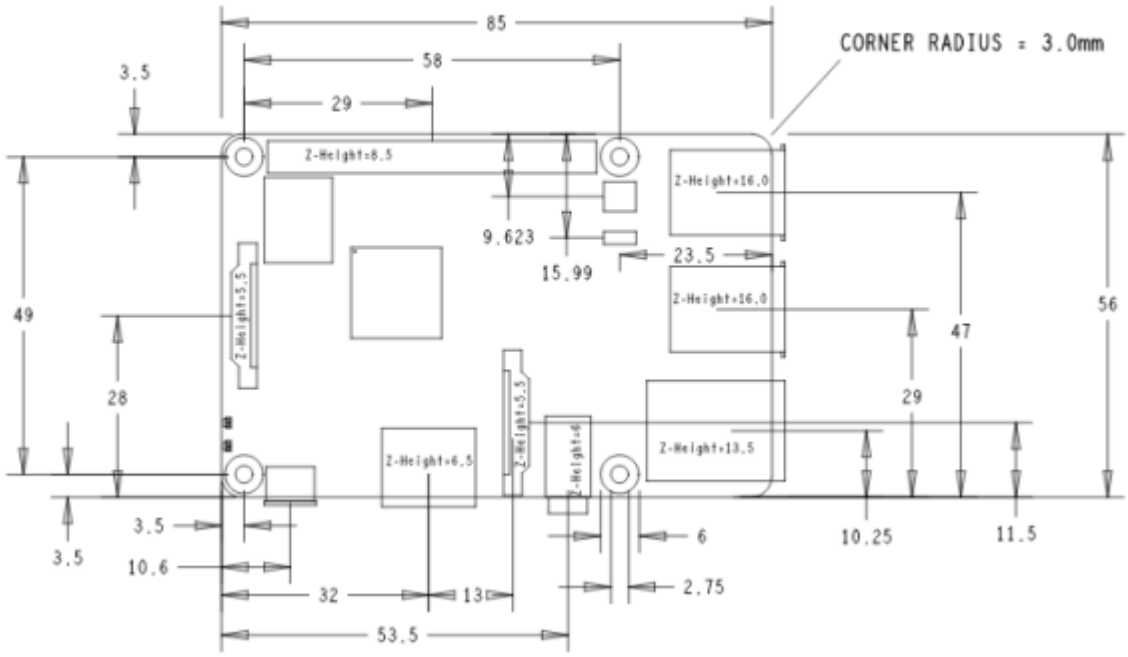
Gateway RAK831

Shield para conexión a Raspberry y GPS

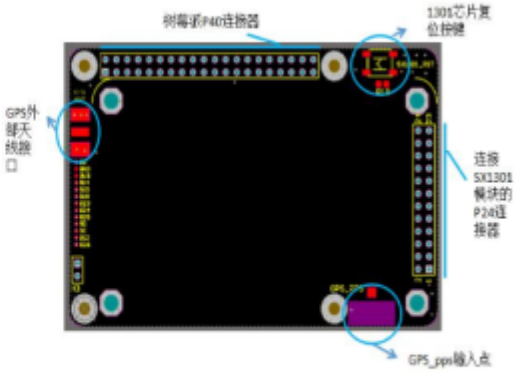
Medidas de raspberry pi 3 b+

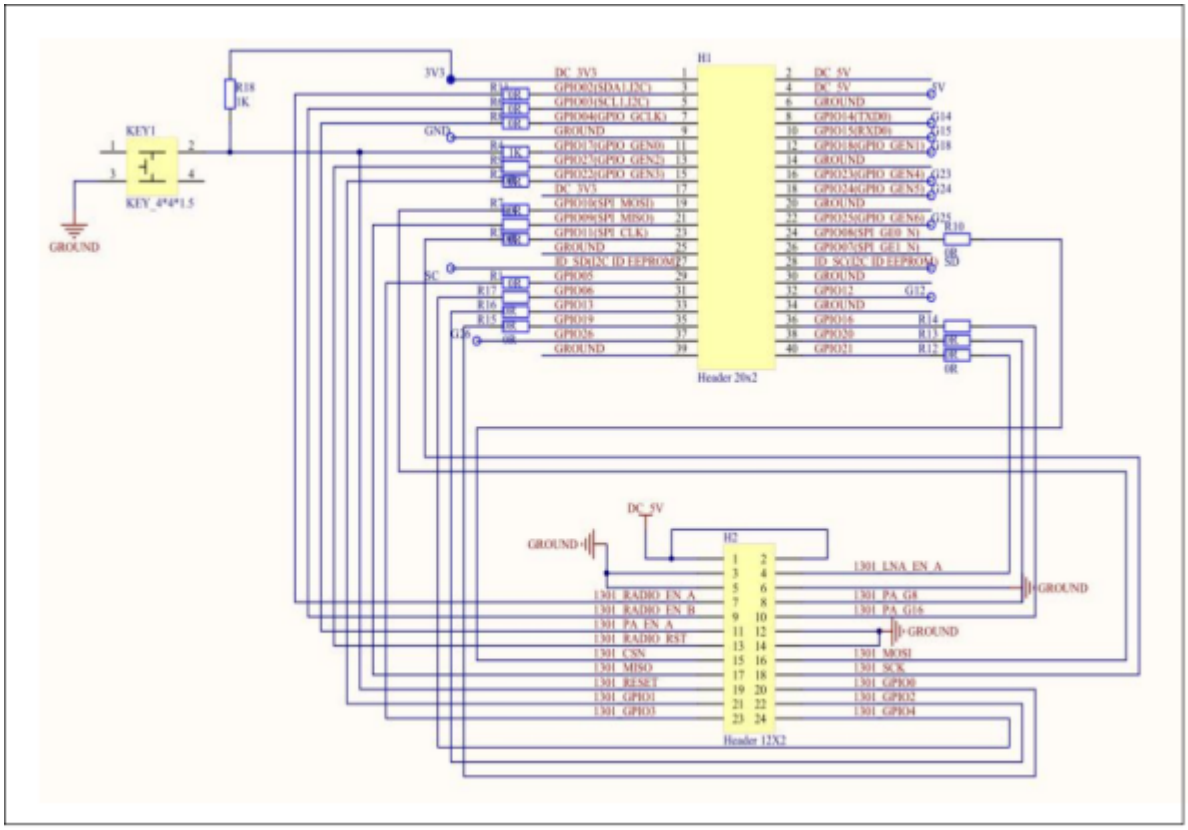


1、SX1301 模块管脚和树莓派管脚对照表

SX1301 其他引脚		树莓派 40Pin 引脚对照表				SX1301 其他引脚	
		功能名	BOARD编码		功能名		
		3.3V	1	2	5V		
1301_RADIO_EN_A	P7	SDA.1	3	4	5V	P1/P2	DC_5V
1301_RADIO_EN_B	P9	SCL.1	5	6	GND	悬空或接GND	GND
1301_FE_EN_A	P11	GPIO.7	7	8	TXD		
悬空或接GND	GND	GND	9	10	RXD		
1301_RESET	P19	GPIO.0	11	12	GPIO.1		
1301_RADIO_RST	P13	GPIO.2	13	14	GND	悬空或接GND	GND
1301_GPIO1	P21	GPIO.3	15	16	GPIO.4		
		3.3V	17	18	GPIO.5		
1301_MOSI	P16	MOSI	19	20	GND	悬空或接GND	GND
1301_MISO	P23	MISO	21	22	GPIO.6		
1301_SCK	P18	SCLK	23	24	CE0	1301_CSN	P15
悬空或接GND	GND	GND	25	26	CE1		
		SDA.0	27	28	SCL.0		
1301_GPIO5	P29	GPIO.21	29	30	GND	悬空或接GND	GND
1301_GPIO6	P24	GPIO.22	31	32	GPIO.26		
1301_GPIO2	P22	GPIO.23	33	34	GND	悬空或接GND	GND
