

Software Release Notes

*USB Power Delivery Software Framework (PSF)*

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| Microchip Technology, Inc. | | | Microchip Technology, Incorporated  2355 W. Chandler Boulevard  Chandler, Arizona 85224  480/792-7416 |
| REV | DATE | ORIGINATOR | DESCRIPTION OF CHANGE |
| 0.8 | June 29, 2019 | Poornima | Initial version of PSF release for design completion |
| 0.81 | July 26, 2019 | Muthukumar | Internal release for PSF\_Config.h documentation |
| 0.82 | Aug 21, 2019 | Muthukumar | Internal release for PSF\_Port.h 50% completion |
| 0.83 | Sep 13, 2019 | Muthukumar | Internal release for Harmony Integration and PSF\_Port.h 100% completion |
| 0.90 | Oct 24, 2019 | Muthukumar | First Web release |
| 0.91 | Nov 11,2019 | Poornima | Bug fix release |

Table of Contents

[1 Introduction 5](#_Toc24373911)

[2 Release notes 5](#_Toc24373912)

[2.1 Version 0.91 5](#_Toc24373913)

[2.1.1 Not implemented / Limited functionality requirements 6](#_Toc24373914)

[2.1.2 Bug Fixes 6](#_Toc24373915)

[2.1.3 Features added 6](#_Toc24373916)

[2.1.4 Notes 6](#_Toc24373917)

[2.2 Version 0.90 6](#_Toc24373918)

[2.2.1 Not implemented / Limited functionality requirements 7](#_Toc24373919)

[2.2.2 Bug Fixes 7](#_Toc24373920)

[2.2.3 Features added 7](#_Toc24373921)

[2.2.4 Notes 7](#_Toc24373922)

[2.3 Version 0.83 7](#_Toc24373923)

[2.3.1 Not implemented / Limited functionality requirements 8](#_Toc24373924)

[2.3.2 Bug Fixes 8](#_Toc24373925)

[2.3.3 Features added 8](#_Toc24373926)

[2.3.4 Notes 8](#_Toc24373927)

[2.4 Version 0.82 8](#_Toc24373928)

[2.4.1 Not implemented / Limited functionality requirements 9](#_Toc24373929)

[2.4.2 Bug Fixes 9](#_Toc24373930)

[2.4.3 Features added 9](#_Toc24373931)

[2.4.4 Notes 9](#_Toc24373932)

[2.5 Version 0.81 9](#_Toc24373933)

[2.5.1 Not implemented / Limited functionality requirements 10](#_Toc24373934)

[2.5.2 Bug Fixes 10](#_Toc24373938)

[2.5.3 Features added 10](#_Toc24373947)

[2.5.4 Notes 10](#_Toc24373948)

[2.5.5 Known Limitations 10](#_Toc24373949)

[2.6 Version 0.8 11](#_Toc24373950)

[2.6.1 Not implemented / Limited functionality requirements 11](#_Toc24373951)

[2.6.2 Bug Fixes 11](#_Toc24373952)

[2.6.3 Features added 11](#_Toc24373953)

[2.6.4 Notes 12](#_Toc24373954)

# Introduction

|  |  |
| --- | --- |
| Component Type | Software Stack Package |
| **Target Silicon** | SAMD20 + UPD350 |
| **Where can an end user see the version number** | Version number appended with filename <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-public/browse/PSF/PSF/Source/include/ProjectVersion.h> |

USB Power Delivery Software Framework (PSF) – a software-based Power Delivery stack along with UPD350 Type -c Port Controller (Maverick) is a USB-PD solution. It is a generic user-friendly stack that can be ported across various hardware platform.

