

Thermal Print

必需功能需求：

Power : Input 5 ~ 24V 48W, Output1 4.5 ~ 9V(可調) 5.5 ~ 7A, Output2 3.3V 0.5A.

MCU : MG32F104 LQFP64, 兼容 MG32F103 LQFP48, 保留 XTAL 電路, 保留 RTC Xtal 電路.

Print Head : REGO 瑞工 RG-6281F 58mm 兼容富士 FTP-628

Moto Driver : L9110S x2

Font Library : W25Q32

LED x3 : Power / Error / Paper

Key x2 : Stop / Feed Paper

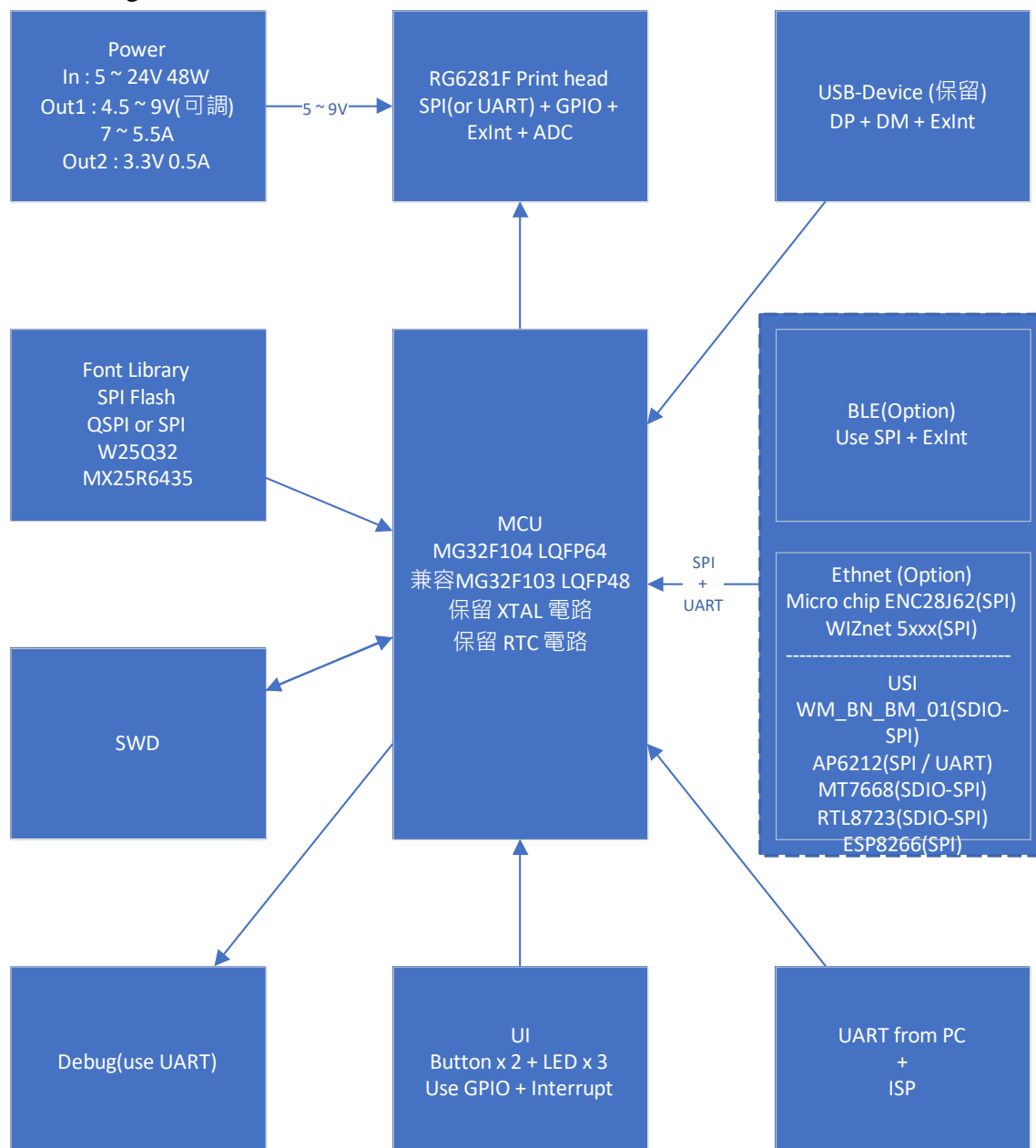
擴充功能：

USB

LED / Key

BLE / WIFI / Ethernet use SPI or UART, 保留 2.54mm 插座(3.3V + GND Pin)