1301_GPIO0	P28	GPIO.24	35	36	GPIO.27	P10	1301_PA_GIO
		GPIO.25	37	38	GPIO.28	P8	1301_PA_GIO
悬空或接GND	GND	GND	39	40	GPIO.29	P4	1301_LBT_EN_A

2、管脚对应位置




H1
3V3
GND
KEY1
KEY_4*4*1.5
GROUND
R18
10K
DC_3V3
GPIO02(SDA1,I2C)
GPIO03(SCL1,I2C)
GPIO04(GPIO_GCLK)
GROUND
GPIO17(GPIO_GEN0)
GPIO27(GPIO_GEN2)
GPIO22(GPIO_GEN3)
DC_3V3
GPIO10(SPI_MOSI)
GPIO09(SPI_MISO)
GPIO11(SPI_CLK)
GROUND
ID_SD(I2C_ID EEPROM)
GPIO05
GPIO06
GPIO13
GPIO19
GPIO26
GROUND
DC_5V
DC_5V
GROUND
GPIO14(TXD0)
GPIO15(RXD0)
GPIO18(GPIO_GEN1)
GROUND
GPIO23(GPIO_GEN4)
GPIO24(GPIO_GEN5)
GROUND
GPIO25(GPIO_GEN6)
GPIO08(SPI_CE0_N)
GPIO07(SPI_CE1_N)
ID_SC(I2C_ID EEPROM)
GROUND
GPIO12
GROUND
GPIO16
GPIO20
GPIO21
Header 20x2
H2
DC_5V
GROUND
1301_LNA_EN_A
1301_RADIO_EN_A
1301_RADIO_EN_B
1301_PA_EN_A
1301_RADIO_RST
1301_CSN
1301_MISO
1301_RESET
1301_GPIO1
1301_GPIO3
1301_PA_G8
1301_PA_G16
GROUND
1301_MOSI
1301_SCK
1301_GPIO0
1301_GPIO2
1301_GPIO4
Header 12X2

