

Overview

The PD charger example is a simple demonstration based on the MCUXpresso SDK PD stack. The application simulate charger product. The demo only works as source and is external powered.

System Requirement

Hardware requirements

- One or two Type-C shield board
- One or two 9V DC power suppliers
- Type-C Cable
- One or two hardwares (Tower module/base board, and so on) for a specific device, for example: lpcxpresso54114 board
- Personal Computer

Software requirements

- The project files are in:
<MCUXpresso_SDK_Install>/boards/<board>/usb_examples/usb_pd_source_charger/<rtos>/<toolchain>.

Note

The <rtos> is Bare Metal or FreeRTOS OS.

- Terminal tool.

Getting Started

Hardware Settings

- When connect om13790 board to frdmk22f board and frdmk22f board uses CMSIS DAP debugger, user need do as follow, otherwise the download may fail.
 - Connect debug port (J5) to PC
 - Wait about 5s
 - Click reset button (SW1)
 - Then start use CMSIS DAP to download application.

For detailed instructions, see the appropriate board User's Guide.

Note

Set the hardware jumpers (Tower system/base module) to default settings.

Prepare the example

1. Download the program to the target board.
2. Power on Type-C shield board then power on development board.

Run the example

1. Connect the OpenSDA USB port to the PC and open terminal.
2. This charger provide power 5V/2.7A and 9V/1.5A.
3. Connect the sink with Type-C cable to the board, The board will print the sink's request power information.
For example: Download usb_pd_charger_battery or usb_pd_sink_battery demo to another board and connect to the tested board.