TP2 L   F1 Fuse   MOV1 MOV-14D471K   1 ACDC+ 3   FS1 0805L075WR   5V   U1 LM1117IMPX-3.3/NOPB   3 IN OUT 2   3V3   TP1
TP3 N   4 ACDC- 4   C2 0.1uF/50V   C1 220uF/16V   C3 10uF/16V   1 OUT 4   C4 10uF/16V   C5 10uF/16V   C6 10uF/16V   R1 1k2-5%
AC/DC1   GND   GND   GND   GND   GND   GND   GND   D1 LED_5MM   GND

RST_ESP   1   P1
GPIO0   2
ESP_TXD   3
ESP_RXD   4
Header 1X4

3V3   R3 1k2-5%   D4 LED_5MM   3V3   R7 10k-5%   3V3   R8 10k-5%   5V   R2 1k2-5%   D2 LL4448-GS08   RL1   2 OUT1_NC TP4
3V3   R4 10k-5%   3V3   R5 10k-5%   ESP1   16 ESP_TXD   D3 LED_5MM   1 L
RST_ESP   REST TXD   15 ESP_RXD   GPIO0   P2   GND   Relay 10A/5V   3 OUT1_N0 TP5
RST_ESP   ADC RXD   14   2   RELAY1   R6 1k2-5%   1 Q1 MMBT3904LT1G
SW1 Button   EN_ESP   CH_PD GPIO4   13 GPIO0   1   C8 0.1uF/50V   GND
RST_ESP   GPIO16 GPIO5   12 GPIO0   Header 1X2
C7 1uF/16V   GPIO14 GPIO0   11 GPIO2   5V   R10 1k2-5%   D5 LL4448-GS08   RL2   2 OUT2_NC TP6
3V3   GPIO12 GPIO2   10 GPIO15   GPIO0: HIGH: RUN MODE   GND   D6 LED_5MM   1 L
GND   GPIO13 GPIO15   9   GPIO0: LOW: FLASH MODE   Relay 10A/5V   3 OUT2_N0 TP7
C9 220uF/16V   C10 10uF/16V   VCC GND   GND   R9 10k-5%   RELAY2   R11 1k2-5%   1 Q2 MMBT3904LT1G
GND   GND   GND   GND

3V3   BZ1   3V3   R12 10k-5%   S1   4 ESP_TXD   3V3   P3   3V3   C11 1uF/16V   P4
BUZZER   1 2 BUZZER   STM8_RX 2   STM8_RX 1   3 ESP_RXD   SWIM   1   TEMP_DA   1
Q3 MMBT3904LT1G   RST_STM8   STM8_TX 2   SW DIP-2   RST_STM8   2   TEMP_CLK   2
BUZZER   R13 1k2-5%   SW2 Button   C12 1uF/16V   3   3
GND   GND   Header 1X4   GND   Header 1X4

3V3   R14 1k2-5%   CR1 32.768KHZ   C13 0.1uF/50V   GND
D7 LED_5MM   5V 5V 5V   U3 DS1307Z+
U2   R15 10k-5% R16 10k-5%
BUZZER 1 UART1_CK/TIM2_CH1/BEEP/(HS)PD4   PD3(HS)/AIN4/TIM2_CH2/ADC_ETR 20 RELAY1   I2C_SCL   6 X1 X2 VCC   7
STM8_TX 2 UART1_TX/AIN5/HS PD5   PD2(HS)/AIN3[TIM2_CH3] 19 RELAY2   SCL SQW
STM8_RX 3 UART1_RX/AIN6/HS PD6   PD1(HS)/SWIM 18 SWIM   I2C_SDA   5 SDA VBAT   3
RST_STM8 4 NRST   PC7(HS)/SPI_MISO[TIM1_CH2] 17   BT1 Battery
5 OSCIN/PA1   PC6(HS)/SPI_MOSI[TIM1_CH1] 16 TEMP_DA   GND
6 OSOUT/PA2   PC5(HS)/SPI_SCK[TIM2_CH1] 15 TEMP_CLK   GND   GND
3V3   7 VSS   PC4(HS)/TIM1_CH4/CLK_CCO/AIN2[TIM1_CH2N] 14 SW1
GND   8 VCAP   PC3(HS)/TIM1_CH3[TLI][TIM1_CH1N] 13 SW2
9 VDD   PB4(T)/I2C_SCL[ADC_ETR] 12 I2C_SCL
10 [SPI_NSS] TIME2_CH3/(HS) PA3   PB5(T)/I2C_SDA[TIM1_BKIN] 11 I2C_SDA
C14 1uF/16V   C15 1uF/16V   STM8S103F3P6   3V3   3V3
GND   GND   R17 10k-5%   R18 10k-5%
SW1   SW2
P5   P6
2   2
1   1
Header 1X2   Header 1X2   C16 0.1uF/50V   C17 0.1uF/50V
GND   GND

