

MPLAB® Connect Release Notes

|  |  |  |  |
| --- | --- | --- | --- |
| Microchip Technology, Inc. | | | Microchip Technology, Incorporated  2355 W. Chandler Boulevard  Chandler, Arizona 85224  480/792-7416 |
| REV | DATE | ORIGINATOR | DESCRIPTION OF CHANGE |
| 0.2 | 9/2/2014 | Vishnu P | Initial version |
| 0.3 | 9/26/2014 | Vishnu P | DLL is newly added to this release |
| 0.4 | 10/15/2014 | Vishnu P | Changes from version 0.3 |
| 0.5 | 11/17/2014 | Vishnu P | Changes from version 0.4 |
| 0.6 | 11/26/2014 | Vishnu P | Changes from version 0.5 |
| 0.9 | 23/12/2014 | Vishnu P | Changes from version 0.6 to 0.9 |
| 1.2 | 04/20/2015 | Riyas K | Changes from version 1.0 to 1.2 |
| 1.3 | 04/30/2015 | Vishnu P | Changes from version 1.2 to 1.3 |
| 1.4 | 05/14/2015 | Vishnu P | Changes from version 1.3 to 1.4 |
| 1.41 | 06/16/2015 | Vishnu P | Changes from version 1.4 to 1.41 |
| 1.44 | 08/06/2015 | Vishnu P | Changes from version 1.41 to 1.44 |
| 1.5 | 08/20/2015 | Vishnu P | Changes from version 1.44 to 1.5 |
| 1.54 | 09/23/2015 | PrasannaV | Changes from version 1.5 to 1.54 |
| 1.55 | 10/01/2015 | Karpagam A | Changes from version 1.54 to 1.55 |
| 1.6 | 4/8/2016 | Karpagam A | Changes from version 1.5 to 1.6 |
| 1.7 | 09/09/2016 | Rathika K | Changes from version 1.6 to 1.7 |
| 1.8 | 09/30/2016 | Karpagam A | Changes from version 1.7 to 1.8 |
| 1.9 | 03/29/2017 | Karpagam A | Changes from version 1.8 to 1.9 |
| 2.0 | 08/10/2017 | Karpagam A | Changes from version 1.9 to 1.9.1 |
| 2.1 | 01/19/2018 | Karpagam A | Changes from version 1.9.1 to 1.9.2 |
| 2.2 | 03/28/2018 | Karpagam A/  Rathika K | Changes from version 1.9.2 to 1.9.3 |
| 2.3 | 05/14/2018 | Karpagam A/  Rathika K | Changes from version 1.9.3 to 2.0 |

Table of Contents

[1 Introduction 9](#_Toc526415804)

[2 Legal Information 9](#_Toc526415805)

[3 OS supported 10](#_Toc526415806)

[4 Required Software 10](#_Toc526415807)

[5 USB Controllers supported 10](#_Toc526415808)

[*6* Supported SKU List 10](#_Toc526415809)

[6.1 CLI/DLL 10](#_Toc526415810)

[6.1.1 USB 2.0 Hub 10](#_Toc526415811)

[6.1.2 USB 3.0 Hub 11](#_Toc526415812)

[6.1.3 USB to Ethernet Controller 11](#_Toc526415813)

[6.1.4 PCIe to Gigabit Ethernet Controller 11](#_Toc526415814)

[6.2 GUI 11](#_Toc526415815)

[6.2.1 USB 2.0 Hub 11](#_Toc526415816)

[6.2.2 USB 3.0 Hub 12](#_Toc526415817)

[6.2.3 USB to Ethernet Controller 12](#_Toc526415818)

[6.2.4 PCIe to Gigabit Ethernet Controller 12](#_Toc526415819)

[7 MPLAB Connect Components 13](#_Toc526415820)

[8 Package Content 13](#_Toc526415821)

[8.1 Drivers 13](#_Toc526415822)

[8.2 CLI 13](#_Toc526415823)

[8.3 DLL 13](#_Toc526415824)

[8.4 GUI 14](#_Toc526415825)

[8.5 Sample CFG 14](#_Toc526415826)

[9 Release History 15](#_Toc526415827)

[9.1 Version 2.0 15](#_Toc526415828)

[9.1.1 Command Line Interface (CLI) 15](#_Toc526415829)

[9.1.1.1 Changes 15](#_Toc526415830)

[9.1.1.2 Feature Addition 15](#_Toc526415831)

[9.1.1.3 Bug fixes 15](#_Toc526415832)

[9.1.1.4 Known limitations 15](#_Toc526415833)

[9.1.2 DLL 15](#_Toc526415834)

[9.1.2.1 Changes 15](#_Toc526415835)

[9.1.2.2 Feature Addition 15](#_Toc526415836)

[9.1.2.3 Bug fixes 15](#_Toc526415837)

[9.1.2.4 Known limitations 15](#_Toc526415838)

[9.1.3 Graphical User Interface (GUI) 16](#_Toc526415839)

[9.1.3.1 Changes 16](#_Toc526415840)

[9.1.3.2 Feature Addition 16](#_Toc526415841)

[9.1.3.3 Bug fixes 16](#_Toc526415842)

[9.1.3.4 Known limitations 16](#_Toc526415843)

[9.1.4 Known limitations for CLI, DLL, GUI 17](#_Toc526415844)

[9.2 Version 1.9.3 18](#_Toc526415845)

[9.2.1 Command Line Interface (CLI) 18](#_Toc526415846)

[9.2.1.1 Changes 18](#_Toc526415847)

[9.2.1.2 Feature Addition 18](#_Toc526415848)

[9.2.1.3 Bug fixes 18](#_Toc526415849)

[9.2.1.4 Known limitations 18](#_Toc526415850)

[9.2.2 DLL 18](#_Toc526415851)

[9.2.2.1 Changes 18](#_Toc526415852)

[9.2.2.2 Feature Addition 18](#_Toc526415853)

[9.2.2.3 Bug fixes 18](#_Toc526415854)

[9.2.2.4 Known limitations 18](#_Toc526415855)

[9.2.3 Graphical User Interface (GUI) 19](#_Toc526415856)

[9.2.3.1 Changes 19](#_Toc526415857)

[9.2.3.2 Feature Addition 19](#_Toc526415858)

[9.2.3.3 Bug fixes 19](#_Toc526415859)

[9.2.3.4 Known limitations 19](#_Toc526415860)

[9.2.4 Known limitations for CLI, DLL, GUI 19](#_Toc526415861)

[9.3 Version 1.9.2 21](#_Toc526415862)

[9.3.1 Command Line Interface (CLI) 21](#_Toc526415863)

[9.3.1.1 Changes 21](#_Toc526415864)

[9.3.1.2 Feature Addition 21](#_Toc526415865)

[9.3.1.3 Known limitations 21](#_Toc526415866)

[9.3.2 DLL 21](#_Toc526415867)

[9.3.2.1 Changes 21](#_Toc526415868)

