Device Tree

Zephyr makes use of the device tree format to specify hardware, comparable to how it works in the Linux kernel. A hardware build target is defined by overlaying different *device tree source* files.

In the case of the Aloxy.Valve board, the base device tree structure is as follows:

- mvpi_pulse_STM32L071.dts (specific board)
  - ***includes*** STM32L071Xb.dtsi (SoC + memory description)
    - ***includes*** STM32L071.dtsi (Specific SoC)
      - ***includes*** STM32L0.dtsi (SoC family)
        - ***includes*** armv6-m.dtsi (Architecture)
          - ***includes*** skeleton.dtsi (Base file)

For defining the pin configuration of the board, often a ***pinctrl*** overlay gets used. This overlay gets placed in the application directory under /board as **specific_board_name-pinctrl.dtsi** → *Here it would be mvpi_pulse_STM32L071-pinctrl.dtsi*

When a custom board is used for which different applications are developed, you can describe the hardware in the board device tree source with its nodes disabled and you can later enable them when needed, using a board overlay, also under /board as **overlay_name.overlay**.