Title
Size C   Number   Revision
Date: 7/21/2017   Sheet of
File: E:\PCB\WiFarm\WiFarm.SchDoc   Drawn By:

MOV1

AC
AC

AC/DC1

V-

V+

V+

U1

SW1

C1   C9

RL2

F1

BT1

C1 C9 +

P2

SW2

ESP1

P1

RL1

P4   P5   P6   P3

S1

3V3 DA CLK GNB   BUTTON1   BUTTON2

Q2   Q1

D1   D4   D3   D6   D7

BZ1

R11 R6

WiFarm V1.0
SHAL-CRETA-FLEA PRODUCTION

Comment	Description	Designator	Footprint	Manufacturer Part Number	Quantity
AC/DC_5V_0.7A	AC/DC Converter 5V 700mA	AC/DC1	AC/DC_5V_700mA		1
Battery	Battery 3VDC	BT1	BATTERY HOLDER 1		1
BUZZER	AUDIO MAGNETIC XDCR 3-7V TH	BZ1	buzzer smd	AT-1224-TWT-5V-2-R	1
220uF/16V	CAP ALUM 100UF 20% 25V RADIAL	C1, C9	RADIAL_6.3X12	ECA-1EM101	2
0.1uF/50V	CAP CER 0.1UF 50V X7R 0805	C2, C8, C13, C16, C17	CAP_SMD_0805	CC0805KRX7R9BB104	5
10uF/16V	CAP CER 10UF 16V X5R 0805	C3, C4, C5, C6, C10	CAP_SMD_0805	CC0805KKX5R7BB106	5
1uF/16V	CAP CER 1UF 16V X7R 0805	C7, C11, C12, C14, C15	CAP_SMD_0805	CC0805KKX7R7BB105	5
32.768KHZ	CRYSTAL 32.7680KHZ 12.5PF SMD	CR1	Cylindrical crystal - small	AB26TRB-32.768KHZ-T	1
LED_5MM	LED BLUE 5MM	D1, D3, D4, D6, D7	LED_5mm	LTST-C171TBKT	5
LL4448-GS08	DIODE GEN PURP 75V 150MA SOD80	D2, D5	SOD80C	LL4448-GS08	2
ESP8266_07	ESP8266 SMT MODULE	ESP1	ESP8266_07	2491	1
Fuse	Fuse 500mA	F1	RESISTOR 1/4W (STAND)		1
0805L075WR	PTC RESETTABLE 6V .750A SMD 0805	FS1	RES_SMD_0805	0805L075WR	1
MOV-14D471K	VARISTOR 470V 4.5KA DISC 14MM	MOV1	14D471	MOV-14D471K	1
Header 1X4	Header, 4-Pin	P1, P3, P4	Header 1X4		3
Header 1X2	Header, 2-Pin	P2, P5, P6	Header 1X2		3
MMBT3904LT1G	TRANS NPN 40V 0.2A SOT23	Q1, Q2, Q3	SOT-23	MMBT3904LT1G	3
1k2-5%	RES SMD 1.2K OHM 5% 1/8W 0805	R1, R2, R3, R6, R10, R11, R13, R14	RES_SMD_0805	RC0805JR-071K2L	8
10k-5%	RES SMD 10K OHM 5% 1/8W 0805	R4, R5, R7, R8, R9, R12, R15, R16, R17, R18	RES_SMD_0805	RC0805JR-0710KL	10
Relay 10A/5V	Relay SPDT,10A - 12VDC 5 Pin	RL1, RL2	RELAY5PIN-10A		2
SW DIP-2	DIP Switch, 2 Position, SPST	S1	DIP SWITCH 2		1
Button	Switch button 2 pin	SW1, SW2	BUTTON_SMD_2PIN		2
Test Point	Test Point	TP1, TP2, TP3, TP4, TP5, TP6, TP7			7
LM1117IMPX-3.3/NOPB	IC REG LDO 3.3V 0.8A SOT223	U1	SOT223	LM1117IMPX-3.3/NOPB	1
STM8S103F3P6	IC MCU 8BIT 8KB FLASH 20TSSOP	U2	TSSOP20	STM8S103F3P6	1
DS1307Z+	IC RTC CLK/CALENDAR I2C 8-SOIC	U3	SOIC8_MOSFET	DS1307Z+	1