Rugged Board

GPIO

https://community.ruggedboard.com

SAMA5D27 Pin Numbers vs. GPIO Port Numbers

SAMA5D27 Pin Numbers	GPIO Port Numbers
0 - 31	PA0 - PA31
32 - 63	PB0 - PB31
64 - 95	PC0 - PC31
96 - 127	PD0 - PD31

How to calculate SAMA5D27 pin number using GPIO port number?

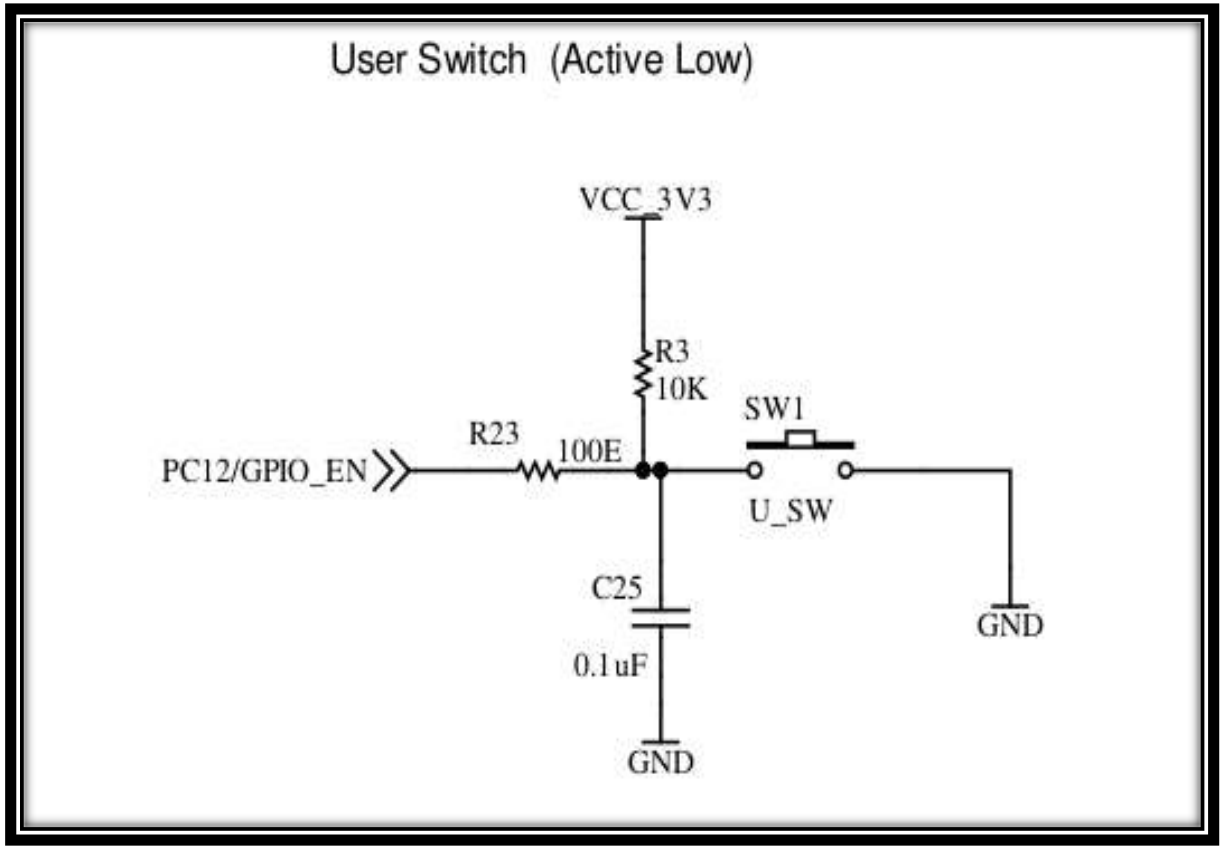
Port value PA --> 0
PB --> 1
PC --> 2
PD --> 3