[9.3.2.2 Feature Addition 21](#_Toc526415869)

[9.3.2.3 Known limitations 21](#_Toc526415870)

[9.3.3 Graphical User Interface (GUI) 21](#_Toc526415871)

[9.3.3.1 Changes 21](#_Toc526415872)

[9.3.3.2 Feature Addition 21](#_Toc526415873)

[9.3.3.3 Known limitations 22](#_Toc526415874)

[9.3.4 Known limitations for CLI, DLL, GUI 22](#_Toc526415875)

[9.4 Version 1.9.1 23](#_Toc526415876)

[9.4.1 Command Line Interface (CLI) 23](#_Toc526415877)

[9.4.1.1 Changes 23](#_Toc526415878)

[9.4.1.2 Feature Addition 23](#_Toc526415879)

[9.4.1.3 Known limitations 23](#_Toc526415880)

[9.4.2 DLL 23](#_Toc526415881)

[9.4.2.1 Changes 23](#_Toc526415882)

[9.4.2.2 Feature Addition 23](#_Toc526415883)

[9.4.2.3 Known limitations 23](#_Toc526415884)

[9.4.3 Graphical User Interface (GUI) 23](#_Toc526415885)

[9.4.3.1 Changes 23](#_Toc526415886)

[9.4.3.2 Feature Addition 23](#_Toc526415887)

[9.4.3.3 Known limitations 23](#_Toc526415888)

[9.4.4 Known limitations for CLI, DLL, GUI 24](#_Toc526415889)

[9.5 Version 1.9 25](#_Toc526415890)

[9.5.1 Command Line Interface (CLI) 25](#_Toc526415891)

[9.5.1.1 Changes 25](#_Toc526415892)

[9.5.1.2 Feature Addition 25](#_Toc526415893)

[9.5.1.3 Known limitations 25](#_Toc526415894)

[9.5.2 DLL 25](#_Toc526415895)

[9.5.2.1 Changes 25](#_Toc526415896)

[9.5.2.2 Feature Addition 25](#_Toc526415897)

[9.5.2.3 Known limitations 25](#_Toc526415898)

[9.5.3 Graphical User Interface (GUI) 25](#_Toc526415899)

[9.5.3.1 Changes 25](#_Toc526415900)

[9.5.3.2 Feature Addition 26](#_Toc526415901)

[9.5.3.3 Known limitations 26](#_Toc526415902)

[9.5.4 Known limitations for CLI, DLL, GUI 26](#_Toc526415903)

[9.6 Version 1.8 27](#_Toc526415904)

[9.6.1 Command Line Interface (CLI) 27](#_Toc526415905)

[9.6.1.1 Changes 27](#_Toc526415906)

[9.6.1.2 Feature Addition 27](#_Toc526415907)

[9.6.1.3 Known limitations 27](#_Toc526415908)

[9.6.2 DLL 27](#_Toc526415909)

[9.6.2.1 Changes 27](#_Toc526415910)

[9.6.2.2 Feature Addition 27](#_Toc526415911)

[9.6.2.3 Known limitations 27](#_Toc526415912)

[9.6.3 Graphical User Interface (GUI) 27](#_Toc526415913)

[9.6.3.1 Changes 27](#_Toc526415914)

[9.6.3.2 Feature Addition 27](#_Toc526415915)

[9.6.3.3 Bug Fix 27](#_Toc526415916)

[9.6.3.4 Known limitations 27](#_Toc526415917)

[9.6.4 Known limitations for CLI, DLL, GUI 28](#_Toc526415918)

[9.7 Version 1.7 29](#_Toc526415919)

[9.7.1 Command Line Interface (CLI) 29](#_Toc526415920)

[9.7.1.1 Changes 29](#_Toc526415921)

[9.7.1.2 Feature Addition 29](#_Toc526415922)

[9.7.1.3 Known limitations 29](#_Toc526415923)

[9.7.2 DLL 29](#_Toc526415924)

[9.7.2.1 Changes 29](#_Toc526415925)

[9.7.2.2 Feature Addition 29](#_Toc526415926)

[9.7.2.3 Known limitations 29](#_Toc526415927)

[9.7.3 Graphical User Interface (GUI) 30](#_Toc526415928)

[9.7.3.1 Changes 30](#_Toc526415929)

[9.7.3.2 Feature Addition 30](#_Toc526415930)

[9.7.3.3 Bug Fix 30](#_Toc526415931)

[9.7.3.4 Known limitations 30](#_Toc526415932)

[9.8 Version 1.6 31](#_Toc526415933)

[9.8.1 Command Line Interface (CLI) 31](#_Toc526415934)

[9.8.1.1 Changes 31](#_Toc526415935)

[9.8.1.2 Feature Addition 31](#_Toc526415936)

[9.8.1.3 Known limitations 31](#_Toc526415937)

[9.8.2 DLL 31](#_Toc526415938)

[9.8.2.1 Changes 31](#_Toc526415939)

[9.8.2.2 Feature Addition 31](#_Toc526415940)

[9.8.2.3 Known limitations 32](#_Toc526415941)

[9.8.3 Graphical User Interface (GUI) 32](#_Toc526415942)

[9.8.3.1 Changes 32](#_Toc526415943)

[9.8.3.2 Feature Addition 32](#_Toc526415944)

[9.8.3.3 Known limitations 32](#_Toc526415945)

[9.9 Version 1.55 33](#_Toc526415946)

[9.9.1 Command Line Interface (CLI) 33](#_Toc526415947)

[9.9.1.1 Changes 33](#_Toc526415948)

[9.9.1.2 Feature Addition 33](#_Toc526415949)

[9.9.1.3 Known limitations 33](#_Toc526415950)

[9.9.2 DLL 33](#_Toc526415951)

[9.9.2.1 Changes 33](#_Toc526415952)

[9.9.2.2 Feature Addition 33](#_Toc526415953)

[9.9.2.3 Known limitations 33](#_Toc526415954)

[9.1 Version 1.54 34](#_Toc526415955)

[9.1.1 Command Line Interface (CLI) 34](#_Toc526415956)

[9.1.1.1 Changes 34](#_Toc526415957)

[9.1.1.2 Feature Addition 34](#_Toc526415958)

[9.1.1.3 Known limitations 34](#_Toc526415959)

[9.2 Version 1.5 34](#_Toc526415960)

[9.2.1 Command Line Interface (CLI) 34](#_Toc526415961)

[9.2.1.1 Changes 34](#_Toc526415962)

[9.2.1.2 Feature Addition 34](#_Toc526415963)

[9.2.1.3 Known limitations 34](#_Toc526415964)

[9.2.2 Graphical User Interface (GUI) 35](#_Toc526415965)

[9.2.2.1 Changes 35](#_Toc526415966)

[9.2.2.2 Features Addition 35](#_Toc526415967)

[9.2.2.3 Known limitations 35](#_Toc526415968)

[9.2.3 DLL 35](#_Toc526415969)

