

Freescale SOC USB controllers

The device node for a USB controller that is part of a Freescale SOC is as described in the document "Open Firmware Recommended Practice : Universal Serial Bus" with the following modifications and additions :

Required properties :

- compatible : Should be "fsl-usb2-mph" for multi port host USB controllers, or "fsl-usb2-dr" for dual role USB controllers
- phy_type : For multi port host USB controllers, should be one of "ulpi", or "serial". For dual role USB controllers, should be one of "ulpi", "utmi", "utmi_wide", or "serial".
- reg : Offset and length of the register set for the device
- port0 : boolean; if defined, indicates port0 is connected for fsl-usb2-mph compatible controllers. Either this property or "port1" (or both) must be defined for "fsl-usb2-mph" compatible controllers.
- port1 : boolean; if defined, indicates port1 is connected for fsl-usb2-mph compatible controllers. Either this property or "port0" (or both) must be defined for "fsl-usb2-mph" compatible controllers.
- dr_mode : indicates the working mode for "fsl-usb2-dr" compatible controllers. Can be "host", "peripheral", or "otg". Default to "host" if not defined for backward compatibility.

Recommended properties :

- interrupts : <a b> where a is the interrupt number and b is a field that represents an encoding of the sense and level information for the interrupt. This should be encoded based on the information in section 2) depending on the type of interrupt controller you have.
- interrupt-parent : the phandle for the interrupt controller that services interrupts for this device.

Example multi port host USB controller device node :

```
usb@22000 {
    compatible = "fsl-usb2-mph";
    reg = <22000 1000>;
    #address-cells = <1>;
    #size-cells = <0>;
    interrupt-parent = <700>;
    interrupts = <27 1>;
    phy_type = "ulpi";
    port0;
    port1;
};
```

Example dual role USB controller device node :

```
usb@23000 {
    compatible = "fsl-usb2-dr";
    reg = <23000 1000>;
    #address-cells = <1>;
    #size-cells = <0>;
    interrupt-parent = <700>;
    interrupts = <26 1>;
```

```
};  
    dr_mode = "otg";  
    phy = "ulpi";  
usb.txt
```