

# WLAN device tree configuration

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## 1 Article purpose

The purpose of this article is to explain how to configure the [WLAN](#) when the peripheral (*or peripheral associated to the framework*) is assigned to Linux<sup>®</sup> OS.

The configuration is performed using the [device tree](#) mechanism that provides a hardware description of the WLAN peripheral connected on SDIO bus.

The purpose of this article is to explain Cypress WLAN/BT companion chip<sup>[1]</sup> [device tree](#) node

## 2 DT bindings documentation

The [WLAN](#)<sup>[2]</sup> **tree bindings are composed by :**

- SDIO link configuration<sup>[3]</sup>
- WLAN device configuration<sup>[4]</sup>

## 3 DT configuration

This hardware description is a combination of the STM32 microprocessor device tree files (.dtsi extension) and board device tree files (.dts extension). See the [Device tree](#) for an explanation of the device tree file split.

### 3.1 DT configuration (STM32 level)

The companion chip uses the SDIO link so the DT is based on the SDMMC peripheral node which is located in *stm32mp157c.dtsi*

- This is a set of properties that may not vary for given STM32 device, such as: registers address, clock, reset.

The SDMMC DT configuration is explained at [SDMMC device tree configuration](#)



**This device tree part is related to STM32 microprocessors. It must be kept as is, without being modified by the end-user.**

### 3.2 DT configuration (board level)

Part of the [device tree](#) is used to describe the WLAN hardware used on a given board. The DT node ("**sdmmc2**") must be filled in:

- mmc-pwrseq: phandle to the MMC power sequence node
- keep-power-in-suspend: preserves the card power during a suspend/resume cycle

```
&sdmmc2 {
    ...
    vmmc-supply = <&v3v3>;
    mmc-pwrseq = <&wifi_pwrseq>;           /* phandle to the MMC power sequence n
    ...
    keep-power-in-suspend;               /* preserves the card power during a s
    brcmf: brcmf@1 {                     /* node of WLAN companion chip */
        reg = <1>;
        compatible = "brcm,bcm4329-fmac";
    }
}
```

## 4 References

1. ↑ [1], CYW4343W
2. ↑ [WLAN and Bluetooth hardware component](#)
3. ↑ [SDMMC device tree configuration](#)
4. ↑ [Documentation/devicetree/bindings/net/wireless/brcm,bcm43xx-fmac.txt](#)