# Release notes

## Version 0.91

|  |  |
| --- | --- |
| Release date | 11-Nov-19 |
| **Release Type** | Internal Temp Bug fix release |
| **Pre-requisites (if any)** | **UNG8222 -Hades Platform with UNG 8122 Rev D PM-PD configured for 1-Hot** |
| **Source code path** | <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-public/browse/PSF/PSF> |
| **Source Tag and Bit Bucket commit** | **Tag:** PSF\_STACK\_V0.91  **Commit:41b3dbe** |
| **Software Requirements Specification (SRS) Path and Revision Number** | <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-private/browse/PSF/Project_Management/Requirement/Open%20Sourcing%20PSF%20phase%20I%20requirement.docx> Rev1.0  <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-private/browse/PSF/Project_Management/System%20Dos/Release/PSF%20Systems%20DOS%20v1.0_REVIEW_CANDIDATE.pdf> |
| **Software Design Document (SDD) Path and Revision Number** | <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-private/browse/PSF/Project_Management/Design/Modular%20Design/PIO%20configuration%20management%20modular%20Design.docx> Rev0.1  <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-private/browse/PSF/Project_Management/Design/Modular%20Design/Power%20supply%20management%20design%20changes%20from%20Zeus.docx> Rev0.1  //depot\_hw\_amazon/doc/design/Zeus Stack Firmware Design.docx Rev1.1 |
| **Software Developer Test Plan (SDTP) Path and Revision Number** | <https://bitbucket.microchip.com/projects/UNG_APPS/repos/usb-pd-software-framework-private/browse/PSF/Project_Management/Developer_Test_Plan/PSF_Developer_Test_Plan.xlsm> Rev 1.0 |
| **Software Requirements Tracker (SRT) Path and Revision Number** | NA for PSF |

|  |  |
| --- | --- |
| **Hex Name** | **Hardware Platform** |
| PSF\_Hades\_Source\_V0.91.hex | USB PD Software Framework(PSF) Hades EVB |

### Not implemented / Limited functionality requirements

1. PSF-7 - HiByte has potential error

### Bug Fixes

1. PSF-19 -FW has build issue when CONFIG\_PD\_PORT\_COUNT set to 1
2. PSF-21 - VBUS OCS Power fault handling not working
3. PSF-26 - Build Fails When INCLUDE\_POWER\_FAULT\_HANDLING Macro is set to 0
4. PSF-31 - Build Fails When INCLUDE\_PDFU Macro is set to 1
5. PSF-32 - Configuring CONFIG\_PORT\_n\_SINK\_USB\_COM macro Field is not Effective
6. PSF-33 - Configuring CONFIG\_PORT\_n\_SINK\_UNCONSTRAINED\_PWR macro Field is not Effective
7. PSF-34 - Build Fails When INCLUDE\_PD\_3\_0 Macro is set to 0

### Features added

NA

### Notes

Following JIRA reported marked invalid after developing from developer’s side:

1. PSF-22 -VCONN OCS handling not working
2. PSF 23 - PD Negotiation Fails when PDOs are Configured more than 5 with certain values
3. PSF-25 - The PUT is not Disabled Even After the Under Voltage Count Exceeds the Maximum Fault Count

## Version 0.90

|  |  |
| --- | --- |
| Release date | 24-Oct-2019 |
| **Release Type** | Web release |
| **Pre-requisites (if any)** | **UNG8222 -Hades Platform with UNG 8122 Rev D PM-PD configured for 1-Hot** |
| **Source code path** | //depot\_dsg/PSF/PSF/ |
| **Source code label / branch & perforce change list number** | **Label:** PSF\_STACK\_V0.90  **Changelist:** 178665 |
| **Software Requirements Specification (SRS) Path and Revision Number** | //depot\_dsg/PSF/Project\_Management/Requirement/Open Sourcing PSF phase I requirement.docx Rev:1.0  //depot\_dsg/PSF/Project\_Management/System Dos/Release/PSF Systems DOS v1.0\_REVIEW\_CANDIDATE.pdf |
| **Software Design Document (SDD) Path and Revision Number** | //depot\_dsg/PSF/ Project\_Management /Design/Modular Design/PIO configuration management modular Design.docx Rev0.1  //depot\_dsg/PSF/ Project\_Management /Design/Modular Design/Power supply management design changes from Zeus.docx Rev0.1  //depot\_hw\_amazon/doc/design/Zeus Stack Firmware Design.docx Rev1.1 |
| **Software Developer Test Plan (SDTP) Path and Revision Number** | //depot\_dsg/PSF/Project\_Management/Developer\_Test\_Plan/  PSF\_Developer\_Test\_Plan.xlsm Rev 1.0 |
| **Software Requirements Tracker (SRT) Path and Revision Number** | NA as the release is design completion release |

|  |  |
| --- | --- |
| **Hex Name** | **Hardware Platform** |
| PSF\_Hades\_Source\_V0.90.hex | USB PD Software Framework(PSF) Hades EVB |