[9.2.3.1 Changes 35](#_Toc526415970)

[9.2.3.2 Features Addition 35](#_Toc526415971)

[9.2.3.3 Known limitations 35](#_Toc526415972)

[9.3 Version 1.44 36](#_Toc526415973)

[9.3.1 Command Line Interface (CLI) 36](#_Toc526415974)

[9.3.1.1 Changes 36](#_Toc526415975)

[9.3.1.2 Feature Addition 36](#_Toc526415976)

[9.3.1.3 Known limitations 36](#_Toc526415977)

[9.3.2 Graphical User Interface (GUI) 36](#_Toc526415978)

[9.3.2.1 Changes 36](#_Toc526415979)

[9.3.2.2 Features Addition 36](#_Toc526415980)

[9.3.2.3 Known limitations 36](#_Toc526415981)

[9.3.3 DLL 37](#_Toc526415982)

[9.3.3.1 Changes 37](#_Toc526415983)

[9.3.3.2 Features Addition 37](#_Toc526415984)

[9.3.3.3 Known limitations 37](#_Toc526415985)

[9.4 Version 1.41 38](#_Toc526415986)

[9.4.1 Command Line Interface (CLI) 38](#_Toc526415987)

[9.4.1.1 Changes 38](#_Toc526415988)

[9.4.1.2 Feature Addition 38](#_Toc526415989)

[9.4.1.3 Known limitations 38](#_Toc526415990)

[9.5 Version 1.4 39](#_Toc526415991)

[9.5.1 Command Line Interface (CLI) 39](#_Toc526415992)

[9.5.1.1 Changes 39](#_Toc526415993)

[9.5.1.2 Feature Addition 39](#_Toc526415994)

[9.5.1.3 Known limitations 39](#_Toc526415995)

[9.5.2 Graphical User Interface (GUI) 39](#_Toc526415996)

[9.5.2.1 Changes 39](#_Toc526415997)

[9.5.2.2 New Features 39](#_Toc526415998)

[9.5.2.3 Known Limitations 39](#_Toc526415999)

[9.5.3 DLL 40](#_Toc526416000)

[9.5.3.1 Changes 40](#_Toc526416001)

[9.5.3.2 Feature Addition 40](#_Toc526416002)

[9.5.3.3 Bug Fix 40](#_Toc526416003)

[9.5.3.4 Known Limitations 40](#_Toc526416004)

[9.6 Version 1.3 41](#_Toc526416005)

[9.6.1 Command Line Interface (CLI) 41](#_Toc526416006)

[9.6.2 Graphical User Interface (GUI) 41](#_Toc526416007)

[9.6.2.1 Changes 41](#_Toc526416008)

[9.6.2.2 Features 41](#_Toc526416009)

[9.6.2.3 Known Limitations 41](#_Toc526416010)

[9.6.3 DLL 41](#_Toc526416011)

[9.7 Version 1.2 42](#_Toc526416012)

[9.7.1 Command Line Interface (CLI) 42](#_Toc526416013)

[9.7.1.1 Changes 42](#_Toc526416014)

[9.7.1.2 Feature Addition 42](#_Toc526416015)

[9.7.1.3 Known limitations 42](#_Toc526416016)

[9.8 Version 1.1 43](#_Toc526416017)

[9.8.1 Command Line Interface (CLI) 43](#_Toc526416018)

[9.8.1.1 Changes 43](#_Toc526416019)

[9.8.1.2 Feature Addition 43](#_Toc526416020)

[9.8.1.3 Bug Fix 43](#_Toc526416021)

[9.8.1.4 Known limitations 43](#_Toc526416022)

[9.8.2 DLL 43](#_Toc526416023)

[9.8.2.1 Changes 43](#_Toc526416024)

[9.8.2.2 Feature Addition 43](#_Toc526416025)

[9.8.2.3 Bug Fix 43](#_Toc526416026)

[9.8.2.4 Known Limitations 43](#_Toc526416027)

[9.9 Version 1.0 45](#_Toc526416028)

[9.9.1 Command Line Interface (CLI) 45](#_Toc526416029)

[9.9.1.1 Changes 45](#_Toc526416030)

[9.9.1.2 Feature Addition 45](#_Toc526416031)

[9.9.1.3 Bug Fix 45](#_Toc526416032)

[9.9.1.4 Known limitations 45](#_Toc526416033)

[9.10 Version 0.9 46](#_Toc526416034)

[9.10.1 Command Line Interface (CLI) 46](#_Toc526416035)

[9.10.1.1 Changes 46](#_Toc526416036)

[9.10.1.2 Feature Addition 46](#_Toc526416037)

[9.10.1.3 Bug Fix 46](#_Toc526416038)

[9.10.1.4 Known limitations 46](#_Toc526416039)

[9.10.2 Graphical User Interface (GUI) 46](#_Toc526416040)

[9.10.2.1 Known Limitations 46](#_Toc526416041)

[9.10.3 DLL 47](#_Toc526416042)

[9.10.3.1 Changes 47](#_Toc526416043)

[9.10.3.2 Feature Addition 47](#_Toc526416044)

[9.10.3.3 Bug Fix 47](#_Toc526416045)

[9.10.3.4 Known Limitations 47](#_Toc526416046)

[9.11 Version 0.6 48](#_Toc526416047)

[9.11.1 Changes in Version 0.6 48](#_Toc526416048)

[9.11.2 Changes & Bug Fixes in DLL 48](#_Toc526416049)

[9.11.3 Known Limitations 48](#_Toc526416050)

[9.12 Version 0.5 49](#_Toc526416051)

[9.12.1 Changes in Version 0.5 49](#_Toc526416052)

[9.12.2 Changes & Bug Fixes in DLL 49](#_Toc526416053)

[9.12.3 Known Limitations 49](#_Toc526416054)

[9.13 Version 0.4 50](#_Toc526416055)

[9.13.1 Changes in Version 0.4 50](#_Toc526416056)

[9.13.2 Changes & Bug Fixes in CLI 50](#_Toc526416057)

[9.13.3 Changes & Bug Fixes in DLL 50](#_Toc526416058)

[9.13.4 Known Limitations 50](#_Toc526416059)

[9.14 Version 0.3 51](#_Toc526416060)

[9.14.1 Changes in Version 0.3 51](#_Toc526416061)

[9.14.2 Bug Fixes in DLL 51](#_Toc526416062)

[9.14.3 Known Limitations 51](#_Toc526416063)

[9.15 Version 0.2 52](#_Toc526416064)

[9.15.1 Changes in Version 0.2 52](#_Toc526416065)

[9.15.2 Known Limitations 52](#_Toc526416066)

[10 Appendix I - SPI flash memory 53](#_Toc526416067)

[10.1 USB253x/(8)4604/USB57x4 53](#_Toc526416068)

[10.2 USB58xx/USB59xx 53](#_Toc526416069)

[10.3 USB49xx/USB4715 53](#_Toc526416070)

[10.4 USB70xx 53](#_Toc526416071)

# Introduction

This document provides release information about different versions of MPLAB Connect components.