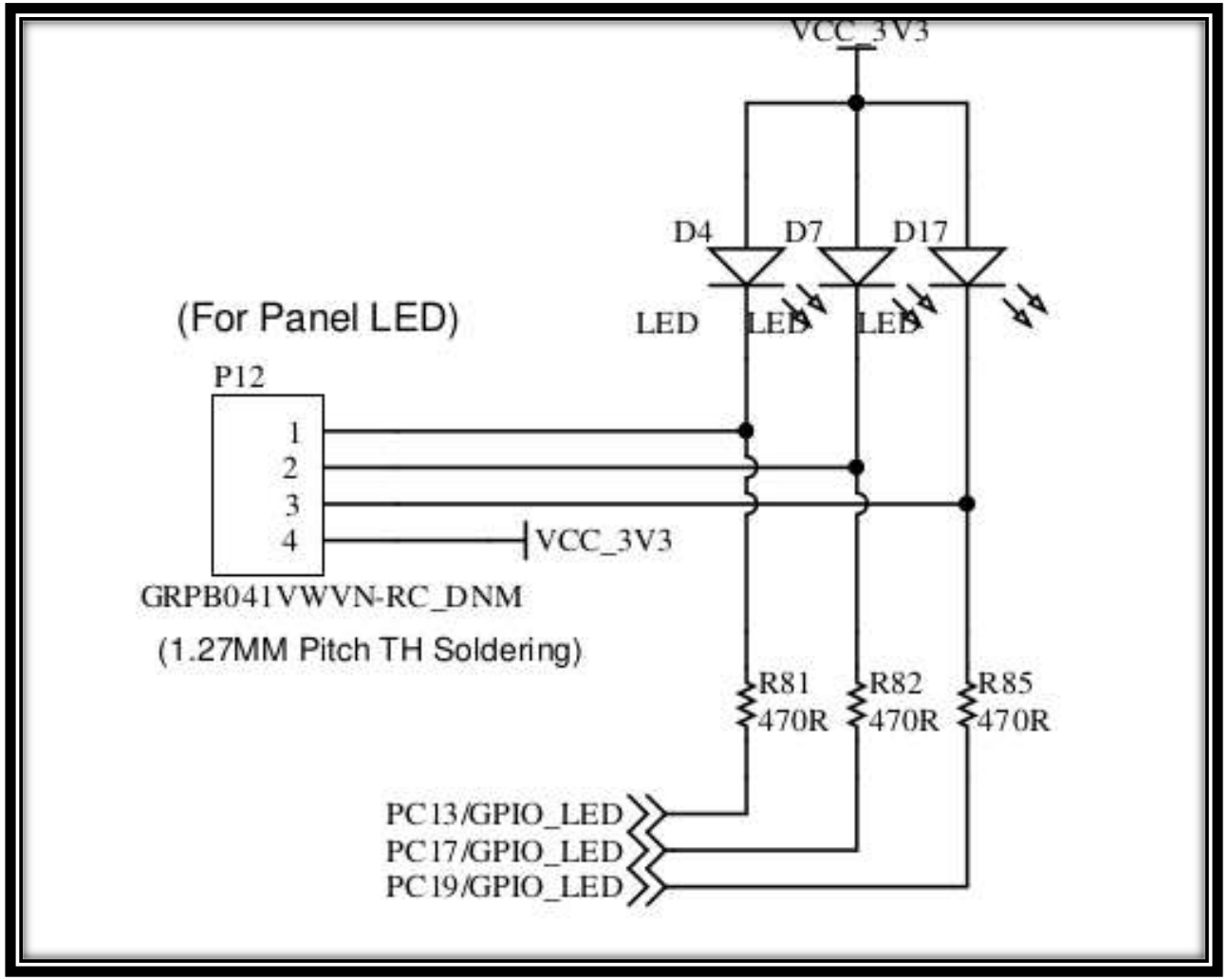
*SAMA5D2_PIN_Number = (32 * PX) + GPIO_PX_Number,*
Where X takes A / B /C /D

For PC13 SAMA5D2 pin number is 77

(32 * PC) + 13 = (32 * 2) + 13 = 77

On Board Switch and LED circuit





Accessing the GPIO using SYSFS

Example: PC13 as output pin

Export PC13

```
root@rugged-board-a5d2x-sd1:~# echo 77 > /sys/class/gpio/export
```

Set PC13 as output pin

```
root@rugged-board-a5d2x-sd1:~# echo out  > /sys/class/gpio/PC13/direction
```

Set PC13 as Low

```
root@rugged-board-a5d2x-sd1:~# echo 0  > /sys/class/gpio/PC13/value
```

Set PC13 as High

```
root@rugged-board-a5d2x-sd1:~# echo 1  > /sys/class/gpio/PC13/value
```

Unexport PC13

```
root@rugged-board-a5d2x-sd1:~# echo 77 > /sys/class/gpio/unexport
```

Accessing the GPIO using SYSFS

Example: PC12 as input pin

Export PC12

```
root@rugged-board-a5d2x-sd1:~# echo 76 > /sys/class/gpio/export
```

Set PC12 as input pin

```
root@rugged-board-a5d2x-sd1:~# echo in >  /sys/class/gpio/PC12/direction
```

Keep pressing user switch

```
root@rugged-board-a5d2x-sd1:~# cat  /sys/class/gpio/PC12/value
0
```

Switch not pressed

```
root@rugged-board-a5d2x-sd1:~# cat  /sys/class/gpio/PC12/value
1
```

Unexport PC13

```
root@rugged-board-a5d2x-sd1:~# echo 76 > /sys/class/gpio/unexport
```

C program to blink the LED connected to PC13,PC17,PC19

C program to blink any one of the LED by pressing user switch connected to PC12

Open Discussions

Connect-us

Developer Wiki