms that connect via FTDI on macOS Catalina. The boards include:<br>• CYW920819EVB-02<br>• CYW920820EVB-02<br>• CYW920719B2Q40EVB-01<br>• CYW920719Q40EVB-01<br>• CYW920721B2EVK-02<br>• CYW920721B2EVK-03<br>• CYW989820EVB-01<br>• CYW920706WCDEVAL<br>• CYW920735Q60EVB-01<br><br>This only happens in macOS Catalina 10.15.5 because of a serial port detection error. The macOS Catalina FTDI driver is missing the necessary device identification information.<br>To resolve this issue, update to macOS Catalina 10.15.6. |
| PROGTOOLS-893 | External memory programming does not work on CYW943340WCD1 kit |
| None | The CYW9M2BASE-43012BT kit supports only direct download to the RAM. To recover or reset this device, you should power cycle the board. Due to this limitation, the only allowed operation for this device is program to the RAM. |
| None | Due to significant changes in design of production PSoC™ 64 devices, Cypress Programmer 4.0 does not support previous pre-released PSoC™ 64 secure devices. In case if pre-released PSoC™ 64 silicon is connected to Cypress Programmer 4.0, the appropriate warning message is displayed in the Log view. |
| None | Some PMG1 devices can be acquired by programmer tool only in the Power Cycle mode. See description of the “Programming Mode” setting in the Cypress Programmer 4.0 user guide. |

## Documentation and Links

The following are links to source and documentation

- Cypress programming solutions website:
  https://www.cypress.com/products/psoc-programming-solutions
- 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

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