# Legal Information

**Software License Agreement**

(c) 2004 - 2018 Microchip Technology Inc.

Microchip licenses this software to you solely for use with Microchip products. The software is owned by Microchip and its

licensors, and is protected under applicable copyright laws. All rights reserved.

SOFTWARE IS PROVIDED "AS IS" MICROCHIP EXPRESSLY DISCLAIMS ANY WARRANTY OF ANY KIND, WHETHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL MICROCHIP BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES, LOST PROFITS OR LOST DATA, HARM TO YOUR EQUIPMENT, COST OF PROCUREMENT OF SUBSTITUTE GOODS, TECHNOLOGY OR SERVICES,

ANY CLAIMS BY THIRD PARTIES (INCLUDING BUT NOT LIMITED TO ANY DEFENSE THEREOF), ANY CLAIMS FOR INDEMNITY OR CONTRIBUTION, OR OTHER SIMILAR COSTS.

To the fullest extent allowed by law, Microchip and its licensors liability shall not exceed the amount of fees, if any, that you have paid directly to Microchip to use this software.

MICROCHIP PROVIDES THIS SOFTWARE CONDITIONALLY UPON YOUR ACCEPTANCE OF THESE TERMS.

**Trademark Information**

The Microchip name and logo, the Microchip logo, MPLAB, and PIC are registered trademarks of Microchip Technology

Incorporated in the U.S.A. and other countries.

PICDEM and PICtail are trademarks of Microchip Technology Incorporated in the U.S.A. and other countries.

Microsoft, Windows, Windows Vista, and Authenticode are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

SD is a trademark of the SD Association in the U.S.A and other countries

# OS supported

* Windows 7 (32 and 64 bit)
* Windows 8 (32 and 64 bit)
* Windows 8.1 (32 and 64 bit)
* Windows 10 (32 and 64 bit)

# Required Software

* JDK 1.8.0\_60

Download JDK from the following website

<http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

# USB Controllers supported

1. EHCI - USB 2.0
2. XHCI - USB 3.0

***Note:*** External PCI USB controllers may not be supported.

# Supported SKU List

The following devices are supported in this release

## CLI/DLL

### USB 2.0 Hub

* USB2532
* USB2533
* USB2534
* USB3503
* USB3613
* USB3803
* USB3813
* USB4604
* USB4624
* USB82512
* USB82513
* USB82514
* USB82640
* USB82642
* USB84604
* USB4914
* USB4916
* USB4925
* USB4927
* USB4715

### USB 3.0 Hub

* USB5734
* USB5744
* USB5742
* USB5806
* USB5807
* USB5816
* USB5826
* USB5906
* USB5916
* USB5926
* USB7002
* USB7050
* USB7051
* USB7052
* USB7056

### USB to Ethernet Controller

* LAN7800
* LAN7801
* LAN7850

### PCIe to Gigabit Ethernet Controller

* LAN7430
* LAN7431

## GUI

### USB 2.0 Hub

* USB2532
* USB2533
* USB2534
* USB4604
* USB84604
* USB3813
* USB3613
* USB4914
* USB4916
* USB4925
* USB4927
* USB4715

### USB 3.0 Hub

* USB5734
* USB5744
* USB5742
* USB5806
* USB5807
* USB5816
* USB5826
* USB5906
* USB5916
* USB5926
* USB7002
* USB7050
* USB7051
* USB7052
* USB7056

### USB to Ethernet Controller

* LAN7800
* LAN7801
* LAN7850

### PCIe to Gigabit Ethernet Controller

* LAN7430
* LAN7431

# MPLAB Connect Components

* Command line programmer – **CLI**
* Graphical User Interface for configuration and programming**- GUI**
* SDK which contains APIs that can be used for custom applications **- DLL**

# Package Content

The release package contains the following files and directories

## Drivers

* **Drivers/VsmFilter/** - This folder contains the driver files for VSM filter install/uninstall.
* **Drivers/UDC\_WINUSB\_Driver/ –** This folder contains the driver files for WinUSB installation and uninstallation
* **Drivers/ LAN78xxDriver/-** This folder contains the driver file for LAN devices

## CLI

* **MPLAB® Connect CLI User Manual.pdf –** User Manual for the command line tool
* **MPLABConnect\_CLI/MPLABConnect.exe** - MPLAB® Connect command line executable application
* **MPLABConnect\_CLI/MPLABConnect.ini** - MPLAB® Connect command line executable initialisation file
* **MPLABConnect\_CLI//DisableSPIFlash.bin** – Bin File used for erasing the SPI Flash firmware – Refer to “MPLAB® Connect CLI User Manual.pdf” for more details
* **MPLABConnect\_CLI/SerialNumberSuppression/** – Contains Batch file used for supressing new driver load on each Serial number change. Refer to “MPLAB® Connect CLI User Manual.pdf” for more details

## DLL

* **MPLAB® Connect DLL User Guide.pdf –** User Manual for the DLL and its APIs
* **MPLABConnect\_DLL/APIHeader/:** Contains the header file (supported API list) in this SDK
* **MPLABConnect\_DLL/APILib/:** Contains the 32 bit and the 64 bit library file that supports the API list in the header file
* **MPLABConnect\_DLL/APILib/MPLABConnect.ini** - MPLABConnect DLL initialisation file
* **MPLABConnect\_DLL/SampleApp/:** Contains the Sample Visual Studio project (2010 or later) that demonstrates the usage of the library for programming MCHP hubs.

## GUI

* **MPLAB® Connect GUI User Manual.pdf -** User Manual for the GUI tool
* **MPLABConnect\_GUI/MPLABConnect.exe –** MPLAB® Connect GUI executable application
* **MPLABConnect\_GUI/UI/** – UI and DLL files used by the MPLAB® Connect GUI: For internal use only – Please do not change anything in this folder.
* **MPLABConnect\_GUI/DefaultBin/ -** Default bin files for each SKU
* **MPLABConnect\_GUI/MPLABConnect.ini** - MPLAB® Connect GUI initialisation file

## Sample CFG

* Folder contains sample configuration file
  + ***Sample CFG\USB5744\_HCE\_DISABLE.cfg***: This file can be used for disabling the internal HCE device if it is not required for the user.

