









































GPIO

BPI-R2-GPIO

Pin-Belegung



Nebenfunktion	Hauptfunktion	pin#	xxxxxxxxxxxxxxxxxxxxxxx	pin#	Hauptfunktion	Nebenfunktion
	+3V3	1	1  	2	+5V	
GPIO 56 #	I2C1_SDA	3	3  	4	+5V	
GPIO 55 #	I2C1_SCL	5	5  	6	GND	
GPIO101	PWM 7	7	7  	8	UART0-TX	GPIO 59 #
	GND	9	9  	10	UART0-RX	GPIO 60 #
GPIO 51 #	PWM1 / UART1-TX	11	11  	12		
GPIO 52 #	PWM2 / UART1-RX	13	13  	14	GND	
GPIO 98 #		15	15  	16		GPIO 61 #
	+3V3	17	17  	18		GPIO 62 #
GPIO 68 #	PWM5 / SPI1 MOSI	19	19  	20	GND	
GPIO 69	PWM6 / SPI1 MISO	21	21  	22	SPI0 CLK	GPIO 63
GPIO 67	PWM4 / SPI1 CLK	23	23  	24	SPI1 CS	GPIO 70
	GND	25	25  	26	SPI0 CS	GPIO 66
GPIO 58	I2C2 SDA	27	27  	28	I2C2 SCL	GPIO 57
GPIO 85		29	29  	30	GND	
GPIO 82	SPI0 MOSI	31	31  	32	SPI0 MOSI	GPIO 64
		33	33  	34	GND	
		35	35  	36	SPI0 MISO	GPIO 65
GPIO 86		37	37  	38	I2S IN	
	GND	39	39  	40	I2S OUT	

(# verified gpio working, 101 is blocked by pwm)

- uart0 (dts) ⇒ Debug-Uart
- uart1 (dts) ⇒ undefined ⇒ mt7622_uart2_2_tx_rx_pins (59/60)
- uart2 (dts) ⇒ uart1 (gpio) ⇒ mt7622_uart2_1_tx_rx_pins (51/52)

Kernel 4.19

```
root@bpi-iot-ros-ai:~# cat /sys/kernel/debug/pinctrl/10211000.pinctrl-
pinctrl_mt7622/gpio-ranges
GPIO ranges handled:
0: pinctrl_mt7622 GPIOs [409 - 511] PINS [0 - 102]
root@bpi-iot-ros-ai:~# GPIO_N0=$((409+56))
root@bpi-iot-ros-ai:~# echo $GPIO_N0
465
root@bpi-iot-ros-ai:~# echo $GPIO_N0 > /sys/class/gpio/export

-bash: echo: write error: Invalid argument => blocked by i2c1

#if i2c1 is disabled in dts:
root@bpi-r64:~# echo $GPIO_N0 > /sys/class/gpio/export
root@bpi-r64:~# echo out > /sys/class/gpio/gpio${GPIO_N0}/direction
root@bpi-r64:~# echo 1 > /sys/class/gpio/gpio${GPIO_N0}/value #led goes on
root@bpi-r64:~# echo 0 > /sys/class/gpio/gpio${GPIO_N0}/value #led goes off
```

Die sysfs Schnittstelle (/sys/class/gpio/...) benötigt die kernel-option CONFIG_GPIO_SYSFS

uart

der debug-Uart ist in der DTS uart0. Der vorhandene uart2 ist scheinbar uart1 der gpio-Leiste...uart1 ist aktuell nicht definiert.

From:

<http://fw-web.de/dokuwiki/> - **FW-WEB Wiki**

Permanent link:

<http://fw-web.de/dokuwiki/doku.php?id=bpi-r64:gpio>

Last update: **2023/06/08 17:06**