Pin PPS Quectel l80

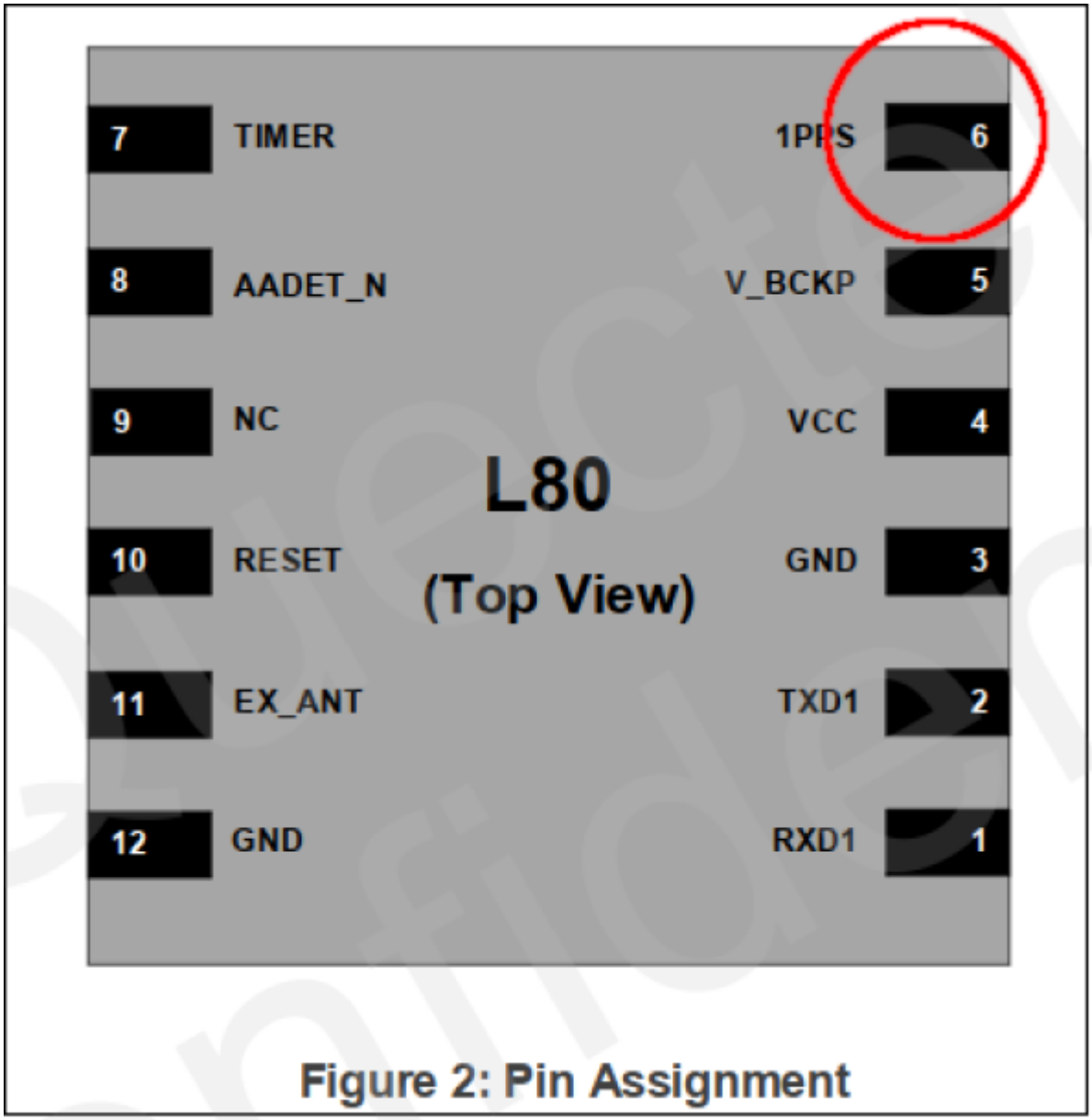
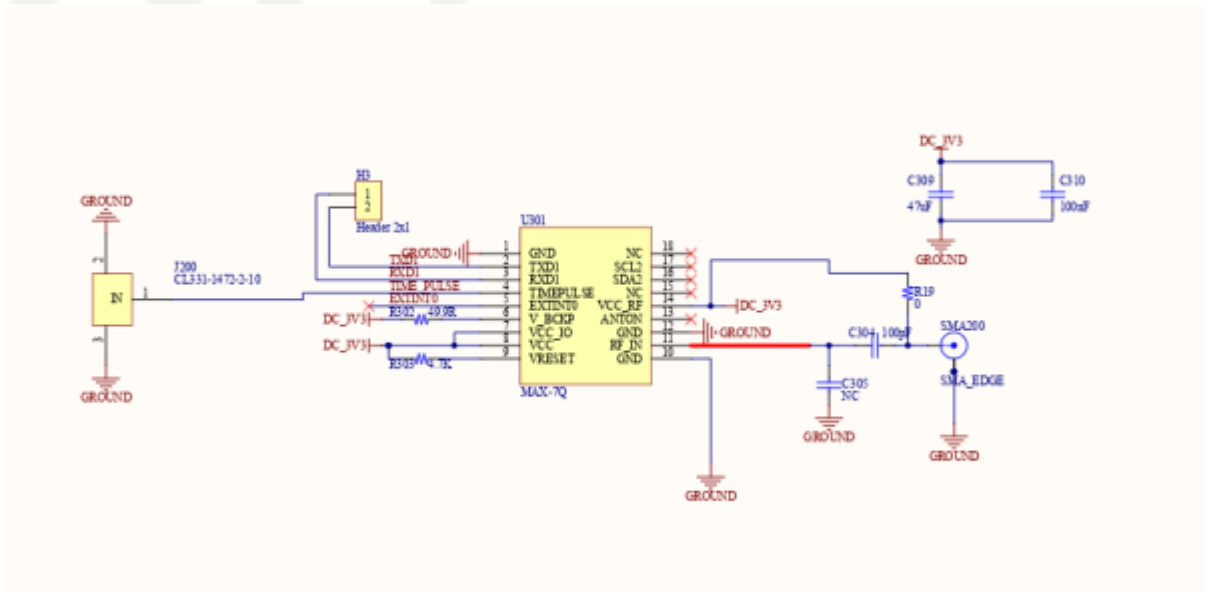
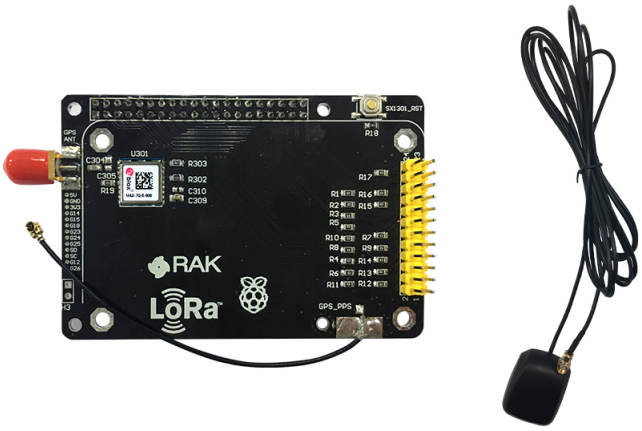