# Release History

## Version 2.0

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* None

#### Bug fixes

* Fixed JIRA Bugs – Affects Version MPLABConnect V1.9.3\_BETA1
* Fixed LAN7801 .ini file programming issue
* Fixed USB3.1 Gen1 enumeration issue after programming

#### Known limitations

* PCIE - /el command may work.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### DLL

#### Changes

* None

#### Feature Addition

* None

#### Bug fixes

* Fixed JIRA Bugs – Affects Version MPLABConnect V1.9.3\_BETA1
* Fixed USB3.1 Gen1 enumeration issue after programming
* Fixed Sample application issue while programming configuration file along with serial number

#### Known limitations

* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* LAN – MchpLanReadUsbPhyStat API always return False.
* PCIE – MchpPciePing – External LoopBack API may work.
* MchpUsbSpiFlashWrite – Fails to write data when BytesToWrite is less than Firmware size
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Graphical User Interface (GUI)

#### Changes

* None

#### Feature Addition

* None

#### Bug fixes

* Fixed JIRA Bugs – Affects Version MPLABConnect V1.9.3\_BETA1
* Fixed USB3.1 Gen1 enumeration issue after programming

#### Known limitations

* **USB70xx – A0 ROM - Configuration file generation is not supported in both Online and Offline Page**.
* Inconsistent failure while programming USB84604 continuously
* Default values loaded in offline page and online page may be different because of configuration strap value of the device connected.
* Default ini file for USB70xx offline page were created using V1.30 SPI Firmware
* USB70xx - Port mapping is not done as per customer facing document
* USB70xx – Port number mentioned in alert message does not match with Port selected
* USB70xx – Downstream port order changes when programming is terminated by user or program fails. Clicking Refresh option will resolve this issue
* USB7056 – Port 6 Swap enables/disables bit 5 instead of bit 6
* USB70xx – Tool updates Config Strap only based on HW Straps and not based on OTP
* USB70xx -Tool does not allow to program SPI Firmware file greater than 264KB
* USB58xx/USB59xx, USB253x, USB57xx – SPI Bridge demo does not work properly after Refresh button is clicked
* USB58xx/USB59xx – Tool does not able to dump SPI firmware with configuration memory
* USB253x / (8)460x /3x13 Hubs, USB57xx Online – Tool does not show warning/alert message when no hubs are connected
* Tool does not show alert message when user tries to program multicast and broadcast MAC address
* LAN74xx - External LoopBack option in special features tab may work.
* USB products – User should not edit UUID field
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Known limitations for CLI, DLL, GUI

* The tool supports programming of only one Microchip device at a time for CLI and GUI.
* EEPROM with size 256 byte may not work for LAN78XX products.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device should be connected before launching the application.
* If the MCHP device (USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **(Only if the internal HFC device is disabled)**
* SPI flashes other than listed in [Appendix I](#_Appendix_I_-) may or may not work.
* For USB70xx family hubs along SST25 series SPI Flash, Programming configuration file alone when device is booting from SPI is not supported. Alternatively, Firmware programming along with configuration file can be used.
* Following are the limitations of USB70xx – B0 ROM
* Mini Host not supported in PD Enabled SKUs
* Multi Host (MHB) not supported in PD enabled SKUs
* FlexConnect will not be supported for PD enabled SKUs
* Battery Charging will be disabled for PD enabled ports

## Version 1.9.3

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* None

#### Bug fixes

* Fixed JIRA Bugs – Affects Version MPLABConnect V1.9.2\_BETA1

#### Known limitations

* PCIE - /el command may work.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### DLL

#### Changes

* Added new sample application with separate project for each feature.
* SampleApp.exe will not delivered as part of release. User should build the sample application source to get executable file

#### Feature Addition

* Added MchpUsbSetRoleSwitch API to support RoleSwitch feature for USB70xx and USB49xx family hubs.

#### Bug fixes

* Fixed JIRA Bugs – Affects Version MPLABConnect V1.9.2\_BETA1

#### Known limitations

* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* LAN – MchpLanReadUsbPhyStat API always return False.
* PCIE – MchpPciePing – External LoopBack API may work.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Graphical User Interface (GUI)

#### Changes

* USB70xx – Offline and Online page will display downstream ports as per customer DOS

#### Feature Addition

* None

#### Bug fixes

* Fixed JIRA Bugs – Affects Version MPLABConnect V1.9.2\_BETA1

#### Known limitations

* **USB70xx – A0 ROM - Configuration file generation is not supported in both Online and Offline Page**.
* Inconsistent failure while programming USB84604 continuously
* [AP-50](https://jira.microchip.com:8443/browse/AP-50) - https://jira.microchip.com:8443/browse/AP-50

Default values loaded in offline page and online page may be different because of configuration strap value of the device connected.

* Default ini file for USB70xx offline page were created using V1.30 SPI Firmware
* External LoopBack option in special features tab may work.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Known limitations for CLI, DLL, GUI

* The tool supports programming of only one Microchip device at a time for CLI and GUI.
* EEPROM with size 256 byte may not work for LAN78XX products.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device has to be connected before launching the application.
* If the MCHP device(USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HFC device is disabled)**
* SPI flashes other than listed in Appendix I may or may not work.
* Following are the limitations of USB70xx – B0 ROM
* Mini Host not supported in PD Enabled SKUs
* Multi Host (MHB) not supported in PD enabled SKUs
* FlexConnect will not be supported for PD enabled SKUs
* Battery Charging will be disabled for PD enabled ports

## Version 1.9.2

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* Added support for USB70xx family hubs
* Added support for USB57xx B0 revision
* Added support for LAN74xx

#### Known limitations

Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### DLL

#### Changes

* None

#### Feature Addition

* Added support for USB70xx family hubs - A0 SPI, B0 ROM and SPI
* Added support for USB57xx B0 revision
* Added support for LAN74xx
* Added new API MchpSetPath

#### Known limitations

* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* USB70xx does not support MchpUsbRoleSwitch API. Instead MchpUsbFlexConnect API can be used.
* LAN – MchpLanReadUsbPhyStat API will always return False.
* PCIE – MchpPciePing – External LoopBack API may work.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Graphical User Interface (GUI)

#### Changes

* None

#### Feature Addition

* Added support for USB70xx family hubs – A0 SPI, B0 ROM and SPI. Limited support for A0 ROM – Only programming is supported.
* Added support for USB57xx B0 revision
* Added support for LAN74xx

#### Known limitations

* **USB70xx – A0 ROM - Configuration file generation is not supported in both Online and Offline Page**.
* Inconsistent failure while programming USB84604 continuously
* Default values loaded in offline page and online page may be different because of configuration strap value of the device connected.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Known limitations for CLI, DLL, GUI

* The tool supports programming of only one Microchip device at a time for CLI and GUI.
* EEPROM with size 256 byte may not work for LAN78XX products.
* PCIE – External LoopBack option in special features tab may work for LAN74XX family dvices.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device has to be connected before launching the application.
* If the MCHP device(USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HFC device is disabled)**
* SPI flashes other than listed in Appendix I may or may not work.
* Following are the limitations of USB70xx – B0 ROM
* Mini Host not supported in PD Enabled SKUs
* Multi Host (MHB) not supported in PD enabled SKUs
* FlexConnect will not be supported for PD enabled SKUs
* Battery Charging will be disabled for PD enabled ports

## Version 1.9.1

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* Name change from MPLABCC.exe to MPLABConnect.exe

