

System level Integration of PSF

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# Introduction

## Terms and abbreviations

## References

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# Hardware Integration

## UPD 350

### PIOs for UPD350 IRQ

### PIO for UPD350 Reset

## Hardware Timer

## DC-DC Buck boost controller

# Software integration

## Memory Requirement

### 32-bit MCU

### 16-bit MCU

### 8-bit MCU

## Multi-Port Support Requirement

PSF supports maximum of 4 Port.

## Endianness

PSF stack supports only Little-Endian format.

## API Implementation required for SW integration

### Block Diagram – TBD

### Data Types

Explanation what is UINT8, UINT16,

### APIs to be implemented by the user application

List of APIs with Hyperlink in a table format

#### UPD350 Hardware Interface Configurations

Hooks required for SPI or I2C Initialization, Read and Write

#### PD Timer Configuration

Hooks and Macros required for HW Timer Initialization and Configuration

#### UPD350 Alert Control

Hooks to initialize the SOC PIOs used for UPD350 Alert control

#### UPD350 Reset Control

Hooks to Initialize the SOC PIO that Controls UPD350 Reset and to drive UPD350 Reset

#### SOC Interrupt Enable/Disable

Hooks to enable/Disable Global interrupts in SOC

#### Memory Compare and Copy

Hooks to copy and compare operations

#### Structure Packing

Macros for structure packing

#### Port Power Control

Hooks to overcome default GPIO Port power control (PortPower Init, VBUS Drive, VBUS Discharge, Sink Circuitry Control)

#### Boot time configuration

Hooks to modify configurable parameters at boot time

#### Hooks for Policy Manager

Hooks to run before and after Policy Manager Execution

#### Debug Hooks

Driver for printing debug messages

#### PD Firmware Upgrade

Hooks required for PDFU functionality

### APIs to be called by the user application

Hooks to be called by the SOC layer

* + MCHPPSF\_Init()
  + MCHPPSF\_Run()
  + MCHPPSF\_UPDAlertHandler()
  + MCHPPSF\_PDTimerHandler()

Note: The frequency at which the APIs to be called shall be captured

### Notification callback from PSF

Callback API that provide per port event like Detach, Attach, Powerfaults, UPD350Idle.