Figure 2: Pin Assignment





- https://hackaday.io/project/20482-designing-a-raspberry-pi-hat

RAK 831 Pin	Description on silk screen	RPi physical pin
1	+5V	2
3	GND	6
19	RST (Resent pin)	22
18	SCK (SPI Clock)	23
17	MISO	21
16	MOSI	19
15	CSN (Chip Select)	24

rpi v3 to rak 831 pin connection

Conexión a la raspberry pi

- http://docs.rakwireless.com/cn/LoRa/RAK831-LoRa-Gateway/B应用笔记/转接板接线说明.pdf
- https://github.com/IRNAS/RPi-HAT-RAK831-PoE
- **Antena** → https://github.com/IRNAS/ttn-irnas-gw

Referentes

- https://github.com/RAKWireless/RAK2245-RAK831-LoRaGateway-RPi-Raspbian-OS
- https://www.thethingsnetwork.org/forum/t/the-hard-rak831-cafe-part-1/8464
- https://github.com/Edzelf/RAK831-LoRa-gateway/blob/master/LoRa%20gateway%20with%20Orange%20Pi%20and%20RAK831.pdf
- https://github.com/xesscorp/RPi_Hat_Template
- http://docs.rakwireless.com/en/LoRa/RAK831-LoRa-Gateway/Hardware-Specification/Raspberry%

20Pi%20Switchboard%20Schematic_20171218.pdf

- https://www.quectel.com/UploadImage/Downlad/L80_Hardware_Design_V1.1.pdf
- http://mtnstormdaq.com/blog/2012/10/gps-pps-use-as-a-time-reference/