### Not implemented / Limited functionality requirements

1. PSF-7 - HiByte has potential error
2. PSF-21 - VBUS Power fault handling not working
3. PSF-22 - VOCNN OCS handling not working
4. PSF-23 - PD Negotiation Fails when PDOs are Configured more than 5 with certain values

### Bug Fixes

1. PSF-6 - Compilation error with XC32 compiler
2. PSF-8 - Port enable and disable logic isn’t working as expected
3. PSF-19 FW has build issue when CONFIG\_PD\_PORT\_COUNT set to 1
4. PSF-17 Hooks for UPD interface (SPI/I2C) to be modified to accommodate I2C

### Features added

NA

### Notes

1. Stack directory structure is modified
2. Developer tested release

## Version 0.83

|  |  |
| --- | --- |
| Release date | 13-Sep-2019 |
| **Release Type** | Temp release |
| **Pre-requisites (if any)** | **Applicable for platform with SAMD2016E + UPD350 B Silicon** |
| **Source code path** | //depot\_dsg/PSF/Source/ |
| **Source code label / branch & perforce change list number** | **Label:** PSF\_STACK\_V0.83  **Changelist:** 1757280 |
| **Software Requirements Specification (SRS) Path and Revision Number** | //depot\_dsg/PSF/Doc/Requirement/Open Sourcing PSF v2.0 requirement.docx Rev:1.0  //depot\_dsg/PSF/Doc/System Dos/Release/PSF Systems DOS v0.3.pdf |
| **Software Design Document (SDD) Path and Revision Number** | //depot\_dsg/PSF/Doc/Design/Modular Design/PIO configuration management modular Design.docx Rev0.1  //depot\_dsg/PSF/Doc/Design/Modular Design/Power supply management design changes from Zeus.docx Rev0.1  //depot\_hw\_amazon/doc/design/Zeus Stack Firmware Design.docx Rev1.1 |
| **Software Developer Test Plan (SDTP) Path and Revision Number** | NA as the release is design completion release |
| **Software Requirements Tracker (SRT) Path and Revision Number** | NA as the release is design completion release |

|  |  |
| --- | --- |
| **Hex Name** | **Hardware Platform** |
| PSF\_Amazon\_Platform\_SourceOnly\_V0.83.hex | UPD301 – Amazon (Port-2 Alone) |
| PSF\_Hades\_SourceOnly\_V0.83.hex | UNG8222 – Hades (Port-1 and Port-2) |

### Not implemented / Limited functionality requirements

1. PSF-7 - HiByte has potential error
2. PSF-6 - Compilation error with XC32 compiler
3. PSF-8 - Port enable and disable logic isnt working as expected

### Bug Fixes

NA

### Features added

1. Harmony Integration with PSF Stack

### Notes

1. Policy Manager, Policy Engine and Protocol Layer module files are reviewed and updated
2. 100% completion of PSF\_Port.h file.
3. Developer Test Plan completion.

## Version 0.82

|  |  |
| --- | --- |
| Release date | 21-Aug-2019 |
| **Release Type** | Temp release |
| **Pre-requisites (if any)** | **Applicable for platform with SAMD2016E + UPD350 B Silicon** |
| **Source code path** | //depot\_dsg/PSF/Source/ |
| **Source code label / branch & perforce change list number** | **Label:** PSF\_STACK\_V0.82  **Changelist:** 1750611 |
| **Software Requirements Specification (SRS) Path and Revision Number** | //depot\_dsg/PSF/Doc/Requirement/Open Sourcing PSF v2.0 requirement.docx Rev:1.0  //depot\_dsg/PSF/Doc/System Dos/Release/PSF Systems DOS v0.3.pdf |
| **Software Design Document (SDD) Path and Revision Number** | //depot\_dsg/PSF/Doc/Design/Modular Design/PIO configuration management modular Design.docx Rev0.1  //depot\_dsg/PSF/Doc/Design/Modular Design/Power supply management design changes from Zeus.docx Rev0.1  //depot\_hw\_amazon/doc/design/Zeus Stack Firmware Design.docx Rev1.1 |
| **Software Developer Test Plan (SDTP) Path and Revision Number** | NA as the release is design completion release |
| **Software Requirements Tracker (SRT) Path and Revision Number** | NA as the release is design completion release |