#### Feature Addition

* Added support for USB49xx,USB4715 Quad SPI Flash

#### Known limitations

Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### DLL

#### Changes

* Name change from MPLABCC.exe to MPLABConnect.exe

#### Feature Addition

* Added support for USB49xx,USB4715 Quad SPI Flash
* Added support for USB49xx,USB4715 I2C different frequency
* Added new API (MchpUsbSPISelectDuplex) for USB49xx,USB4715 to select full duplex/half duplex

#### Known limitations

* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* LAN – MchpLanReadUsbPhyStat API will always return False.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Graphical User Interface (GUI)

#### Changes

* Name change from MPLAB Connect Configurator.exe.to MPLABConnect.exe

#### Feature Addition

* Added support for USB49xx,USB4715 Quad SPI Flash
* Added support for USB49xx,USB4715 I2C different frequency(40KHz)

#### Known limitations

* Inconsistent failure while programming USB84604 continuously
* Default values loaded in offline page and online page may be different because of configuration strap value of the device connected.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Known limitations for CLI, DLL, GUI

* The tool supports programming of only one Microchip device at a time for CLI and GUI.
* EEPROM with size 256 byte may not work for LAN78XX products.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device has to be connected before launching the application.
* If the MCHP device(USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HFC device is disabled)**
* SPI flashes other than listed in Appendix I may or may not work.

## Version 1.9

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* Name change from pt2main.exe to MPLABCC.exe

#### Feature Addition

* Added support for USB49XX,USB4715
* Added /ccs option to calculate checksum for given input file
* Added /dar to disable auto reprogram option if programming fails for first time
* Added support to program multiple serial number
* Updated to Signed VSM drivers

#### Known limitations

* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### DLL

#### Changes

* Name change from pt2lib.dll to MPLABCC.dll
* Changes in MchpUsbRegisterRead, MchpUsbRegisterWrite, MchpUsbUartRead

#### Feature Addition

* Added support for USB49XX,USB4715
* More than one Microchip device can be accessed at a time.
* Added support to program multiple serial number

#### Known limitations

* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Graphical User Interface (GUI)

#### Changes

* Name change from Protouch2.exe to MPLAB Connect Configurator.exe.

#### Feature Addition

* Added support for USB49XX and USB4715.
* Generated checksum for given input file in offline for USB49XX and USB4715.
* Added support for NCM Device Mac address programming for USB49XX and USB4715.
* Added support for Secondary downstream port configuration.
* Added support for device selection on based on ini file entry.

#### Known limitations

* Inconsistent failure while programming USB84604 continuously
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Known limitations for CLI, DLL, GUI

* The tool supports programming of only one Microchip device at a time for CLI and GUI.
* EEPROM with size 256 byte may not work for LAN78XX products.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device has to be connected before launching the application.
* If the MCHP device(USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HFC device is disabled)**
* The tool does not support programming Quad SPI Flash.

## Version 1.8

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* Added USB58XX/USB59XX product support.
* Added option /eel for LAN78XX products to erase EEPROM content

#### Known limitations

* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### DLL

#### Changes

* None

#### Feature Addition

* Added USB58XX/USB59XX product support.

#### Known limitations

* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Graphical User Interface (GUI)

#### Changes

None

#### Feature Addition

* Added USB58XX/USB59XX product support.

#### Bug Fix

* None

#### Known limitations

* Unicode characters are not supported for String widgets.
* LAN78XX online page fields will not be populated, if OTP and EEPROM have no valid content.
* Refer to [Known limitations for CLI, DLL, GUI](#_Known_limitations_for)

### Known limitations for CLI, DLL, GUI

* The tool supports programming of only one Microchip device at a time.
* EEPROM with size 256 byte may not work for LAN78XX products.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device has to be connected before launching the application.
* If the MCHP device(USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HFC device is disabled)**

## Version 1.7

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

None

#### Feature Addition

* Added LAN78XX product support.
* Added USB3813 and USB3613 product support.

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* EEPROM with size 256 byte may not work for LAN78XX products.
* .JSON file should not be used with the commands /pspi and /p.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool for LAN78XX and HFC disabled USB hub products.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id.**
* MCHP Device has to be connected before launching the application.
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device(USB Hub) is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HFC device is disabled)**

### DLL

#### Changes

None

#### Feature Addition

* Added LAN78XX product support.
* Added new MchpProgramSPIFirmwareWithConfigBuffer API for USB Hub products.
* Added USB3813 and USB3613 product support.

#### Known limitations

* Admin privilege is required for running the DLL. If a custom application is built which uses the DLL, then admin privilege is required for running the custom application.
* EEPROM with size 256 byte may not work for LAN78XX products.
* .JSON file should not be used for programming other than MchpProgramFile API.
* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id**.
* For USB57x4 family hubs, SPI programming support is not added for SST26VF016B and SST26VF032B parts.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

### Graphical User Interface (GUI)

#### Changes

None

#### Feature Addition

* LAN78XX product support is added in this revision.
* USB3813 and USB3613 product support added in this revision.

#### Bug Fix

None

#### Known limitations

* Unicode characters are not supported for String widgets.
* EEPROM with size 256 byte may not work for LAN78XX products.
* LAN78XX online page fields will not be populated, if OTP and EEPROM has no valid content.
* **The LAN78xx driver is not supported for other than Microchip vendor id and product id**.
* Configuration programming with .json file as an input should not be along with firmware programming.

## Version 1.6

GUI, CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* Programming time has been optimized to achieve higher performance.
* Configuration program count will be updated properly.

#### Feature Addition

* For USB253x/4604 family hubs, SPI programming support is added for SST26VF016B and SST26VF032B parts.
* Devices can be selected using port chain method while programming (/devpath command).
* Logging levels can be controlled using the commands s0, s1 and s2.

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* For USB57x4 family hubs, SPI programming support is not added for SST26VF016B and SST26VF032B parts.
* .JSON file should not be used with the commands /pspi and /p
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### DLL

#### Changes

* By default, logging in PT2.log file is disabled. To enable logging in PT2.log file, MchpEnableLogging API must be called.
* Programming time has been optimized to achieve higher performance.
* Configuration program count will be updated properly.

#### Feature Addition

* The following new API’s are added

1. MchpUsbUartReadTimeOut
2. MchpUsbGetAllHubsPortChainInfo
3. MchpGetHubIndex
4. MchpGetHubPortChain

* For USB253x/4604 family hubs, SPI programming support is added for SST26VF016B and SST26VF032B parts.
* Devices can be selected using port chain method using MchpGetHubPortChain and MchpGetHubIndex API’s.

#### Known limitations

* Admin privilege is required for running the DLL. If a custom application is built which uses the DLL, then admin privilege is required for running the custom application.
* .JSON file should not be used for programming other than MchpProgramFile API.
* For USB253x/4604 family hubs, MchpI2Csetconfig API supports only 62.5 KHz.
* For USB57x4 family hubs, SPI programming support is not added for SST26VF016B and SST26VF032B parts.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

### Graphical User Interface (GUI)

#### Changes

* PHY Boost setting is updated based on the registers mentioned in the Datasheet.
* Configuration program count will be updated properly.

