nVidia GPIO

底下說明如何透過PIN腳編號透過計算取得給GPIO export 的數值

1).假設對象UART2\_RTS



2).前往nVidia 官方([Jetson Download Center](https://developer.nvidia.com/embedded/downloads))下載Pinmux\_Configuration檔案，每個SOM有自己的pinmux 檔案 (excel)

3).打開pinmux configuration檔案，搜尋207，例如

cid:image006.jpg@01D81F50.37F04E90

看GPIO那一欄的名字是GPIO3\_PR.04

4).查閱 nvidia 使用的 kernel 裡面(Xavier-NX header file) R 的定義為17

|  |  |
| --- | --- |
| SOC | Path |
| Xavier-NX | <BSP>/kernel/hardware/nvidia/soc/t19x/kernel-include/dt-bindings/gpio/tegra194-gpio.h |
| TX2-NX | <BSP>kernel/hardware/nvidia/soc/tegra/kernel-include/dt-bindings/gpio/tegra186-gpio.h |
| Nano | <BSP>/Kernel/hardware/nvidia/soc/tegra/kernel-include/dt-bindings/gpio/tegra-gpio.h |

#define TEGRA194\_**MAIN**\_GPIO\_PORT\_R **17**

5).在Device 中輸入底下指令

$ sudo grep tegra-gpio /sys/kernel/debug/gpio

gpiochip1: GPIOs 248-287, parent: platform/c2f0000.gpio, tegra-gpio-aon:

gpiochip0: GPIOs 288-511, parent: platform/2200000.gpio, tegra-gpio:

因為是” **MAIN**”，所以base 就是 **288**，否則就是 AON

公式：Linux GPIO number = (base + (8 \* port) + pin)

**288**+(8\***17**)+4=428

COM PORT GPIO Number

|  |  |  |  |
| --- | --- | --- | --- |
| RTS | Xavier-NX | TX2-NX | Nano |
| COM1 | 478 | 474 | 27 |
| COM2 | 428 | 284 | 50 |

GDIO Number

|  |  |  |  |
| --- | --- | --- | --- |
|  | Xavier-NX | TX2-NX | Nano |
| GPIO0(228) | 393 | 269 | 38 |
| GPIO1(118) | 421 | 425 | 149 |
| GPIO2(127) | 265 | 411 | 65 |
| GPIO3(206) | 424 | 264 | 168 |
| GPIO4(208) | 418 | 476 | 202 |
| GPIO5(211) | 436 | 396 | 246 |
| GPIO6(212) | 417 | 337 | 169 |
| GPIO7(218) | 268 | 338 | 194 |