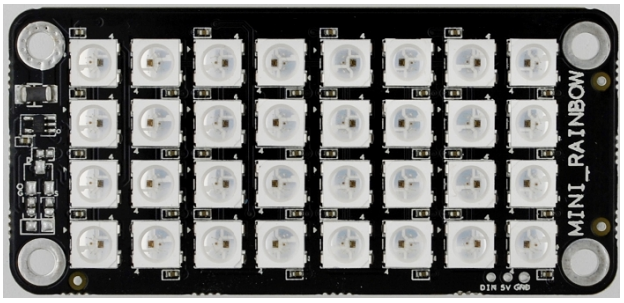
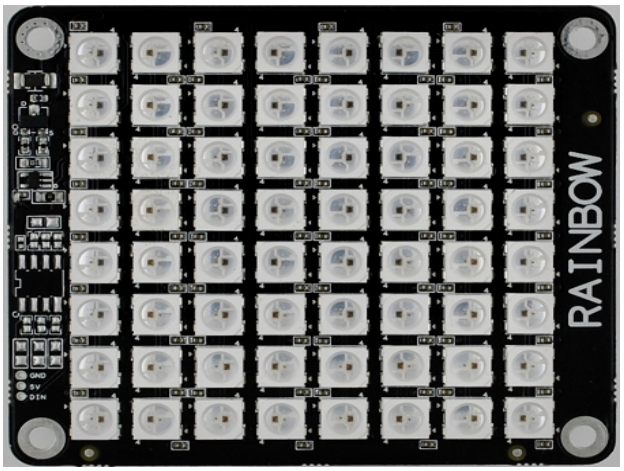
RAINBOW-HAT



MINI_RAINBOW



RAINBOW-HAT 40 pin details.			
RPI	PIN	**PIN**	RPI
3V3	1	2	DC +5V
SDA1-I2C	3	4	DC +5V
SCL1-I2C	5	6	GND
GPIO4	7	8	UART_TX
GND	9	10	UART_RX
GPIO17	11	12	PWM-LED /GPIO18
GPIO27	13	14	GND
GPIO22	15	16	GPIO23
NC	17	18	GPIO24
SPI_MOSI	19	20	GND
SPI_MISO	21	22	GPIO25
SPI_CLK	23	24	GPIO8
GND	25	26	GPIO7
ID_SD	27	28	ID_SC
GPIO5	29	30	GND
GPIO6	31	32	GPIO12
GPIO13	33	34	GND
I2S_LRCLK	35	36	GPIO16
GPIO26	37	38	I2S_DIN
GND	39	40	I2S_DOUT

_highlighted signals are used by RAINBOW /mini-RAINBOW HAT boards

RAINBOW HAT : Supporting a matrix of 64(8 x 8) RGB LEDs and powered directly from the RPI. 64 RGB LEDs (SK6812RGB - 5mm x 5mm). LED data driven via DMA over PWM by using Python library . Compatible with Raspberry Pi 3, 2, Zero. This is ideal for mood lighting, pixel art. Power rating 5V@50-540mA. Board **Dimensions:**65*56.5*12.3 (W*L*H in mm)

Mini-RAINBOW HAT: Supporting a matrix of 32 (8 x 4) RGB LEDs and powered directly from the RPI. 32 RGB LEDs (SK6812RGB - 5mm x 5mm)LED data driven via DMA over PWM by using Python library. Compatible with Raspberry Pi 3, 2, Zero. This is ideal for mood lighting, pixel art. Power rating 5V@50-270mA. Board **Dimensions:** 65*30.5*12.3 (W*L*H in mm)

Notes:

- Rainbow-HAT uses some special PWM trickery, performed with the same hardware that lets your Pi produce sound through the audio jack (analog audio) so you can't use both at the same time!
- **Warning**: SK6218 LEDs are bright enough to cause eye pain, do not look at them directly when brightly lit. We recommend using RAINMBOW-HAT at lower brightness levels.

Software info refer : https://github.com/allocom/Rainbow-HAT