#### Feature Addition

* Added USB-SPI bridging, USB-I2C bridging, USB-GPIO bridging and USB-UART bridging in the Special Features tab
* Added “Flex Connect Demo” in Advanced Features.
* Added the field “USB 3.1 Gen1 bcdUSB” under the “Device Identification USB 3.1 Gen 1”.

#### Known limitations

* Unicode characters are not supported for String widgets.
* For USB57x4 family hubs, SPI programming support is not added for SST26VF016B and SST26VF032B parts.
* Configuration programming with .json file as an input should not be along with firmware programming.

## Version 1.55

CLI and DLL are available as part of this release.

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* Configuration file and Serial number can be programmed with SPI Firmware File

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### DLL

#### Changes

* None

#### Feature Addition

* Configuration file and Serial number cab be programmed with SPI Firmware File

#### Known limitations

* Admin privilege is required for running the DLL. If a custom application is built which uses the DLL, then admin privilege is required for running the custom application.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 1.54

Only CLI is available as part of this release.

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* Hub scanning based on port chain method is added.
* Added command (/lp) to list the hubs with port chain information.
* Alignment changes are done for the device tree view in CLI (/l and /p).
* Hub controller driver version is upgraded to 1.0.0.5 to support the product ID 0x274C.

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

## Version 1.5

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* None

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### Graphical User Interface (GUI)

#### Changes

* None

#### Features Addition

* None

#### Known limitations

* SPI with Pseudo OTP memory dump will fail for USB2530 SKU.
* Tool does not wait for loading driver after changing either Vendor id, Product id or serial number of the hub
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### DLL

#### Changes

* None

#### Features Addition

* None

#### Known limitations

* Admin privilege is required for running the DLL. If a custom application is built which uses the DLL, then admin privilege is required for running the custom application.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 1.44

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* None

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### Graphical User Interface (GUI)

#### Changes

* Strap manipulation support is removed from offline page.
* Restore factory Default is done based on default configurations for USB2530 SKU.
* Tool does not allow disabling all the Ports.

#### Features Addition

* Added support for USB2530 family

#### Known limitations

* Tool user interface will change based on computer screen resolution.
* SPI with Pseudo OTP memory dump will fail for USB2530 SKU.
* USB2530 SKU SPI memory dump will lead tool crash.
* High speed rise/fall Dropdown will expand when selected.
* Restore factory default will not work for USB2534-1050 SKU.
* Simultaneous access to USB57XX and USB2530 is not supported.
* Confirmation box will show dependant widgets list in the offline configuration page.
* Tool does not wait for loading driver after changing either Vendor id, Product id or serial number of the hub
* Tool supports programming/configuration of only one Microchip device at a time.
* Tool did not allow to program firmware with configuration for “USB57X4” SKU when program page is loaded from USB2530 SKU.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**
* Appropriate GUI section is not mentioned in the tool tip for HCE VID and PID.
* "Enable CDC" widget will not highlight when changes detected in the widget value in “USB57X4” SKU.
* For USB2530 SKU, Flex connect cannot be demonstrated if it boots up from ROM. Currently, Flex connect is disabled when the USB2530 hub boots up from ROM. An additional hover on message specifying this condition must be added.

### DLL

#### Changes

* Separate sample code added for each bridging

#### Features Addition

* None

#### Known limitations

* Device handle was not closed by the DLL which is opened through MchpUsbHCEOpen API.
* Admin privilege is required for running the DLL. It can be achieved through if the custom application uses the DLL, then the admin privilege is required for the custom application.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 1.41

### Command Line Interface (CLI)

Only CLI is available as part of this release.

#### Changes

* Added support to program SST26 family SPI flash devices.
* VSM filter driver will be installed based on Vendor ID and Product ID of the hub.

#### Feature Addition

* Added support to program the serial number using /pser command along with Manufacturer or Product string configuration data in input .cfg file for USB57X4 family.

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

## Version 1.4

### Command Line Interface (CLI)

#### Changes

* None

#### Feature Addition

* None

#### Known limitations

* The user should not program the serial number using /pser command along with Manufacturer or Product string configuration data in input .cfg file for USB57X4 family. This will be fixed in the next release.
* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### Graphical User Interface (GUI)

#### Changes

* None

#### New Features

* Strap manipulation support is added for offline page.

#### Known Limitations

* The tool user interface appearance will change based on computer screen resolution.
* ProgressBar gets stuck when operation is in progress.
* The tool supports programming/configuration of only one Microchip device at a time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### DLL

#### Changes

* None

#### Feature Addition

* New API MchpProgramSPIFirmwareWithConfig is added.

#### Bug Fix

* None

#### Known Limitations

* Admin privilege is required for running the DLL. If a custom application uses the DLL, then admin privilege is required for running the custom application.
* **If the internal HCE device is disabled , then please read the following.If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 1.3

### Command Line Interface (CLI)

No changes in CLI from V 1.2

### Graphical User Interface (GUI)

#### Changes

* "Compound Device" widget cannot be disabled since the HCE device is available. Hence it is removed from the GUI.
* Hub Max Power for Hub 3.0 can be programmed through "Hub Max Power (Self)" and "Hub Max Power (Bus)" widgets.

#### Features

* Offline support is added in this revision of the GUI.
* Direct register access and Dump memory are added

#### Known Limitations

* String fields accept special characters. But after programming OTP gets corrupted. So we should not enter special characters while programming strings fields. This will be fixed in next release.
* The tool supports programming/configuration of only one Microchip device at a time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

### DLL

No changes in DLL from V 1.1

## Version 1.2

### Command Line Interface (CLI)

Only CLI is available as part of this release.

#### Changes

* None

#### Feature Addition

* Added support for locking OTP memory area after programming USB57X4family of hubs.

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep **( Only if the internal HCE device is disabled)**

## Version 1.1

### Command Line Interface (CLI)

#### Changes

1. /p option accepts only .cfg or .json file type as an input

#### Feature Addition

* OTP Dump file extension is “.dump”
* Programming SPI flash with config (Pseudo-OTP) memory and firmware simultaneously.
* Reading SPI flash with config (Pseudo-OTP) memory and firmware simultaneously.

#### Bug Fix

None

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep**

### DLL

#### Changes

Code changes required for new revision of the chip

#### Feature Addition

* None

#### Bug Fix

* None

#### Known Limitations

* Admin privilege is required for running the DLL. It can be achieved through if the custom application uses the DLL, then the admin privilege is required for the custom application.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 1.0

### Command Line Interface (CLI)

#### Changes

* Only the CLI has been updated to V 1.0

#### Feature Addition

* None

#### Bug Fix

* Bug fix in finding Number of Downstream ports based on SKU

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 0.9

The initial rev of the GUI has been added in this release. Incremental changes have been done to the CLI and DLL as mentioned below.

