

Overview

This PD example is a simple demonstration based on the MCUXpresso SDK PD stack.

The application use the shield dock board (om13790dock) to implement the DisplayPort alternate mode. It recognize attached video source (like: "the shield host board (om13790host)" or "PC"), and drive the displayer to work.

System Requirement

Hardware requirements

- One Type-C shield dock board
- One 9V DC power supply
- Type-C Cable
- One hardware for a specific device, for example: one lpcxpresso54114 board
- Personal Computer or the shield host board (om13790host)

Software requirements

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

Note

The <rtos> is Bare Metal or FreeRTOS OS.

- Terminal tool.

Getting Started

Hardware Settings

- Rework R120 and R121 to around 2.2K
- Remove R80
- Remove U14 and connect U14-3 with U14-4 on the shield dock board

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

Note

Please reference to the re-worked document for hardware settings.

Prepare the example

1. For MCUXpresso, please reference to the MCUXpresso SDK USB Type-C PD Stack User's Guide to make sure the SDK_DEBUGCONSOLE = 1 in project settings.
2. Download the program to the target board.
3. Power on shield dock board then power on development board.

Run the example

1. Download this program to the board.
2. Connect the displayer to the MinDP port (J2).
3. Connect one video source (like: "the shield host board (om13790host)" or "PC") to the Type-C port (J1). For example: if the video source is PC, connect the shield dock board to PC with one Type-C cable.
4. The video source will recognize the shield dock board and the displayer works.