Block Diagram



Pin Function Config

黃：電源 或 固定功能

粉：擴充功能

Thermal Print		MG32F103 / 104											
Pin Function	AFS	LQFP48	LQFP64	AFS[3:0] Pin Name	0	1	2	3	4	5	6	7	Analog
Power 3.3V		1	1	VBAT									
KEY1 - STOP	GPIO - ExInt	2	2	PC13	TAMPER_RTC								
OSC32_IN	OSC32_IN	3	3	PC14	OSC32_IN								OSC32_IN
OSC32_OUT	OSC32_OUT	4	4	PC15	OSC32_OUT								OSC32_OUT
OSC_IN	OSC_IN	5	5	PD0	OSC_IN								OSC_IN
OSC_OUT	OSC_OUT	6	6	PD1	OSC_OUT								OSC_OUT
NRST		7	7	NRST									
for Ethernet / BLE	SPIM2_NSS0		8	PC0				I2S_WS		SPIM2_NSS0	SPIS2_NSS		ADC_IN10
for Ethernet / BLE	SPIM2_SCK		9	PC1				I2S_SCLK		SPIM2_SCK	SPIS2_SCK		ADC_IN11
for Ethernet / BLE	SPIM2_MI		10	PC2				I2S_SD0		SPIM2_MI	SPIS2_SO		ADC_IN12
for Ethernet / BLE	SPIM2_MO		11	PC3				I2S_SD1		SPIM2_MO	SPIS2_SI		ADC_IN13
Power GND	VSSA	8	12	VSSA									
Power 3.3V	VDDA	9	13	VDDA									
from Print Head Thermal Sensor	ADC_IN0	10	14	PA0	WKUP	TIM2_CH1_ETR						UART2_CTS	ADC_IN0
from Print Head Paper Detect	ADC_IN1	11	15	PA1		TIM2_CH2						UART2_RTS	ADC_IN1
for Debug	UART2_TX	12	16	PA2		TIM2_CH3						UART2_TX	ADC_IN2
for Debug / LED3 / KEY3	UART2_RX / GPIO - ExINT	13	17	PA3		TIM2_CH4						UART2_RX	ADC_IN3

Power GND	VSS_4		18	VSS_4									
Power 3.3V	VDD_4		19	VDD_4									
SPI NAND Flash	QSPI_NSS0	14	20	PA4						QSPI_NSS0	SPIS1_NSS	UART2_CK	ADC_IN4
SPI NAND Flash	QSPI_SCK	15	21	PA5						QSPI_SCK	SPIS1_SCK		ADC_IN5
SPI NAND Flash	QSPI_ML_IO1	16	22	PA6		TIM1_BKIN	TIM3_CH1			QSPI_ML_IO1	SPIS1_SO		ADC_IN6
SPI NAND Flash	QSPI_ML_IO0	17	23	PA7		TIM1_CH1N	TIM3_CH2			QSPI_ML_IO0	SPIS1_SI		ADC_IN7
for Ethernet / BLE Interrupt 1	GPIO - ExINT		24	PC4	TRACECK								ADC_IN14
for Ethernet / BLE	GPIO - ExINT		25	PC5	TRACED0					SPIM2_NSS2			ADC_IN15
SPI NAND Flash	QSPI_IO2	18	26	PB0		TIM1_CH2N	TIM3_CH3	I2S_MCLK		QSPI_IO2			ADC_IN8
SPI NAND Flash	QSPI_IO3	19	27	PB1		TIM1_CH3N	TIM3_CH4			QSPI_IO3			ADC_IN9
to Print Head STB1 - 2	GPIO	20	28	PB2	BOOT1								
to Print Head STB3 - 4	GPIO	21	29	PB10		TIM2_CH3	TIM4_CH1		I2C2_SCL	QSPI_NSS2		UART3_TX	
to Print Head STB5 - 6	GPIO	22	30	PB11		TIM2_CH4			I2C2_SDA	SPIM2_NSS1		UART3_RX	
Power GND	VSS_1	23	31	VSS_1									
Power 3.3V	VDD_1	24	32	VDD_1									
to Print Head nLATCH	SPIM2_NSS0	25	33	PB12		TIM1_BKIN		I2S_WS	LED4	SPIM2_NSS0	SPIS2_NSS	UART3_CK	
to Print Head CLK	SPIM2_SCK	26	34	PB13		TIM1_CH1N		I2S_SCLK	LED5	SPIM2_SCK	SPIS2_SCK	UART3_CTS	
to Print Head DO	SPIM2_MI	27	35	PB14		TIM1_CH2N			LED6	SPIM2_MI	SPIS2_SO	UART3_RTS	
to Print Head DI	SPIM2_MO	28	36	PB15		TIM1_CH3N		I2S_SD0	LED7	SPIM2_MO	SPIS2_SI		
to Print Head STB2	GPIO		37	PC6			TIM3_CH1	I2S_MCLK	LED0				
to Print Head STB4	GPIO		38	PC7			TIM3_CH2	I2S_MCLK	LED1				
to Print Head STB6	GPIO		39	PC8			TIM3_CH3		LED2				
LED Ethernet / WIFI	GPIO		40	PC9	TRACED1		TIM3_CH4		LED3				
USB-Detect	GPIO	29	41	PA8	MCO	TIM1_CH1			LED0			UART1_CK	CMPA_P0
to PC	UART1_TX	30	42	PA9		TIM1_CH2			LED1			UART1_TX	CMPA_N0
from PC	UART1_RX	31	43	PA10		TIM1_CH3			LED2			UART1_RX	
from PC	USBDM	32	44	PA11		TIM1_CH4			LED3			UART1_CTS	USBDM
from PC	USBDP	33	45	PA12		TIM1_ETR						UART1_RTS	USBDP