### Command Line Interface (CLI)

#### Changes

* Added support for verification of hub configuration parameters like VID, PID & Strings
* Log file name is renamed to PT2.log from Protouch2log.log.
* INI file name is renamed to Protouch2.ini from ShowHubsVIDList.ini.

#### Feature Addition

* The internal HCE device VID and PID can be changed

#### Bug Fix

* Bug fix in Programming SPI Firmware

#### Known limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

### Graphical User Interface (GUI)

This is the initial rev of the GUI.

#### Known Limitations

* The tool supports programming/configuration of only one Microchip device at a time.
* The “Special Features” tab is not implemented except for FlexConnect.
* Offline support is not available. The device must be connected to the PC on which the tool is running for generating the configuration file. This will be fixed in the next release.
* "Compound Device" widget cannot be disabled in this revision. This will be addressed in next release.
* Hub Max Power for Hub 3.0 will not get program through "Hub Max Power (Self)" and "Hub Max Power (Bus)" widgets. This will be addressed in next release.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

### DLL

#### Changes

* Log file name is renamed to PT2.log from Protouch2log.log.
* INI file name is renamed to Protouch2.ini from ShowHubsVIDList.ini.

#### Feature Addition

* New Low level API’s are added to access the OTP and SPI memory.

#### Bug Fix

* None

#### Known Limitations

* Admin privilege is required for running the DLL. It can be achieved through if the custom application uses the DLL, then the admin privilege is required for the custom application.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 0.6

### Changes in Version 0.6

Only the DLL has been updated to V 0.6. The CLI in this release is still at V0.4 – Please refer to Section 8.3 for details on the CLI.

### Changes & Bug Fixes in DLL

* Following new API’s have been added to the DLL.
  + - MchpUsbGpioGet
    - MchpUsbGpioSet
    - MchpUsbI2CSetConfig
    - MchpUsbI2CRead
    - MchpUsbI2CWrite
    - MchpUsbI2CTransfer
    - MchpUsbOpenID
* bVSMInstall and iRestartDelay arguments are removed from **MchpUsbOpen** API. Those flags should be configured in the ShowHubsVIDList.ini file.
* Argument pchInputFileName of MchpProgramFileWithSerial API has been made as optional.
* Argument of MchpUsbGetLastErr has been changed to “HANDLE” from hub\_index.

### Known Limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* GUI is not available. Only command line version is available.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* The internal HCE device VID and PID should not be changed.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 0.5

### Changes in Version 0.5

Only the DLL has been updated to V 0.5. The CLI in this release is still at V0.4 – Please refer to Section 8.2 for details on the CLI.

### Changes & Bug Fixes in DLL

* None

### Known Limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* GUI is not available. Only command line version is available.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* The internal HCE device VID and PID should not be changed.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 0.4

### Changes in Version 0.4

Both CLI and DLL have been updated to 0.4 in this release.

### Changes & Bug Fixes in CLI

* Hub index selection was not available if several MCHP hubs are connected. This is fixed in this release.
* The tool assumed that only one Microchip hub is present in the system and programs the Hub at index 0. This is fixed in this release by having a tree view and hub index that needs to be provided for identifying the device that has to be programmed.
* Added support to verify hub configuration parameters like VID, PID & Strings.
* Device specific VSM driver will be installed only if “/iv” command line argument is present.
* Serial number programming support is added.
* All command formats are changed to short formats like beginning with “/”.
* Added support to read the SPI Flash.

### Changes & Bug Fixes in DLL

* MchpUsbGetAllHubs API is modified to find out the tree view and hub index that needs to be provided for identifying the device that has to be programmed.
* MchpVerifyWidgetValues API is added to verify hub configuration parameters.

### Known Limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* GUI is not available. Only command line version is available.
* Hub has to be connected before launching the application
* Only 1 configuration file can be programmed on each device at one time.
* The internal HCE device VID and PID should not be changed.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep, please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**

## Version 0.3

### Changes in Version 0.3

Only the DLL has been updated to V 0.3. The CLI in this release is still at V0.2 – Please refer to Section 8.2 for details on the CLI.

### Bug Fixes in DLL

* Hub index selection was not available if several MCHP hubs are connected. This is fixed in this release.
* The tool assumed that only one Microchip hub is present in the system and programs the Hub at index 0. This is fixed in this release by having a tree view and hub index that needs to be provided for identifying the device that has to be programmed.

### Known Limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* GUI is not available. Only command line version is available.
* Hub has to be connected before launching the application
* Verification of parameters like VID, PID has not been added yet. Only DID verification after programming is supported
* Only 1 configuration file can be programmed on each device at one time.
* The internal HCE device VID and PID should not be changed.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller or the controller which supports hub to sleep , please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep.**
* MCHP Hub should be disconnected when installing and uninstalling winusb driver. This will be addressed in the next release.
* DLL API will be added to find out the tree view and hub index that needs to be provided for identifying the device that has to be programmed.

## Version 0.2

### Changes in Version 0.2

* CLI: Alpha release for PT2 programming support.

### Known Limitations

* The tool supports programming of only one Microchip device at a time.
* Admin privilege is required for running the tool. **“Run as administrator”** needs to be done for running the tool.
* GUI is not available. Only command line version is available.
* Hub has to be connected before launching the application
* Verification of parameters like VID, PID has not been added yet. Only DID verification after programming is supported
* Only 1 configuration file can be programmed on each device at one time.
* If the VID of the device is changed in the config file , then after programming device will be reset , the hub may not be at index 0 ; if –verify option is provided then that command will fail. This will be addressed in the next release.
* The internal UCH device VID and PID should not be changed.
* **If the MCHP device is connected to a XHCI - USB 3.0 controller , please connect a pen drive to the MCHP hub to avoid the controller from putting the hub to sleep**
* MCHP Hub should be disconnected when installing and uninstalling winusb driver. This will be addressed in the next release.
* Hub index selection is not available if several MCHP hubs are connected. This will be addressed in the next release.
* The tool assumes that only one Microchip hub is present in the system and programs the Hub at index 0. This will be addressed in the next release by having a tree view and hub index that needs to be provided for identifying the device that has to be programmed.

# Appendix I - SPI flash memory

Following are the tested SPI flash memories with different family of Microchip hubs.

## USB253x/(8)4604/USB57x4

* SST26F016B
* SST26F032B
* SST26VF064B
* SST25VF064C
* SST25VF040C
* SST25VF040B
* SST25VF020B
* SST25VF010A
* SST25VF080B

## USB58xx/USB59xx

* SST26VF064B
* SST25VF064C

## USB49xx/USB4715

* SST26VF016B
* SST26VF016
* SST26VF032B
* SST26VF064B
* SST26VF016
* SST26VF020B
* SST25VF040B
* SST25VF080B
* SST25VF040C
* SST25VF064C
* W25X30
* AT25SF041

## USB70xx

* SST26VF016B
* SST26VF032B
* SST26VF064B
* SST25VF064C
* AT25SF041
* AT26DF081

The other SPI flash may work with Microchip hubs