### Not implemented / Limited functionality requirements

NA

### Bug Fixes

1. PSF-5 - Port-1 is not working in v0.81 FW

### Features added

NA

### Notes

1. MCU Idle – SOC and Stack Partition is done.
2. 50% completion of PSF\_Port.h file.
3. Globals, UPDHw and Timers module files are reviewed and updated.
4. SAMD20 MCU Module files are reviewed.

## Version 0.81

|  |  |
| --- | --- |
| Release date | 26-Jul-2019 |
| **Release Type** | Temp release |
| **Pre-requisites (if any)** | **Applicable for platform with SAMD2016E + UPD350 B Silicon** |
| **Source code path** | //depot\_dsg/PSF/Source/ |
| **Source code label / branch & perforce change list number** | **Label:** PSF\_STACK\_V0.81  **Changelist:** |
| **Software Requirements Specification (SRS) Path and Revision Number** | //depot\_dsg/PSF/Doc/Requirement/Open Sourcing PSF v2.0 requirement.docx Rev:1.0  //depot\_dsg/PSF/Doc/System Dos/Release/PSF Systems DOS v0.3.pdf |
| **Software Design Document (SDD) Path and Revision Number** | //depot\_dsg/PSF/Doc/Design/Modular Design/PIO configuration management modular Design.docx Rev0.1  //depot\_dsg/PSF/Doc/Design/Modular Design/Power supply management design changes from Zeus.docx Rev0.1  //depot\_hw\_amazon/doc/design/Zeus Stack Firmware Design.docx Rev1.1 |
| **Software Developer Test Plan (SDTP) Path and Revision Number** | NA as the release is design completion release |
| **Software Requirements Tracker (SRT) Path and Revision Number** | NA as the release is design completion release |

### Not implemented / Limited functionality requirements

NA

### Bug Fixes

NA

### Features added

1. Documentation “PSF Stack Configuration.pdf” to configure PSF stack.

### Notes

1. Depository restructured for SAMD20 MCU files

### Known Limitations

NA

**Jira Filter Used:**

**Date:**

|  |  |  |  |
| --- | --- | --- | --- |
| Bug ID | Summary / Description | Priority | Notes |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |

## Version 0.8

|  |  |
| --- | --- |
| Release date | 29-June-2019 |
| **Release Type** | Alpha |
| **Pre-requisites (if any)** | **Applicable for platform with SAMD2016E + UPD350 B Silicon** |
| **Source code path** | //depot\_dsg/PSF/Source/ |
| **Source code label / branch & perforce change list number** | **Label:** PSF\_STACK\_V0.8  **Changelist:** 1740390 |
| **Software Requirements Specification (SRS) Path and Revision Number** | //depot\_dsg/PSF/Doc/Requirement/Open Sourcing PSF v2.0 requirement.docx  Rev:1.0  //depot\_dsg/PSF/Doc/System Dos/Release/PSF Systems DOS v0.3.pdf |
| **Software Design Document (SDD) Path and Revision Number** | //depot\_dsg/PSF/Doc/Design/Modular Design/PIO configuration management modular Design.docx Rev0.1  //depot\_dsg/PSF/Doc/Design/Modular Design/Power supply management modular Design.docx Rev0.1  //depot\_hw\_amazon/doc/design/Zeus Stack Firmware Design.docx Rev1.1 |
| **Software Developer Test Plan (SDTP) Path and Revision Number** | NA as the release is design completion release |
| **Software Requirements Tracker (SRT) Path and Revision Number** | NA as the release is design completion release |

### Not implemented / Limited functionality requirements

This release is not applicable for PSF intended Hardware platform Hades.

### Bug Fixes

NA as it is initial release

### Features added

* Two port source-only operation demonstrable on FDB2(UNG 8165) – UPD301 Platform
* PIO configurability as per PSF V0.3 system DOS
* Power supply manager design approach changes
* PIO override support

### Notes

This release is marking the design completion of PSF as per V0.3 PSF system DOS